Anexa nr. 7
la Documentaţia standard nr.____
din "___" _____ 20__

CERERE DE PARTICIPARE

Către CENTRUL PENTRU ACHIZITII PUBLICE CENTRALIZATE IN SANATATE

Stimaţi domni,

Ca urmare a anunţului/invitaţiei de participare/de preselecţie apărut în Buletinul achiziţiilor publice şi/sau Jurnalul Oficial al Uniunii Europene, nr ocds-b3wdp1-MD-1698849570746 din 1 noiembrie 2023, privind aplicarea procedurii pentru atribuirea contractului privind Achiziţionarea centralizată a Reagenţilor pentru Laboratorul Biochimie conform necesităţilor instituţiilor medico-sanitare publice (IMSP) pentru anul 2024, noi Medist Grup SRL, am luat cunoştinţă de condiţiile şi de cerinţele expuse în documentaţia de atribuire şi exprimăm prin prezenta interesul de a participa, în calitate de ofertant, neavând obiecţii la documentaţia de atribuire.

Data completării 05.12.2023

Digitally signed by Anghel Gabriela-Cristina
Date: 2023.12.07 12:51:52 EET
Reason: MoldSign Signature
Location: Moldova

Cu stimă,

Ofertant/candidat

Gabriela-Cristina Anghel

MEDIST Grup S.R.L.
Str. Mitropolit Gavriil Bănulescu-Bodoni nr. 25
Oficiul 33, MD-2012 Chişinău, Rep. Moldova
Tel./Fax: +373 22 84 94 95
E-mail: office@medist.md
Web: www.medist.md

IDNO: 1018600004516
TVA: 0508191
BC Victoriabank SA, Filiala nr. 26 Chişinău
IBAN (MDL):MD57VI022242600000269MDL
SWIFT: VICBMD2X469

ORDIN DE PLATA NR.485 Tip.doc. 1

DATA EMITERII: 05 decembrie 2023

PLATITI:4110-71 LEI: Patru Mii Una Suta Zece, 71

PLATITOR: (R)MEDIST GRUP SRL CODUL IBAN:MD57VI022242600000269MDL
CODUL FISCAL:1018600004516

PRESTATORUL PLATITOR
B.C VictoriaBank S.A. s.26 Chisinau

BENEFICIAR:(R) CENTRUL PENTRU ACHIZITII P CODUL IBAN:MD23TRPCCC518430B01859AA
UBLICE CENTRALIZATE IN SANATATE CODUL FISCAL:1016601000212

PRESTATORUL BENEFICIAR
Min.Finantelor-Trezoreria de Stat

DESTINATIA PLATII: /P102/4110,71 Garantia pentru o ferta, pentru LP nr. 21113155 din 01.11.2023.

NORMAL/URGENT:NO

L.S.

CODUL TRANZACTIEI:101

DATA PRIMIRII: _____

DATA EXECUTARII: _____

SEMNATURILE EMITENTULUI

_____
SEMNATURA PRESTATORULUI

«VICTORIABANK»
DIRECȚIA OPERAȚIUNI
05. DEC. 2023

MOTIVUL REFUZULUI L.S.

10:57:23 05 DEC 2023
Semnatura electronica:
JjSSeV2xP/RVc0jJhzw5CE5VwA++uPXVIimgOLj5pD2aetmNh9CsCMY0fwRVdnV1lwSOHf5GPfhJ
bHExrBEWd5ncwKGtMqacVDnXoOrbGdWUXR4X7+Jzhrso/r9wLpnrVU2KGcnxyzjwzqrsnNCokcmF
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WHauZWxFq3kkn7MTJvjQ0+fF/1WSBFuA3LUc5g3IZh7tKMh1rzBIPAEXBOqFu+Od01rePTMHfHAe
iBGY/wAF6b3AMoloHj8l7EIuSAu13qZWxLUdYA==

I.P. "AGENȚIA SERVICII PUBLICE"
Departamentul înregistrare și licențiere a unităților de drept

Extras
din Registrul de stat al persoanelor juridice
nr. **117493** din **15.09.2023**

Denumirea completă: **Societatea cu Răspundere Limitată "MEDIST GRUP"**
Denumirea prescurtată: **"MEDIST GRUP" S.R.L.**
Forma juridică de organizare: **Societate cu răspundere limitată**
Numărul de identificare de stat și codul fiscal: **1018600004516**
Data înregistrării de stat: **02.02.2018**
Sediu: **MD-2012, strada Mitropolit Gavriil Bănulescu-Bodoni 25, ap. 33, mun. Chişinău, Republica Moldova**
Genurile de activitate:

1. **Comerţ cu ridicata al produselor farmaceutice;**
2. **Comerţ cu ridicata nespecializat;**
3. **Repararea echipamentelor electronice şi optice;**
4. **Activităţi de testare şi analize tehnice;**
5. **Comerţ cu amănuntul al articolelor medicale şi ortopedice, în magazine specializate;**

Capitalul social: **373026 Lei**
Administrator: **ANGHEL GABRIELA-CRISTINA IDNP 2017803985939**
Asociați:

1. **MEDIST IMAGING & P.O.C. S.R.L., partea socială 6244 Euro, ce constituie 33.00%**
2. **MEDIST LIFE SCIENCE S.R.L., partea socială 6244 Euro, ce constituie 33.00%**
3. **MEDIST S.R.L., partea socială 6433 Euro, ce constituie 34.00%**

Beneficiari efectivi: **MANOLE IONEL, KLUMPNER CATALINA ANA, VLĂDESCU CARMEN, VLĂDESCU SEBASTIAN-ALEXANDRU**

Prezentul extras este eliberat în temeiul art. 34 al Legii nr.220/2007 privind înregistrarea de stat a persoanelor juridice şi a întreprinzătorilor individuali şi confirmă datele din Registrul de stat la data de 15.09.2023

Specialist coordonator
Marina Franţuz
tel. 022-207837

GUVERNUL REPUBLICII MOLDOVA

SERVICIUL FISCAL DE STAT

MCabinet
PORTALUL GUVERNAMENTAL AL CETĂȚEANULUI ȘI AL UNITĂȚILOR DE DREPT

CERTIFICAT

privind lipsa sau existența restanțelor față de bugetul public național

Nr. № **1923516**

Din От **05.12.2023 07:23**

DATE DESPRE CONTRIBUABIL / ИНФОРМАЦИЯ О НАЛОГОПЛАТЕЛЬЩИКЕ

Codul fiscal / Numărul de identificare
Фискальный код / Идентификационный номер

1018600004516

Denumirea
Наименование

Societatea cu Răspundere Limitată MEDIST GRUP

ATESTAREA LIPSEI SAU EXISTENȚEI RESTANȚELOR CONFORM DATELOR SISTEMULUI INFORMAȚIONAL AUTOMATIZAT / ПОДТВЕРЖДЕНИЕ ОТСУТСВИЯ ИЛИ НАЛИЧИЯ ЗАДОЛЖНОСТЕЙ СОГЛАСНО ДАННЫМ ИНФОРМАЦИОННОЙ АВТОМАТИЗИРОВАННОЙ СИСТЕМЫ

La data emiterii prezentului certificat restanța față de bugetul public național constituie
На дату выдачи данной справки задолжность перед национальном публичным бюджетом составляет

0 MDL

VALABIL PÂNĂ LA / ДЕЙСТВИТЕЛЕН ДО **20.12.2023 07:23**

Prezentul document este eliberat în temeiul Art. 29, alin. (3) din Legea cu privire la registre nr. 71/2007 și în baza datelor furnizate de Serviciul Fiscal de Stat în Portalul Guvernamental al Cetățeanului și al Unităților de Drept / Справка выдана в соответсвие со ст. 29 п. (3) Закона о реестрах № 71/2007 на основании данных, предостоставленных Государственной налоговой службой на Портале Правительства Гражданина и Юридических Лиц.

Generat și semnat de Portalul Guvernamental al Cetățeanului și al Unităților de Drept la **05.12.2023 07:23**

Prezentul certificat este semnat electronic în conformitate cu Legea nr.124 din 19.05.2022
Сертификат подписан электронной попдписью в соответсвие с Законом № 124 от 19.05.2022

Certificatul este descărcat din Portalul Guvernamental al Cetățeanului și al Unităților de Drept (mcabinet.gov.md) și este semnat electronic de către posesorul acestui portal și are aceiași valoare juridică ca și documentele eliberate pe suport de hârtie de către organele cu atribuții de administrare fiscală. Verificarea autenticității semnăturii electronice poate fi realizată cu ajutorul Serviciului Guvernamental de Semnătură Electronică (msign.gov.md)

Сертификат скачен с Правительственного Портала Гражданина и Юридических Лиц (mcabinet.gov.md) и подписан электронной подписью владельца портала и имеет такаю же юридическую силу, как и документы выдаваемые на бумаге органами налоговой администрации. Проверку подлиности электронной подписи можно осуществить с помощью Государсвенной Службой Электронной Подписью (msign.gov.md)

VICTORIABANK
PRIMA BANCĂ DIN MOLDOVA

www.victoriabank.md

Filiala nr. 26 Chișinău
str. Mt. Bănulescu-Bodoni, 28/1
MD-2005, mun. Chișinău
Tel.: (+373 22) 92-92-52
Fax: (+373 22) 78-47-30
SWIFT: VICBMD2X469
IDNO 1002600001338
Capital social – 250 000 910 lei
www.victoriabank.md

Nr. 26/466 din "19" iunie 2018

La Nr. 395 din "19" iunie 2018

Secret bancar
Confidențial

CERTIFICAT

Prin prezentul, BC "VICTORIABANK" SA Sucursala nr.26 Chişinău, codul băncii VICBMD2X469, cod fiscal 1002600001338, confirmă că MEDIST GRUP SRL, cod fiscal 1018600004516, deţine următoarele conturi curente în format IBAN:

MD57VI022242600000269MDL;
MD76VI022242600000105USD;
MD61VI022242600000116EUR;
MD83VI022242600000008RON.

Certificatul este eliberat la cererea clientului pentru a fi prezentat la destinaţie.

Cebanu Valentina
Director

REPUBLICA MOLDOVA, mun. CHIŞINĂU * BANCA COMERCIALĂ "VICTORIABANK" S.A. * SUCURSALA Nr.26 CHIŞINĂU Nr. 1002600001338

Blanovscaia Anna
Contabil-şef

Ex: Scutaru Lilia
tel. 022 78-47-32

Anexe la SNC
"Prezentarea situatiilor financiare"
Aprobat de Ministerul Finantelor
al Republicii Moldova

SITUAȚIILE FINANCIARE

pentru perioada 01.01.2022 - 31.12.2022

Entitatea: MEDIST GRUP S.R.L.
Cod CUIÎO: 41247072
Cod IDNO: 1018600004516

Sediul:
MD: 2012
Raionul(municipiul): 105, DDF BUIUCANI
Cod CUATM: 0120, SEC.BUIUCANI
Strada: Mitropolit Gavriil Banulescu-Bodoni nr.25 of.33

Activitatea principală: G4646, Comert cu ridicata al produselor farmaceutice
Forma de proprietate: 23, Proprietatea statelor străine
Forma organizatorico-juridică: 530, Societăţi cu răspundere limitată

Date de contact:
Telefon: 068681147
WEB: www.medist.md
E-mail: natalia.mutu@medist.md
Numele și coordonatele al contabilului-șef: Dl (dna) Natalia Mutu Tel. 068681147

Numărul mediu al salariaților în perioada de gestiune: 6 **persoane.**

Persoanele responsabile de semnarea situațiilor financiare* Anghel Gabriela-Cristina

Unitatea de măsură: leu

BILANŢUL

Anexa 1

la 31.12.2022

Nr. cpt.	Indicatori	Cod rd.	Sold la	
			Începutul perioadei de gestiune	Sfîrșitul perioadei de gestiune
1	2	3	4	5
	A C T I V			
A.	**ACTIVE IMOBILIZATE** **I. Imobilizări necorporale**			
	1. Imobilizări necorporale în curs de execuție	010		
	2. Imobilizări necorporale în exploatare, total	020		
	din care: 2.1. concesiuni, licențe și mărci	021		
	2.2. drepturi de autor și titluri de protecție	022		
	2.3. programe informatice	023		
	2.4. alte imobilizări necorporale	024		
	3. Fond comercial	030		
	4. Avansuri acordate pentru imobilizări necorporale	040		
	Total imobilizări necorporale (rd.010 + rd.020 + rd.030 + rd.040)	050		
	II. Imobilizări corporale			
	1. Imobilizări corporale în curs de execuție	060		

	2. Terenuri	070		
	3. Mijloace fixe, total	080	1673086	3028298
	din care: 3.1. clădiri	081		
	3.2. construcții speciale	082		
	3.3. mașini, utilaje și instalații tehnice	083	1657741	3018214
	3.4. mijloace de transport	084		
	3.5. inventar și mobilier	085		
	3.6. alte mijloace fixe	086	15345	10084
	4. Resurse minerale	090		
	5. Active biologice imobilizate	100		
	6. Investiții imobiliare	110		
	7. Avansuri acordate pentru imobilizări corporale	120	141992	141992
	Total imobilizări corporale (rd.060 + rd.070 + rd.080 + rd.090 + rd.100 + rd.110 + rd.120)	130	1815078	3170290
	III. Investiții financiare pe termen lung			
	1. Investiții financiare pe termen lung în părți neafiliate	140		
	2. Investiții financiare pe termen lung în părți afiliate, total	150		
	din care: 2.1. acțiuni și cote de participație deținute în părțile afiliate	151		
	2.2 împrumuturi acordate părților afiliate	152		
	2.3 împrumuturi acordate aferente intereselor de participare	153		
	2.4 alte investiții financiare	154		
	Total investiții financiare pe termen lung (rd.140 + rd.150)	160		
	IV. Creanțe pe termen lung și alte active imobilizate			
	1. Creanțe comerciale pe termen lung	170		
	2. Creanțe ale părților afiliate pe termen lung	180		
	inclusiv: creanțe aferente intereselor de participare	181		
	3. Alte creanțe pe termen lung	190		
	4. Cheltuieli anticipate pe termen lung	200		
	5. Alte active imobilizate	210		
	Total creanțe pe termen lung și alte active imobilizate (rd.170 + rd.180 + rd.190 + rd.200 + rd.210)	220		
	TOTAL ACTIVE IMOBILIZATE (rd.050 + rd.130 + rd.160 + rd.220)	230	1815078	3170290
B.	**ACTIVE CIRCULANTE** **I. Stocuri**			
	1. Materiale și obiecte de mică valoare și scurtă durată	240	32816	31649
	2. Active biologice circulante	250		
	3. Producția în curs de execuție	260		
	4. Produse și mărfuri	270	2084205	852838
	5. Avansuri acordate pentru stocuri	280		
	Total stocuri (rd.240 + rd.250 + rd.260 + rd.270 + rd.280)	290	2117021	884487

	II. Creanțe curente și alte active circulante			
	1. Creanțe comerciale curente	300	745255	3969789
	2. Creanțe ale părților afiliate curente	310		
	inclusiv: creanțe aferente intereselor de participare	311		
	3. Creanțe ale bugetului	320	192050	982652
	4. Creanțele ale personalului	330		856
	5. Alte creanțe curente	340	2484163	1093188
	6. Cheltuieli anticipate curente	350	13622	48056
	7. Alte active circulante	360	12373	
	Total creanțe curente și alte active circulante (rd.300 + rd.310 + rd.320 + rd.330 + rd.340 + rd.350 + rd.360)	370	3447463	6094541
	III. Investiții financiare curente			
	1. Investiții financiare curente în părți neafiliate	380		
	2. Investiții financiare curente în părți afiliate, total	390		
	din care: 2.1. acțiuni și cote de participație deținute în părțile afiliate	391		
	2.2. împrumuturi acordate părților afiliate	392		
	2.3. împrumuturi acordate aferente intereselor de participare	393		
	2.4. alte investiții financiare în părți afiliate	394		
	Total investiții financiare curente (rd.380 + rd.390)	400		
	IV. Numerar și documente bănești	410	3083838	4161583
	TOTAL ACTIVE CIRCULANTE (rd.290 + rd.370 + rd.400 + rd.410)	420	8648322	11140611
	TOTAL ACTIVE (rd.230 + rd.420)	430	10463400	14310901
	P A S I V			
C.	**CAPITAL PROPRIU** **I. Capital social și neînregistrat**			
	1. Capital social	440	373026	373026
	2. Capital nevărsat	450	( )	( )
	3. Capital neînregistrat	460		
	4. Capital retras	470	( )	( )
	5. Patrimoniul primit de la stat cu drept de proprietate	480		
	Total capital social și neînregistrat (rd.440 + rd.450 + rd.460 + rd.470 + rd.480)	490	373026	373026
	II. Prime de capital	500		
	III. Rezerve			
	1. Capital de rezervă	510		
	2. Rezerve statutare	520		
	3. Alte rezerve	530		
	Total rezerve (rd.510 + rd.520 + rd.530)	540		
	IV. Profit (pierdere)			
	1. Corecții ale rezultatelor anilor precedenți	550	X	
	2. Profit nerepartizat (pierdere neacoperită) al anilor	560	4576184	4576184

	precedenți			
	3. Profit net (pierdere netă) al perioadei de gestiune	570	X	826229
	4. Profit utilizat al perioadei de gestiune	580	X	( )
	Total profit (pierdere) (rd.550 + rd.560 + rd.570 + rd.580)	590	4576184	5402413
	V. Rezerve din reevaluare	600		
	VI. Alte elemente de capital propriu	610		
	TOTAL CAPITAL PROPRIU (rd.490 + rd.500 + rd.540 + rd.590 + rd.600 + rd.610)	620	4949210	5775439
D.	**DATORII PE TERMEN LUNG**			
	1. Credite bancare pe termen lung	630		
	2. Împrumuturi pe termen lung	640	2293001	1579325
	din care: 2.1. împrumuturi din emisiunea de obligațiuni	641		
	inclusiv: împrumuturi din emisiunea de obligațiuni convertibile	642		
	2.2. alte împrumuturi pe termen lung	643	2293001	1579325
	3. Datorii comerciale pe termen lung	650		
	4. Datorii față de părțile afiliate pe termen lung	660		
	inclusiv: datorii aferente intereselor de participare	661		
	5. Avansuri primite pe termen lung	670		
	6. Venituri anticipate pe termen lung	680		
	7. Alte datorii pe termen lung	690		
	TOTAL DATORII PE TERMEN LUNG (rd.630 + rd.640 + rd.650 + rd.660 + rd.670 + rd.680 + rd.690)	700	2293001	1579325
E.	**DATORII CURENTE**			
	1. Credite bancare pe termen scurt	710		
	2. Împrumuturi pe termen scurt, total	720	1965429	1344767
	din care: 2.1. împrumuturi din emisiunea de obligațiuni	721		
	inclusiv: împrumuturi din emisiunea de obligațiuni convertibile	722		
	2.2. alte împrumuturi pe termen scurt	723	1965429	1344767
	3. Datorii comerciale curente	730	22996	2165195
	4. Datorii față de părțile afiliate curente	740	15427	3446175
	inclusiv: datorii aferente intereselor de participare	741		
	5. Avansuri primite curente	750	479003	
	6. Datorii față de personal	760		
	7. Datorii privind asigurările sociale și medicale	770		
	8. Datorii față de buget	780	738334	
	9. Datorii față de proprietari	790		
	10. Venituri anticipate curente	800		
	11. Alte datorii curente	810		
	TOTAL DATORII CURENTE (rd.710 + rd.720 + rd.730 + rd.740 + rd.750 + rd.760 + rd.770 + rd.780 + rd.790 + rd.800 + rd.810)	820	3221189	6956137
F.	**PROVIZIOANE**			
	1. Provizioane pentru beneficiile angajaților	830		

	2. Provizioane pentru garanții acordate cumpărătorilor/clienților	840		
	3. Provizioane pentru impozite	850		
	4. Alte provizioane	860		
	TOTAL PROVIZIOANE (rd.830 + rd.840 + rd.850 + rd.860)	870		
	TOTAL PASIVE (rd.620 + rd.700 + rd.820 + rd.870)	880	10463400	14310901

SITUAŢIA DE PROFIT ŞI PIERDERE

de la 01.01.2022 pînă la 31.12.2022

Anexa 2

Indicatori	Cod rd.	Perioada de gestiune	
		precedenta	curenta
1	2	3	4
Venituri din vînzări, total	010	33578934	29021092
din care: venituri din vînzarea produselor și mărfurilor	011	33233405	28497093
venituri din prestarea serviciilor și executarea lucrărilor	012	93698	126338
venituri din contracte de construcție	013		
venituri din contracte de leasing	014		
venituri din contracte de microfinanţare	015		
alte venituri din vînzări	016	251831	397661
Costul vînzărilor, total	020	21572504	20867803
din care: valoarea contabilă a produselor și mărfurilor vîndute	021	21572504	20867803
costul serviciilor prestate și lucrărilor executate terților	022		
costuri aferente contractelor de construcție	023		
costuri aferente contractelor de leasing	024		
costuri aferente contractelor de microfinanţare	025		
alte costuri aferente vînzărilor	026		
Profit brut (pierdere brută) (rd.010 - rd.020)	030	12006430	8153289
Alte venituri din activitatea operațională	040	34729	135089
Cheltuieli de distribuire	050	309807	118118
Cheltuieli administrative	060	3316071	4920088
Alte cheltuieli din activitatea operațională	070	430627	1931079
Rezultatul din activitatea operațională: profit (pierdere) (rd.030 + rd.040 - rd.050 - rd.060 - rd.070)	080	7984654	1319093
Venituri financiare, total	090	1154867	786797
din care: venituri din interese de participare	091		
inclusiv: veniturile obținute de la părțile afiliate	092		
venituri din dobînzi	093		
inclusiv: veniturile obținute de la părțile afiliate	094		
venituri din alte investiții financiare pe termen lung	095		
inclusiv: veniturile obținute de la părțile afiliate	096		
venituri aferente ajustărilor de valoare privind investițiile financiare pe termen lung și curente	097		

venituri din ieșirea investițiilor financiare	098		
venituri aferente diferențelor de curs valutar și de sumă	099	1154867	786797
Cheltuieli financiare, total	100	685067	904528
din care: cheltuieli privind dobînzile	101		
inclusiv: cheltuielile aferente părților afiliate	102		
cheltuieli aferente ajustărilor de valoare privind investițiile financiare pe termen lung și curente	103		
cheltuieli aferente ieșirii investițiilor financiare	104		
cheltuieli aferente diferențelor de curs valutar și de sumă	105	685067	904528
Rezultatul: profit (pierdere) financiar(ă) (rd.090 - rd.100)	110	469800	-117731
Venituri cu active imobilizate și excepționale	120		5290
Cheltuieli cu active imobilizate și excepționale	130		
Rezultatul din operațiuni cu active imobilizate și excepționale: profit (pierdere) (rd.120 - rd.130)	140		5290
Rezultatul din alte activități: profit (pierdere) (rd.110 + rd.140)	150	469800	-112441
Profit (pierdere) pînă la impozitare (rd.080 + rd.150)	160	8454454	1206652
Cheltuieli privind impozitul pe venit	170	738805	380423
Profit net (pierdere netă) al perioadei de gestiune (rd.160 - rd.170)	180	7715649	826229

SITUAŢIA MODIFICĂRILOR CAPITALULUI PROPRIU

de la 01.01.2022 pînă la 31.12.2022

Anexa 3

Nr. d/o	Indicatori	Cod rd	Sold la începutul perioadei de gestiune	Majorări	Diminuări	Sold la sfîrşitul perioadei de gestiune
1	2	3	4	5	6	7
I.	**Capital social și neînregistrat**					
	1. Capital social	010	373026			373026
	2. Capital nevărsat	020	( )	( )	( )	( )
	3. Capital neînregistrat	030				
	4. Capital retras	040	( )	( )	( )	( )
	5. Patrimoniul primit de la stat cu drept de proprietate	050				
	Total capital social și neînregistrat (rd.010 + rd.020 + rd.030 + rd.040 + rd.050)	060	373026			373026
II.	**Prime de capital**	070				
III.	**Rezerve**					
	1. Capital de rezervă	080				
	2. Rezerve statutare	090				
	3. Alte rezerve	100				
	Total rezerve (rd.080 + rd.090 + rd.100)	110				
IV.	**Profit (pierdere)**					
	1. Corecții ale rezultatelor anilor precedenți	120	X			
	2. Profit nerepartizat (pierdere	130	4576184			4576184

	neacoperită) al anilor precedenți					
	3. Profit net (pierdere netă) al perioadei de gestiune	140	X	826229		826229
	4. Profit utilizat al perioadei de gestiune	150	X	( )	( )	( )
	Total profit (pierdere) (rd.120 + rd.130 + rd.140 + rd.150)	160	4576184	826229		5402413
V.	**Rezerve din reevaluare**	170				
VI.	**Alte elemente de capital propriu**	180				
	Total capital propriu (rd.060 + rd.070 + rd.110 + rd.160 + rd.170 + rd.180)	190	4949210	826229		5775439

SITUAŢIA FLUXURILOR DE NUMERAR

de la 01.01.2022 pînă la 31.12.2022

Anexa 4

Indicatori	Cod rd	Perioada de gestiune	
		precedentă	curentă
1	2	3	4
Fluxuri de numerar din activitatea operațională			
Încasări din vînzări	010	36964792	29053578
Plăți pentru stocuri și servicii procurate	020	31765229	20406745
Plăți către angajați și organe de asigurare socială și medicală	030	1675720	2732087
Dobînzi plătite	040		
Plata impozitului pe venit	050		1868681
Alte încasări	060		5290
Alte plăți	070	490294	1588647
Fluxul net de numerar din activitatea operațională (rd.010 - rd.020 - rd.030 - rd.040 - rd.050 + rd.060 - rd.070)	080	3033549	2462708
Fluxuri de numerar din activitatea de investiții			
Încasări din vînzarea activelor imobilizate	090		
Plăți aferente intrărilor de active imobilizate	100		
Dobînzi încasate	110		
Dividende încasate	120		
inclusiv: dividende încasate din străinătate	121		
Alte încasări (plăți)	130		
Fluxul net de numerar din activitatea de investiții (rd.090 - rd.100 + rd.110 + rd.120 ± rd.130)	140		
Fluxuri de numerar din activitatea financiară			
Încasări sub formă de credite și împrumuturi	150	2042210	
Plăți aferente rambursării creditelor și împrumuturilor	160	2474672	1457991
Dividende plătite	170		
inclusiv: dividende plătite nerezidenților	171		
Încasări din operațiuni de capital	180		
Alte încasări (plăți)	190		
Fluxul net de numerar din activitatea financiară (rd.150 - rd.160 - rd.170 + rd.180 ± rd.190)	200	-432462	-1457991
Fluxul net de numerar total (± rd.080 ± rd.140 ± rd.200)	210	2601087	1004717
Diferențe de curs valutar favorabile (nefavorabile)	220	67584	73028

Versiune de imprimare
Salvare

Recipisa 2

Respondent
Codul fiscal: 1018600004516, denumire: MEDIST GRUP S.R.L.
A prezentat raportul: RSF1_21
Pentru perioada fiscala: A/2022
Data prezentarii: 25.05.2023
Marca temporală a raportului înregistrat în Sistemul Informațional al BNS : 25.05.2023 16:56:13

Biroul Național de Statistică (BNS) a recepționat varianta electronică a raportului, expediat de DVs.
Urmează verificarea și validarea raportului de către specialistul BNS pe domeniu.

DECLARAŢIE
privind valabilitatea ofertei

Către: **CENTRUL PENTRU ACHIZITII PUBLICE CENTRALIZATE IN SANATATE**

Stimaţi domni,

Ne angajăm să menținem oferta valabilă, privind Achiziționarea centralizată a Reagenților pentru Laboratorul Biochimie conform necesităților instituțiilor medico-sanitare publice (IMSP) pentru anul 2024, pentru o durată de 160 zile, (una sută șase zeci), respectiv până la data de 20/06/2024 (ziua/luna/anul), și ea va rămâne obligatorie pentru noi și poate fi acceptată oricând înainte de expirarea perioadei de valabilitate.

Data completării 05.12.2023

Cu stimă,
Ofertant/candidat
Gabriela-Cristina Anghel
(semnătura autorizată)

MEDIST Grup S.R.L.
Str. Mitropolit Gavriil Bănulescu-Bodoni nr. 25
Oficiul 33, MD-2012 Chișinău, Rep. Moldova
Tel./Fax: +373 22 84 94 95
E-mail: office@medist.md
Web: www.medist.md

IDNO: 1018600004516
TVA: 0508191
BC Victoriabank SA, Filiala nr. 26 Chișinău
IBAN (MDL):MD57VI022242600000269MDL
SWIFT: VICBMD2X469

MEDIST Grup

Soluții pentru sănătate

DECLARAȚIE

Subsemnata Gabriela Anghel, reprezentant împuternicit al MEDIST GRUP S.R.L, cu sediul în mun. Chișinău, str. M.G. Bănulescu-Bodoni 25, Oficiul 33, declar pe propria răspundere că:

- mostrele (2 bucăți) vor fi prezentate în termen de 10 zile de la solicitare, ambalate și etichetate cu specificare obligatorie a modelului articolului, producătorului și țării de origine pe ambalajul original al mostrei. Mostrele vor fi prezentate în termen de 10 zile de la solicitare, într-o cutie pe care se va indica denumirea operatorului economic și numărul procedurii de achiziție publică. Se va prezenta lista mostrelor incluse în cutie și numărul de lot al acestora cu scrisoare de însoțire semnată. Pe fiecare produs în parte va fi indicat numărul lotului și denumirea operatorului economic.
- Termenul de valabilitate indicat pe ambalaj de producător nu mai mic de 12 luni din data livrării
- livrarea produselor la destinatar se va efectua cu respectarea condițiilor de păstrare și transportare pe tot parcursul lanțului de transportare de la fabricant la beneficiar.
- Seturile vor fi livrate în ambalaj original, securizat, marcat și etichetat de producător, fără preambalare; Date de identitate (denumirea, numărul lotului, seria, termenii de valabilitate, condițiile de păstrare) ale produsului indicate pe ambalaj coincid în mod obligatoriu cu cele de pe etichetele componentelor incluse în set. Instrucțiunile de utilizare a truselor conțin caracteristicile de performanță și calitate.
- Instrucțiunile privind modul de utilizare vor fi prezentate în limba de stat sau limba rusă.
- bunurile ce urmează a fi achiziționate nu sunt înregistrate în Registrul de Stat al Dispozitivelor Medicale, drept pentru care atașăm dosar cu documentele necesare obținerii înregistrării și dovada depunerii norificării la AMDM pentru data de 03.01.2024, orele 13.00.

Data completării 05.12.2023

Cu stimă,
Ofertant/candidat
Gabriela-Cristina Anghel
(semnătura autorizată)

MEDIST Grup S.R.L.
Str. Mitropolit Gavriil Bănulescu-Bodoni nr. 25
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Sold de numerar la începutul perioadei de gestiune	230	415167	3083838
Sold de numerar la sfîrşitul perioadei de gestiune (± rd.210 ± rd.220 + rd.230)	240	3083838	4161583

Documente atașate - Notă explicativă (fișierul pdf)

MEDIST Grup

Soluții pentru sănătate

Către: Agenţia Medicamentului şi Dispozitivelor Medicale

NOTIFICARE

pentru înregistrarea dispozitivelor medicale în Registrul de stat al dispozitivelor medicale

nr. 18 din 05.12.2023

Solicitantul MEDIST Grup S.R.L., cu sediul în Republica Moldova, Chișinău. Str. Mitropolit Gavriil Bănulescu-Bodoni nr. 25, oficiul 33, tel./fax: +373 22 84 94 95, solicit înregistrarea în Registrul de stat al dispozitivelor medicale a următoarelor categorii şi tipuri de dispozitive medicale pentru introducerea și punerea la dispoziție pe piață a:

- Controale biochimie, produse în Irlanda, Anexa II List B;

Se anexează următoarele acte:
- Declarație de conformitate CE;
- Împuternicire producător –Randox Laboratories Ltd. catre Medist Grup SRL;
- Declarație pe proprie răspundere – MEDIST Grup S.R.L.

Data: 05.12.2023

Semnătura

Tabelul de recepționare a notificării
(se completează de către Agenție în momentul depunerii notificării de către solicitant)

Comentarii cu privire la acceptul/refuzul recepționării notificării, inclusiv motivul refuzului	
Data/nr. de ordine atribuit notificării de către Agenție (în cazul acceptării recepționării)	
Numele, prenumele, funcția persoanei responsabile de recepționarea dosarului	
Semnătura persoanei responsabile	

MEDIST Grup S.R.L.
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IBAN (MDL):MD57VI022242600000269MDL

RANDOX

DECLARATION OF CONFORMITY

Conformity Assessment Route: Annex IV, section 3 of the Directive 98/79/EC on In Vitro Diagnostic Medical Devices

WE: **RANDOX LABORATORIES LIMITED**
of 55 DIAMOND ROAD, CRUMLIN, COUNTY ANTRIM, BT29 4QY, UK

CERTIFY THAT THE PRODUCT (S) CONFORM (S) TO THE DIRECTIVE 98/79/EC AS TRANSPOSED BY MEDICAL DEVICE REGULATIONS STATUTORY INSTRUMENT 618:2002. THE MANUFACTURER RETAINS ALL SUPPORTING DOCUMENTATION. THIS DECLARATION OF CONFORMITY IS ISSUED UNDER THE SOLE RESPONSIBILITY OF THE MANUFACTURER.

PRODUCT CATEGORY: ANNEX II LIST B

PRODUCT NAME/ FAMILY: MULTIPLE CLINICAL CHEMISTRY ANALYTE IVD, CONTROL

PRODUCT DETAILS:

Catalogue number	Description
HN1530	HUMAN ASSAYED MULTI-SERA/ASSAYED CHEMISTRY PREMIUM PLUS - LEVEL 2 (HUM ASY CONTROL 2)
HE1532	HUMAN ASSAYED MULTI-SERA/ASSAYED CHEMISTRY PREMIUM PLUS - LEVEL 3 (HUM ASY CONTROL 3)
HS2611	HUMAN ASSAYED MULTI-SERA/ASSAYED CHEMISTRY PREMIUM PLUS - LEVEL 2 & 3 (HUM ASY CONTROL)

EC REP	
Name of Company	Address
Randox Teoranta	Meenmore, Dungloe Donegal, F94 TV06 Ireland

THE PRODUCT(S) HAVE BEEN ASSESSED BY APPLICATION OF STANDARDS / SPECIFICATIONS AS LISTED IN THE ESSENTIAL REQUIREMENTS CHECKLIST AND BY FULL QUALITY MANAGEMENT SYSTEM APPROVAL CARRIED OUT BY BSI GROUP THE NETHERLANDS B.V. (NB NUMBER 2797, EC CERTIFICATE CE 643008).

DATE OF FIRST ISSUE: 20 APRIL 2005

DATE OF RE-ISSUE: 30 SEPTEMBER 2020

SIGNATURE: Pauline Armstrong

Dr. Pauline Armstrong
Global Quality Assurance / Regulatory Affairs Manager

RANDOX

Randox Laboratories Ltd
55 The Diamond Road
Crumlin
County Antrim
Northern Ireland
BT29 4QY

1 Noiembrie 2023

SCRISOARE DE AUTORIZARE

Prin prezenta scrisoare , noi, Randox Laboratories Ltd., cu sediul în 55 The Diamond Road, Crumlin, Co. Antrim, Irlanda de Nord, BT29 4QY, declarăm prin că Medist Grup SRL, cu sediul în Blvd. Bănulescu Bodoni, nr. 25, birou 33, MD-2012, Chișinău, Republica Moldova, este autorizată să importe, să notifice, să înregistreze și să distribuie produsele noastre Randox în Republica Moldova.

Această autorizație rămâne în vigoare până la 31.12.2024.

In numele Randox Laboratories Ltd.

Randox Laboratories Ltd.,
55 Diamond Road,
Crumlin,
Co. Antrim,
BT29 3QY

SOCIETATEA CU RĂSPUNDERE LIMITATĂ
S.R.L.
MEDIST GRUP
IDNO 1018600004516
REPUBLICA MOLDOVA, mun.CHIȘINĂU

.....
Lyndsay Rodgerson
Business Development Manager

COPIA CORESPUNDE ORIGINALULUI

MEDIST Grup

Soluții pentru sănătate

Către: **Agenţia Medicamentului şi Dispozitivelor Medicale**

DECLARAŢIE PE PROPRIE RĂSPUNDERE

Solicitantul MEDIST Grup S.R.L., înregistrat la Camera de Înregistrare de Stat cu seria 10186000004516 / 02.02.2018, cu sediul în Str. Bănulescu Bodoni 25, of. 33, Chișinău, MD-2012, declar pe proprie răspundere, cunoscând prevederile art. 352[1] din Codul Penal al Republicii Moldova cu privire la falsul în declaraţii, că documentele și datele furnizate pentru notificarea dispozitivului medical:

- *Control biochimie, Anexa II List B ; marca Randox , produse în Irlanda*

sunt autentice și corespund realităţii.

Gabriela Anghel,

Directoare administrativă

Semnătura _____

Data 05.12.2023

SOCIETATEA CU RĂSPUNDERE LIMITATĂ S.R.L. MEDIST GRUP IDNO 1018600004516 REPUBLICA MOLDOVA mun. CHIȘINĂU

MEDIST Grup S.R.L.
Str. Mitropolit Gavriil Bănulescu-Bodoni nr. 25
Oficiul 33, MD-2012 Chișinău, Rep. Moldova
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IDNO: 1018600004516
TVA: 0508191
BC Victoriabank SA, Filiala nr. 26 Chișinău
IBAN (MDL):MD57VI022242600000269MDL

By Royal Charter

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 13485:2016 & EN ISO 13485:2016

This is to certify that:

Randox Laboratories Limited
55 Diamond Road
Crumlin
County Antrim
BT29 4QY
United Kingdom

Holds Certificate Number: **MD 686778**

and operates a Quality Management System which complies with the requirements of ISO 13485:2016 & EN ISO 13485:2016 for the following scope:

The design, development, manufacture, service and distribution of in-vitro diagnostic medical devices, in-vitro diagnostic test kits, in-vitro diagnostic reagents, calibrators and controls and in-vitro diagnostic analysers used in diagnosis and management of cancer, diagnosis of immune status, disease status and autoimmune status, and the identification of drugs of abuse, cardiac markers, protein metabolism, endocrine disorders, blood analytes, blood components, blood gases, coagulation, transmissible agents, sexually transmissible agents, fertility and for immunological typing and therapeutic drug monitoring.

For and on behalf of BSI:

Graeme Tunbridge, Senior Vice President Medical Devices

Original Registration Date: 2018-03-19
Effective Date: 2022-11-06
Latest Revision Date: 2022-11-02
Expiry Date: 2025-11-05

...making excellence a habit.™

RANDOX

DECLARATION OF CONFORMITY

Conformity Assessment Route: Annex IV, section 3 of the Directive 98/79/EC on In Vitro Diagnostic Medical Devices

WE: **RANDOX LABORATORIES LIMITED**
of 55 DIAMOND ROAD, CRUMLIN, COUNTY ANTRIM, BT29 4QY, UK

CERTIFY THAT THE PRODUCT (S) CONFORM (S) TO THE DIRECTIVE 98/79/EC AS TRANSPOSED BY MEDICAL DEVICE REGULATIONS STATUTORY INSTRUMENT 618:2002. THE MANUFACTURER RETAINS ALL SUPPORTING DOCUMENTATION. THIS DECLARATION OF CONFORMITY IS ISSUED UNDER THE SOLE RESPONSIBILITY OF THE MANUFACTURER.

PRODUCT CATEGORY: ANNEX II LIST B

PRODUCT NAME/ FAMILY: MULTIPLE CLINICAL CHEMISTRY ANALYTE IVD, CONTROL

PRODUCT DETAILS:

Catalogue number	Description
HN1530	HUMAN ASSAYED MULTI-SERA/ASSAYED CHEMISTRY PREMIUM PLUS - LEVEL 2 (HUM ASY CONTROL 2)
HE1532	HUMAN ASSAYED MULTI-SERA/ASSAYED CHEMISTRY PREMIUM PLUS - LEVEL 3 (HUM ASY CONTROL 3)
HS2611	HUMAN ASSAYED MULTI-SERA/ASSAYED CHEMISTRY PREMIUM PLUS - LEVEL 2 & 3 (HUM ASY CONTROL)

EC REP	
Name of Company	Address
Randox Teoranta	Meenmore, Dungloe Donegal, F94 TV06 Ireland

THE PRODUCT(S) HAVE BEEN ASSESSED BY APPLICATION OF STANDARDS / SPECIFICATIONS AS LISTED IN THE ESSENTIAL REQUIREMENTS CHECKLIST AND BY FULL QUALITY MANAGEMENT SYSTEM APPROVAL CARRIED OUT BY BSI GROUP THE NETHERLANDS B.V. (NB NUMBER 2797, EC CERTIFICATE CE 643008).

DATE OF FIRST ISSUE: 20 APRIL 2005

DATE OF RE-ISSUE: 30 SEPTEMBER 2020

SIGNATURE: Pauline Armstrong

Dr. Pauline Armstrong
Global Quality Assurance / Regulatory Affairs Manager

Certificate No: **MD 686778**

Location	Registered Activities
Randox Laboratories Limited 55 Diamond Road Crumlin County Antrim BT29 4QY United Kingdom	The design, development, manufacture, service and distribution of in-vitro diagnostic medical devices, in-vitro diagnostic test kits, in-vitro diagnostic reagents, calibrators and controls and in-vitro diagnostic analysers used in diagnosis and management of cancer, diagnosis of immune status, disease status and autoimmune status, and the identification of drugs of abuse, cardiac markers, protein metabolism, endocrine disorders, blood analytes, blood components, blood gases, coagulation, transmissible agents, sexually transmissible agents, fertility and for immunological typing and therapeutic drug monitoring.
Randox Laboratories Limited 34 Diamond Road Crumlin County Antrim BT29 4QX United Kingdom	The design, development and manufacture of in-vitro diagnostic medical devices, in-vitro diagnostic test kits, in-vitro diagnostic reagents, calibrators and controls used in diagnosis and management of cancer, diagnosis of immune status, disease status and autoimmune status, and the identification of drugs of abuse, cardiac markers, protein metabolism, endocrine disorders, blood analytes, blood components, blood gases, coagulation, transmissible agents, sexually transmissible agents, fertility and for immunological typing and therapeutic drug monitoring.
Randox Laboratories Limited 36 Largy Road Crumlin County Antrim BT29 2RN United Kingdom	The design, development, manufacture, service and distribution of in-vitro diagnostic analysers used in diagnosis and management of cancer, diagnosis of immune status, disease status and autoimmune status, and the identification of drugs of abuse, cardiac markers, protein metabolism, endocrine disorders, blood analytes, blood components, blood gases, coagulation, transmissible agents, sexually transmissible agents, fertility and for immunological typing and therapeutic drug monitoring.
Randox Laboratories Limited 44 Largy Road Crumlin County Antrim BT29 4RN United Kingdom	The design, development, manufacture, service and distribution of in-vitro diagnostic medical devices, in-vitro diagnostic test kits, in-vitro diagnostic reagents, calibrators and controls and in-vitro diagnosis analysers used in diagnosis and management of cancer, diagnosis of immune status, disease status and autoimmune status, and the identification of drugs of abuse, cardiac markers, protein metabolism, endocrine disorders, blood analytes, blood components, blood gases, coagulation, transmissible agents, sexually transmissible agents, fertility and for immunological typing and therapeutic drug monitoring.

Original Registration Date: 2018-03-19

Effective Date: 2022-11-06

Latest Revision Date: 2022-11-02

Expiry Date: 2025-11-05

Certificate No: **MD 686778**

Location	Registered Activities
Randox Teoranta Meenmore Dungloe Donegal F94 TV06 Ireland	The design, development, manufacture and distribution of in-vitro diagnostic analysers, manufacture of in-vitro diagnostic reagents, used in diagnosis and management of cancer, diagnosis of immune status, disease status and autoimmune status, and the identification of drugs of abuse, cardiac markers, protein metabolism, endocrine disorders, blood analytes, blood components, blood gases, coagulation, transmissible agents, sexually transmissible agents, fertility and for immunological typing and therapeutic drug monitoring.
Randox Science Park 30 Randalstown Rd Antrim BT41 4FL United Kingdom	The design and development of reagents, calibrators and controls and the manufacture of calibrators and controls used in the diagnosis and management of cancer, diagnosis of immune status, disease status and autoimmune status, and the identifications of drugs of abuse, cardiac markers, protein metabolism, endocrine disorders, blood analytes, blood components, blood gases, coagulation, transmissible agents, sexually transmissible agents, fertility and for immunological typing and therapeutic drug monitoring.
Randox Laboratories Ltd 61 Largy Road Crumlin County Antrim BT29 4RR United Kingdom	The design, development and manufacture of in-vitro diagnostic medical devices, in-vitro diagnostic test kits, in-vitro diagnostic reagents, calibrators and controls used in diagnosis and management of cancer, diagnosis of immune status, disease status and autoimmune status, cardiac markers, protein metabolism, endocrine disorders, transmissible agents, sexually transmissible agents, fertility and for immunological typing and therapeutic drug monitoring.

Original Registration Date: 2018-03-19

Effective Date: 2022-11-06

Latest Revision Date: 2022-11-02

Expiry Date: 2025-11-05

CLINICAL CHEMISTRY CONTROLS

Our clinical chemistry controls are suitable for a range of integrated analyser systems and methods. To cover all laboratory requirements, our flexible Clinical Chemistry Controls contain up to 100 analytes, delivering effective consolidation and cost savings. Available in a choice of assayed/unassayed, liquid/lyophilised and human/bovine formats, options are available to suit all laboratory sizes and budgets.

Assayed Chemistry Premium Plus Control

Analytes

Cardiac
CK (Total)

Drugs
Digoxin
Gentamicin
Lithium
Paracetamol
Salicylate
Theophylline
Tobramycin

Electrophoresis
α-1-Globulin
α-2-Globulin
Albumin
β-Globulin
γ-Globulin

Immunoassay
Cortisol
Folate
PSA (Total)
T3 (Total)
T4 (Free)
T4 (Total)
TSH
Vitamin B_{12}

Lipids
Apolipoprotein A-1
Apolipoprotein B
Cholesterol (HDL)
Cholesterol (Total)
NEFA
Triglycerides

Proteins
Immunoglobulin A (IgA)
Immunoglobulin G (IgG)
Immunoglobulin M (IgM)
Protein (Total)
Transferrin

Routine Chemistry
α-HBDH
Acid Phosphatase (Total)
Albumin
Alkaline Phosphatase (ALP)
ALT (GPT)
Amylase
Amylase (Pancreatic)
AST (GOT)
Bicarbonate
Bile Acids
Bilirubin (Direct)
Bilirubin (Total)
Calcium
Chloride
Cholinesterase
Creatinine
D-3-Hydroxybutyrate
γGT
GLDH
Glucose
Iron
Iron (TIBC)
Lactate
Lactate Dehydrogenase (LDH)
Lipase
Magnesium
Osmolality
Phosphate (Inorganic)
Potassium
Sodium
Urea
Uric Acid (Urate)

Trace Metals
Copper
Zinc

One of our most popular controls, the Acusera Assayed Chemistry Premium Plus Control, combines a comprehensive 66 analytes in a single vial for maximum efficiency. As a true third party control, assayed instrument, method and temperature specific target values are provided for an extensive range of clinical chemistry analysers, reducing the need to assign values in-house. Also provided are electrophoresis targets as a % breakdown of total protein.

- **Lyophilised for enhanced stability**
- **Human based serum**
- **Typical Osmolality values: Level 2 is 300 mOsm/kg, Level 3 is 370 mOsm/kg**
- **Stable to expiry date at 2°C to 8°C**
- **Reconstituted stability of up to 7 days at 2°C to 8°C or 28 days at -20°C**

Description	Size	Cat No
Assayed Chemistry Premium Plus Level 2	20 x 5 ml	HN1530
Assayed Chemistry Premium Plus Level 3	20 x 5 ml	HE1532
Assayed Chemistry Premium Plus Level 2 & 3	2 x 5 x 5 ml	HS2611

Bilirubin Elevated Serum

Analytes

Bilirubin (Direct)
Bilirubin (Total)

Acusera Bilirubin Elevated Serum is a bovine based serum designed for use in the monitoring of accuracy and precision. This product is suitable for monitoring paediatric bilirubin levels and contains method specific target values and ranges.

- **Lyophilised for enhanced stability**
- **Bovine serum**
- **Stable to expiry date at 2°C to 8°C**
- **Reconstituted stability of 5 days at 2°C to 8°C**

Description	Size	Cat No
Bilirubin Elevated Serum	10 x 3 ml	BE454

CLINICAL CHEMISTRY CONTROLS

Controalele noastre de chimie clinică sunt potrivite pentru o gamă largă de sisteme și metode de analiză integrată. Pentru a acoperi toate cerințele de laborator, controalele noastre flexibile de chimie clinică conțin până la 100 de analiți, oferind o consolidare eficientă și economii de costuri. Disponibil într-o gamă de formate testat/netestat, lichid/liofilizat și uman/bovine, opțiunile sunt disponibile pentru a se potrivi tuturor dimensiunilor și bugetelor de laborator.

Chimie testată Premium Plus Control

Analiti

Cardiac
CK (total)

Droguri
Digoxină
Gentamicină
Litiu
Paracetamol
Salicilat
Teofilina
Tobramicină

Electroforeză
A-1-Globulina
A-2-Globulina
Albumină
b-Globulina
g-Globulina

Imunotest
cortizolul
Folat
PSA (total)
T3 (total)
T4 (gratuit)
T4 (total)
TSH
Vitamina B_{12}

Lipidele
Apolipoproteina A-1
Apolipoproteina B
Colesterol (HDL)
Colesterol (total)
NEFA
Trigliceridele

Proteinele
Imunoglobulina A (IgA)
Imunoglobulina G (IgG)
Imunoglobulina M (IgM)
Proteine (Total)
Transferrina

Chimie de rutină
A-HBDH
Fosfataza acidă (total)
Albumină
Fosfataza alcalina (ALP)
ALT (GPT)
Amilază
Amilază (pancreatică)
AST (GOT)
Bicarbonat
Acizi biliari
Bilirubina (Direct)
Bilirubina (total)
Calciu
Clorură
Colinesterază
Creatinină
D-3-hidroxibutirat
gGT
GLDH
Glucoză
Fier
Fier de călcat (TIBC)
lactat
Lactat dehidrogenază (LDH)
Lipaza
Magneziu
Osmolalitate
Fosfat (anorganic)
Potasiu
Sodiu
Uree
Acid uric (urat)

Urme de metale
Cupru
Zinc

Unul dintre cele mai populare controale ale noastre, Acusera Assayed Chemistry Premium Plus Control, combină un total de 66 de analiți într-o singură fiolă pentru o eficiență maximă. Ca un adevărat control terță parte, instrumentul testat, metoda și valorile țintă specifice temperaturii sunt furnizate pentru o gamă extinsă de analizoare de chimie clinică, reducând nevoia de a atribui valori interne. De asemenea, sunt furnizate ținte de electroforeză ca un procent de descompunere a proteinei totale.

- **Liofilizat pentru stabilitate sporită**
- **Ser pe bază umană**
- **Valori tipice de osmolalitate: Nivelul 2 este 300 mOsm/kg, Nivelul 3 este 370 mOsm/kg**
- **Stabil până la data de expirare la 2°C până la 8°C**
- **Stabilitate reconstituită de până la 7 zile la 2°C până la 8°C sau 28 zile la -20°C**

Descriere	mărimea	Cat Nr
Chimie testată Premium Plus Nivel 2 Chimie	20 x 5 ml	HN1530
testată Premium Plus Nivel 3 Chimie testată	20 x 5 ml	HE1532
Premium Plus Nivele 2 și 3	2 x 5 x 5 ml	HS2611

Ser cu creștere a bilirubinei

Analiti

Bilirubina (Direct)
Bilirubina (total)

Acusera Bilirubin Elevated Serum este un ser pe bază de bovine conceput pentru a fi utilizat în monitorizarea acurateței și preciziei. Acest produs este potrivit pentru monitorizarea nivelurilor de bilirubină pediatrică și conține valori și intervale țintă specifice metodei.

- **Liofilizat pentru stabilitate sporită**
- **Ser bovin**
- **Stabil până la data de expirare la 2°C până la 8°C**
- **Stabilitate reconstituită de 5 zile la 2°C până la 8°C**

Descriere	mărimea	Cat Nr
Ser cu creștere a bilirubinei	10 x 3 ml	BE454

HUMAN ASSAYED MULTI-SERA - LEVEL 3 (HUM ASY CONTROL 3)

CAT. NO.	HE1532	**GTIN:**	05055273203608	**SIZE:**	20 x 5ml
CAT. NO.	HS2611	**GTIN:**	05055273203813	**SIZE:**	5 x 5ml
LOT NO.	1211UE	**EXPIRY:**	2025-08-28		

INTENDED USE
This product is intended for *in vitro* diagnostic use, in the quality control of diagnostic assays. The Human Assayed Multi-sera is for the control of accuracy.

DEVICE DESCRIPTION
The Human Assayed Multi-sera is supplied at 2 levels, level 2 and 3. Target values and ranges are supplied for the analytes listed in the values section at both levels.

SAFETY PRECAUTIONS AND WARNINGS
For *in vitro* diagnostic use only. Do not pipette by mouth. Exercise the normal precautions required for handling laboratory reagents.

Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HbsAg), and Hepatitis C Virus (HCV) antibody and found to be NON-REACTIVE. FDA approved methods have been used to conduct these tests.
However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY
OPENED: Store refrigerated (+2°C to +8°C). Reconstituted serum is stable for 8 hours at +15°C to +25°C or 7 days at +2°C to +8°C, and 28 days when frozen once at –18°C to –24°C. (See Limitations)

UNOPENED: Store refrigerated (+2°C to +8°C). Stable to expiration date printed on individual vials.

LIMITATIONS
For Total & Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25µl - 30µl) of 0.7M Acetic acid solution to 1ml of the serum exactly 30 minutes after reconstitution. After stabilisation Total and Prostatic Acid Phosphatase is stable for 2 hours at +15°C to +25°C, 2 days at +2°C to +8°C, and 28 days when frozen once at –18°C to –24°C.
Alkaline Phosphatase levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum is allowed to stand for 1 hour at +15°C to +25°C before measurement.
Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 4 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.
GLDH is stable for 2 day at 2 - 8°C.
NEFA is stable for 1 day at +2°C to +8°C.
Total PSA is stable for 4 days at +2°C to +8°C, or 28 days in aliquots frozen at –18°C to –24°C.
Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components.
Different lot numbers of this control should not be interchanged, as the values assigned to the controls vary from lot to lot.
The control should not be used as a calibration material.
Due to the zinc content in some batches of rubber stoppers, the QC and calibrator material should be aliquoted into polypropylene tubes and stored at +2°C to +8°C to ensure stable zinc levels throughout the stability period.

PREPARATION FOR USE
The Human Assayed Multi-sera is supplied lyophilised.

1. Carefully reconstitute each vial of lyophilised serum with exactly 5ml of distilled water at +15°C to +25°C. Close the bottle and allow to stand for 30 minutes before use. Ensure contents are completely dissolved by swirling gently. Avoid formation of foam. Do not shake.

2. Refer to the Control section of the individual analyser application.

3. Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

MATERIALS PROVIDED
Human Assayed Multi-sera - Level 3 20 x 5ml / 5 x 5ml

MATERIALS REQUIRED BUT NOT PROVIDED
Volumetric pipette

ASSIGNED VALUES
Due to the variation caused by test equipment, test reagents and laboratory technique, the quoted ranges are provided for guidance. It is recommended that these ranges are used until each laboratory has established its own ranges, based on individual laboratory requirements.

Each batch of assayed human serum is submitted to reference laboratories for assignment against international Reference Standards. Where international Reference Standards are unavailable, Reference Methods are used. Values are also collected from approx. 3000 laboratories worldwide and using a unique statistical analysis, a value is assigned.

With each batch, a control range is provided for individual parameters and each parameter method. The control range is equivalent to the assigned mean ±2S.D.

If an instrument specific value is not available, refer to the Mean of all Instruments section. If necessary, contact Randox Laboratories - Technical Services, Northern Ireland, tel: +44 (0) 28 9445 1070 or email Technical.Services@randox.com.

NOTES
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(1) Applies only in Germany. Ranges established according to the Guidelines of the Federal Chamber of Physicians in Germany.
(2) Values established by reference laboratories officially recognised by the Federal Chamber of Physicians in Germany.
(3) DGKC: German Society for Clinical Chemistry.
(4) IFCC: International Federation of Clinical Chemistry.
(5) SCE: Scandinavian Committee on Enzymes.

EC REP Randox Teoranta, Meenmore,
Dungloe, Donegal,
F94 TV06, Ireland

10 Feb '22 me

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Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.6	25.2	34.0	2.20	4.40	Bromocresol Green
	g/dl	2.96	2.52	3.40	0.22	0.44	
	g/l	29.3	24.9	33.7	2.20	4.40	Bromocresol Purple
	g/dl	2.93	2.49	3.37	0.22	0.44	
Alkaline Phosphatase	U/l	369	313	425	28.00	56.00	AMP optimised to IFCC 37°C
	U/l	365	310	420	27.50	55.00	AMP non-optimised 37°C
ALT (GPT)	U/l	129	103	155	13.00	26.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	251	213	289	19.00	38.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	306	260	352	23.00	46.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	343	292	394	25.50	51.00	Abbott Architect IFCC Cal. 37°C
AST (GOT)	U/l	133	106	160	13.50	27.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	45.3	36.3	54.3	4.50	9.00	Enzymatic Colorimetric
Bicarbonate	mmol/l	11.9	9.41	14.4	1.25	2.49	Enzymatic
Bilirubin Direct	µmol/l	33.4	26.4	40.4	3.50	7.00	Diazo with Sulphanilic Acid
	mg/dl	1.95	1.54	2.36	0.21	0.41	
	µmol/l	33.1	26.2	40.0	3.45	6.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.94	1.53	2.35	0.21	0.41	
Bilirubin Total	µmol/l	91.9	72.6	111	9.65	19.30	Diazo with Dichloroaniline (DCA)
	mg/dl	5.38	4.25	6.51	0.57	1.13	
	µmol/l	93.0	73.5	113	9.75	19.50	Diazo with Sulphanilic Acid
	mg/dl	5.44	4.30	6.58	0.57	1.14	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	91.6	72.4	111	9.60	19.20	Diazonium ion
	mg/dl	5.36	4.24	6.48	0.56	1.12	
Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	Arsenazo III
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.21	6.28	8.14	0.47	0.93	Cholesterol Oxidase - Abell Kendall
	mg/dl	278	242	314	18.00	36.00	
	mmol/l	7.36	6.40	8.32	0.48	0.96	Cholesterol Oxidase - IDMS
	mg/dl	284	247	321	18.50	37.00	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Cholinesterase	U/l	6249	4999	7499	625.00	1250.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	509	417	601	46.00	92.00	CK-NAC serum start (DGKC) 37°C
	U/l	512	420	604	46.00	92.00	CK-NAC (IFCC) 37°C
	U/l	518	425	611	46.50	93.00	Abbott CK-NAC (IFCC) 37°C
Creatinine	µmol/l	378	303	453	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.27	3.42	5.12	0.43	0.85	
	µmol/l	367	293	441	37.00	74.00	Enzymatic UV method
	mg/dl	4.15	3.31	4.99	0.42	0.84	
	µmol/l	371	297	445	37.00	74.00	Creatinine PAP method
	mg/dl	4.19	3.36	5.02	0.42	0.83	
gamma-GT	U/l	177	151	203	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	176	150	202	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
HDL - Cholesterol	mmol/l	2.61	2.22	3.00	0.20	0.39	Direct HDL PPD
	mg/dl	101	85.7	116	7.65	15.30	

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Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	2.58	2.20	2.96	0.19	0.38	Direct Clearance Method
	mg/dl	99.6	84.9	114	7.35	14.70	
	mmol/l	2.51	2.13	2.89	0.19	0.38	HDL - Ultra
	mg/dl	96.9	82.2	112	7.35	14.70	
Iron	µmol/l	39.2	32.2	46.2	3.50	7.00	Colorimetric with ppt.
	µg/dl	219	180	258	19.50	39.00	
	µmol/l	38.2	31.4	45.0	3.40	6.80	Colorimetric without ppt.
	µg/dl	214	176	252	19.00	38.00	
Lactate	mmol/l	6.06	4.97	7.15	0.55	1.09	Colorimetric Lactate Oxidase
	mg/dl	54.6	44.8	64.4	4.90	9.80	
LD (LDH)	U/l	400	340	460	30.00	60.00	L->P 37°C
	U/l	396	336	456	30.00	60.00	L->P IFCC 37°C
Lipase	U/l	55	44	66	5.50	11.00	Other Colorimetric 37°C
Lithium	mmol/l	1.91	1.68	2.14	0.12	0.23	Spectrophotometric
	mg/dl	1.33	1.17	1.49	0.08	0.16	
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Arsenazo III
	mg/dl	4.13	3.65	4.61	0.24	0.48	
	mmol/l	1.72	1.52	1.92	0.10	0.20	Enzymatic
	mg/dl	4.18	3.69	4.67	0.25	0.49	
Osmolality	mOsm/kg	368	294	442	37.00	74.00	Calculated
Phosphate Inorganic	mmol/l	2.29	1.94	2.64	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.10	6.01	8.19	0.55	1.09	
	mmol/l	2.28	1.94	2.62	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.07	6.01	8.13	0.53	1.06	
Potassium	mmol/l	6.06	5.57	6.55	0.25	0.49	ISE method - indirect

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Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	47.2	37.8	56.6	4.70	9.40	Biuret reaction end point
	g/dl	4.72	3.78	5.66	0.47	0.94	
	g/l	47.3	37.8	56.8	4.75	9.50	Biuret reaction kinetic
	g/dl	4.73	3.78	5.68	0.48	0.95	
Sodium	mmol/l	155	148	162	3.50	7.00	ISE method - indirect
TIBC	µmol/l	43.2	34.2	52.2	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	241	191	291	25.00	50.00	
	µmol/l	42.5	33.6	51.4	4.45	8.90	Calculated from Transferrin
	µg/dl	238	188	288	25.00	50.00	
Triglycerides	mmol/l	3.01	2.53	3.49	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	224	308	21.00	42.00	
	mmol/l	3.01	2.53	3.49	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	224	308	21.00	42.00	
	mmol/l	3.00	2.52	3.48	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	266	223	309	21.50	43.00	
UIBC	µmol/l	4.42	3.62	5.22	0.40	0.80	Direct Colorimetric
	µg/dl	24.7	20.2	29.2	2.25	4.50	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.31	8.10	10.5	0.61	1.21	
	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.34	8.13	10.6	0.61	1.21	
Urea	mmol/l	20.4	17.3	23.5	1.55	3.10	Urease end point
	mg/dl	123	104	142	9.50	19.00	
	mmol/l	19.8	16.9	22.7	1.45	2.90	Urease kinetic
	mg/dl	119	102	136	8.50	17.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
	mg/dl	55.6	47.3	63.9	4.15	8.30	

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ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.9	25.4	34.4	2.25	4.50	Bromocresol Green
	g/dl	2.99	2.54	3.44	0.23	0.45	
ALT (GPT)	U/l	139	112	166	13.50	27.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	32.7	25.8	39.6	3.45	6.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.91	1.51	2.31	0.20	0.40	
Cholesterol	mmol/l	7.68	6.68	8.68	0.50	1.00	Cholesterol Oxidase - Abell Kendall
	mg/dl	296	258	334	19.00	38.00	
Creatinine	µmol/l	367	293	441	37.00	74.00	Alkaline picrate no deproteinization
	mg/dl	4.15	3.31	4.99	0.42	0.84	
gamma-GT	U/l	183	155	211	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
Lactate	mmol/l	5.54	4.54	6.54	0.50	1.00	Colorimetric Lactate Oxidase
	mg/dl	49.9	40.9	58.9	4.50	9.00	
Protein Total	g/l	47.3	37.8	56.8	4.75	9.50	Biuret reaction end point
	g/dl	4.73	3.78	5.68	0.48	0.95	
Triglycerides	mmol/l	3.06	2.57	3.55	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	271	227	315	22.00	44.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.26	8.05	10.5	0.61	1.21	

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RANDOX

ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease kinetic
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	3.95	7.90	

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RANDOX

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Albumin	g/l	28.7	24.4	33.0	2.15	4.30	Bromocresol Green
	g/dl	2.87	2.44	3.30	0.22	0.43	
	g/l	29.4	25.0	33.8	2.20	4.40	Bromocresol Purple
	g/dl	2.94	2.50	3.38	0.22	0.44	
Alkaline Phosphatase	U/l	429	365	493	32.00	64.00	AMP optimised to IFCC 37°C
	U/l	396	337	455	29.50	59.00	Beckman (Extinction Coefficient) 37°C
ALT (GPT)	U/l	128	102	154	13.00	26.00	Beckman (Extinction Coefficient) 37°C
	U/l	134	107	161	13.50	27.00	Tris buffer without P5P 37°C
Amylase Total	U/l	271	230	312	20.50	41.00	Beckman (Extinction Coefficient) 37°C
	U/l	292	248	336	22.00	44.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	281	239	323	21.00	42.00	Other 2-chloro-pNPG3 37°C
AST (GOT)	U/l	134	107	161	13.50	27.00	Beckman (Extinction Coefficient) 37°C
	U/l	147	118	176	14.50	29.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.1	12.0	18.2	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	27.4	21.6	33.2	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
Bilirubin Total	µmol/l	96.8	76.5	117	10.15	20.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	5.66	4.48	6.84	0.59	1.18	
	µmol/l	92.3	72.9	112	9.70	19.40	DPD (Beckman AU)
	mg/dl	5.40	4.26	6.54	0.57	1.14	
Calcium	mmol/l	3.18	2.86	3.50	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.5	13.9	0.60	1.20	

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RANDOX

Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.15	2.84	3.46	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Cholesterol	mmol/l	7.40	6.44	8.36	0.48	0.96	Cholesterol Oxidase - Abell Kendall
	mg/dl	286	249	323	18.50	37.00	
	mmol/l	7.66	6.66	8.66	0.50	1.00	Cholesterol Oxidase - IDMS
	mg/dl	296	257	335	19.50	39.00	
Chloride	mmol/l	111	102	120	4.50	9.00	ISE indirect
Cholinesterase	U/l	5083	4066	6100	508.50	1017.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	522	428	616	47.00	94.00	Beckman (Extinction Coefficient) 37°C
	U/l	544	446	642	49.00	98.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	344	275	413	34.50	69.00	Alkaline picrate no deproteinization
	mg/dl	3.89	3.11	4.67	0.39	0.78	
	µmol/l	382	306	458	38.00	76.00	Enzymatic UV method
	mg/dl	4.32	3.46	5.18	0.43	0.86	
	µmol/l	361	289	433	36.00	72.00	IDMS traceable
	mg/dl	4.08	3.27	4.89	0.41	0.81	
	µmol/l	346	277	415	34.50	69.00	Jaffe rate blanked
	mg/dl	3.91	3.13	4.69	0.39	0.78	
	µmol/l	357	286	428	35.50	71.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.03	3.23	4.83	0.40	0.80	
gamma-GT	U/l	187	159	215	14.00	28.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	185	157	213	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
GLDH	U/l	32	25	39	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Glucose oxidase
	mg/dl	285	241	329	22.00	44.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.8	13.4	18.2	1.20	2.40	Hexokinase
	mg/dl	285	241	329	22.00	44.00	
HDL - Cholesterol	mmol/l	2.71	2.30	3.12	0.21	0.41	Direct Clearance Method
	mg/dl	105	88.8	121	8.10	16.20	
	mmol/l	2.57	2.18	2.96	0.20	0.39	Direct HDL Immunoseparation
	mg/dl	99.2	84.1	114	7.55	15.10	
	mmol/l	2.86	2.43	3.29	0.22	0.43	HDL - Ultra
	mg/dl	110	93.8	126	8.10	16.20	
Iron	µmol/l	38.5	31.6	45.4	3.45	6.90	Colorimetric with ppt.
	µg/dl	215	177	253	19.00	38.00	
	µmol/l	38.6	31.7	45.5	3.45	6.90	Colorimetric without ppt.
	µg/dl	216	177	255	19.50	39.00	
Lactate	mmol/l	5.73	4.70	6.76	0.52	1.03	Colorimetric Lactate Oxidase
	mg/dl	51.6	42.3	60.9	4.65	9.30	
LD (LDH)	U/l	371	315	427	28.00	56.00	L to P Beckman (Extinction Coeff) 37°C
	U/l	406	345	467	30.50	61.00	L->P IFCC 37°C
	U/l	882	750	1014	66.00	132.00	P->L Scandinavian & Dutch 37°C
	U/l	392	333	451	29.50	59.00	L->P 37°C
Lipase	U/l	59	47	71	6.00	12.00	Other Colorimetric 37°C
Lithium	mmol/l	1.90	1.67	2.13	0.12	0.23	Spectrophotometric
	mg/dl	1.32	1.16	1.48	0.08	0.16	
Magnesium	mmol/l	1.77	1.56	1.98	0.11	0.21	Xylidyl Blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
Phosphate Inorganic	mmol/l	2.37	2.01	2.73	0.18	0.36	Beckman PHOSm (365nm)
	mg/dl	7.35	6.23	8.47	0.56	1.12	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	2.35	2.00	2.70	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.29	6.20	8.38	0.55	1.09	
Potassium	mmol/l	6.04	5.56	6.52	0.24	0.48	ISE method - indirect
Protein Total	g/l	45.7	36.6	54.8	4.55	9.10	Biuret reaction end point
	g/dl	4.57	3.66	5.48	0.46	0.91	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - indirect
TIBC	µmol/l	43.5	34.4	52.6	4.55	9.10	FE+UIBC(saturation with iron)
	µg/dl	243	192	294	25.50	51.00	
Triglycerides	mmol/l	3.02	2.54	3.50	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	267	225	309	21.00	42.00	
	mmol/l	3.04	2.55	3.53	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	269	226	312	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.63	8.38	10.9	0.63	1.25	
	mmol/l	0.57	0.50	0.65	0.04	0.08	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.64	8.38	10.9	0.63	1.26	
Urea	mmol/l	19.7	16.7	22.7	1.50	3.00	Urease end point
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.9	16.9	22.9	1.50	3.00	Urease kinetic
	mg/dl	120	102	138	9.00	18.00	
	mmol/l	19.9	16.9	22.9	1.50	3.00	BUN
	mg/dl	55.9	47.5	64.3	4.20	8.40	

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Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.0	24.6	33.4	2.20	4.40	Bromocresol Purple
	g/dl	2.90	2.46	3.34	0.22	0.44	
Alkaline Phosphatase	U/l	387	329	445	29.00	58.00	AMP optimised to IFCC 37°C
Amylase Total	U/l	298	253	343	22.50	45.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	135	108	162	13.50	27.00	Beckman Mod. IFCC Ref. without P5P 37°C
Calcium	mmol/l	3.12	2.81	3.43	0.16	0.31	Ion selective electrode
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
Creatinine	µmol/l	382	305	459	38.50	77.00	Alkaline picrate no deproteinization
	mg/dl	4.32	3.45	5.19	0.44	0.87	
Glucose	mmol/l	15.0	12.8	17.2	1.10	2.20	Glucose oxidase
	mg/dl	270	231	309	19.50	39.00	
HDL - Cholesterol	mmol/l	2.74	2.32	3.16	0.21	0.42	HDL - Ultra
	mg/dl	106	89.6	122	8.20	16.40	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Calmagite
	mg/dl	4.23	3.72	4.74	0.26	0.51	
Phosphate Inorganic	mmol/l	2.36	2.01	2.71	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.32	6.23	8.41	0.55	1.09	
Potassium	mmol/l	6.06	5.58	6.54	0.24	0.48	ISE method - indirect
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	3.07	2.57	3.57	0.25	0.50	Lipase/GPO-PAP no correction
	mg/dl	272	227	317	22.50	45.00	

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Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.26	8.06	10.5	0.60	1.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.9	27.1	36.7	2.40	4.80	Bromocresol Green
	g/dl	3.19	2.71	3.67	0.24	0.48	
	g/l	28.2	24.0	32.4	2.10	4.20	Turbidimetric Assays
	g/dl	2.82	2.40	3.24	0.21	0.42	
Alkaline Phosphatase	U/l	352	300	404	26.00	52.00	Roche Integra AMP buffer 37°C
	U/l	274	234	314	20.00	40.00	Roche Integra AMP buffer 30°C
	U/l	225	192	258	16.50	33.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	121	97	145	12.00	24.00	Tris buffer without P5P 37°C
	U/l	90	72	108	9.00	18.00	Tris buffer without P5P 30°C
	U/l	68	55	81	6.50	13.00	Tris buffer without P5P 25°C
Amylase Total	U/l	280	238	322	21.00	42.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	278	236	320	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	282	239	325	21.50	43.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 30°C
	U/l	64	51	77	6.50	13.00	Tris buffer without P5P 25°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Enzymatic
Bilirubin Direct	µmol/l	36.3	28.7	43.9	3.80	7.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.12	1.68	2.56	0.22	0.44	
	µmol/l	35.4	28.0	42.8	3.70	7.40	Diazo with Sulphanilic Acid
	mg/dl	2.07	1.64	2.50	0.22	0.43	

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Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	35.0	27.6	42.4	3.70	7.40	Roche DPD JG standardised
	mg/dl	2.05	1.61	2.49	0.22	0.44	
Bilirubin Total	µmol/l	84.8	67.0	103	8.90	17.80	Diazo with Sulphanilic Acid
	mg/dl	4.96	3.92	6.00	0.52	1.04	
	µmol/l	83.9	66.3	102	8.80	17.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.91	3.88	5.94	0.52	1.03	
	µmol/l	85.0	67.2	103	8.90	17.80	Diazonium ion
	mg/dl	4.97	3.93	6.01	0.52	1.04	
Calcium	mmol/l	3.18	2.86	3.50	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	3.18	2.86	3.50	0.16	0.32	NM-BAPTA
	mg/dl	12.7	11.5	13.9	0.60	1.20	
Cholesterol	mmol/l	7.31	6.36	8.26	0.48	0.95	Cholesterol Oxidase - Abell Kendall
	mg/dl	282	245	319	18.50	37.00	
	mmol/l	7.31	6.36	8.26	0.48	0.95	Cholesterol Oxidase - IDMS
	mg/dl	282	245	319	18.50	37.00	
Chloride	mmol/l	112	103	121	4.50	9.00	ISE indirect
CK Total	U/l	494	405	583	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	309	254	364	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	360	288	432	36.00	72.00	Alkaline picrate with deproteinization
	mg/dl	4.07	3.25	4.89	0.41	0.82	
	µmol/l	350	280	420	35.00	70.00	Alkaline picrate no deproteinization
	mg/dl	3.96	3.16	4.76	0.40	0.80	
	µmol/l	374	299	449	37.50	75.00	Enzymatic UV method
	mg/dl	4.23	3.38	5.08	0.43	0.85	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	370	296	444	37.00	74.00	Roche Creatinine Plus
	mg/dl	4.18	3.34	5.02	0.42	0.84	
	µmol/l	357	285	429	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.03	3.22	4.84	0.41	0.81	
	µmol/l	352	281	423	35.50	71.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.98	3.18	4.78	0.40	0.80	
gamma-GT	U/l	167	142	192	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	132	112	152	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	103	88	118	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	187	159	215	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	98	132	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	3.15	2.68	3.62	0.24	0.47	Direct HDL Roche 4th Generation
	mg/dl	122	103	141	9.50	19.00	
Iron	µmol/l	38.2	31.3	45.1	3.45	6.90	Colorimetric with ppt.
	µg/dl	214	175	253	19.50	39.00	
	µmol/l	38.6	31.7	45.5	3.45	6.90	Colorimetric without ppt.
	µg/dl	216	177	255	19.50	39.00	
Lactate	mmol/l	5.82	4.77	6.87	0.53	1.05	Colorimetric Lactate Oxidase
	mg/dl	52.4	43.0	61.8	4.70	9.40	
LD (LDH)	U/l	418	355	481	31.50	63.00	L->P IFCC 37°C
	U/l	302	256	348	23.00	46.00	L->P IFCC 30°C
	U/l	212	180	244	16.00	32.00	L->P IFCC 25°C

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COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lipase	U/l	58	47	69	5.50	11.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.91	1.68	2.14	0.12	0.23	Ion selective electrode
	mg/dl	1.33	1.17	1.49	0.08	0.16	
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
	mmol/l	1.71	1.51	1.91	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.16	3.67	4.65	0.25	0.49	
Phosphate Inorganic	mmol/l	2.41	2.05	2.77	0.18	0.36	Phosphomolybdate enzymatic
	mg/dl	7.47	6.36	8.58	0.56	1.11	
	mmol/l	2.40	2.04	2.76	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.44	6.32	8.56	0.56	1.12	
Potassium	mmol/l	6.08	5.59	6.57	0.25	0.49	ISE method - indirect
Protein Total	g/l	43.9	35.1	52.7	4.40	8.80	Biuret reaction end point
	g/dl	4.39	3.51	5.27	0.44	0.88	
Sodium	mmol/l	154	147	161	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.5	32.0	49.0	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	226	179	273	23.50	47.00	
Triglycerides	mmol/l	3.04	2.55	3.53	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	269	226	312	21.50	43.00	
	mmol/l	2.96	2.49	3.43	0.24	0.47	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	262	220	304	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.53	8.28	10.8	0.63	1.25	
	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.46	8.23	10.7	0.62	1.23	

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RANDOX

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.53	8.28	10.8	0.63	1.25	
Urea	mmol/l	18.9	16.1	21.7	1.40	2.80	Urease kinetic
	mg/dl	114	96.8	131	8.60	17.20	
	mmol/l	18.9	16.1	21.7	1.40	2.80	BUN
	mg/dl	53.0	45.1	60.9	3.95	7.90	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.1	24.7	33.5	2.20	4.40	Bromocresol Green
	g/dl	2.91	2.47	3.35	0.22	0.44	
Alkaline Phosphatase	U/l	385	327	443	29.00	58.00	AMP optimised to IFCC 37°C
	U/l	300	255	345	22.50	45.00	AMP optimised to IFCC 30°C
	U/l	246	209	283	18.50	37.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	144	115	173	14.50	29.00	Tris buffer without P5P 37°C
	U/l	107	85	129	11.00	22.00	Tris buffer without P5P 30°C
	U/l	81	65	97	8.00	16.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
	U/l	105	84	126	10.50	21.00	Tris buffer without P5P 30°C
	U/l	74	59	89	7.50	15.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	88.3	69.7	107	9.30	18.60	Diazo with Sulphanilic Acid
	mg/dl	5.17	4.08	6.26	0.55	1.09	
	µmol/l	90.5	71.5	110	9.50	19.00	Nitrobenzenediazonium salt
	mg/dl	5.29	4.18	6.40	0.56	1.11	
Calcium	mmol/l	3.28	2.95	3.61	0.17	0.33	Arsenazo III
	mg/dl	13.1	11.8	14.4	0.65	1.30	
Cholesterol	mmol/l	7.25	6.31	8.19	0.47	0.94	Cholesterol Oxidase - Abell Kendall
	mg/dl	280	244	316	18.00	36.00	
CK Total	U/l	535	438	632	48.50	97.00	CK-NAC (IFCC) 37°C
	U/l	335	274	396	30.50	61.00	CK-NAC (IFCC) 30°C
	U/l	227	186	268	20.50	41.00	CK-NAC (IFCC) 25°C

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	373	298	448	37.50	75.00	Alkaline picrate no deproteinization
	mg/dl	4.21	3.37	5.05	0.42	0.84	
gamma-GT	U/l	179	152	206	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	141	120	162	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	110	94	126	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.7	13.3	18.1	1.20	2.40	Hexokinase
	mg/dl	283	240	326	21.50	43.00	
	mmol/l	15.2	12.9	17.5	1.15	2.30	Glucose oxidase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	3.18	2.70	3.66	0.24	0.48	Direct HDL PEGME
	mg/dl	123	104	142	9.50	19.00	
Iron	µmol/l	39.3	32.3	46.3	3.50	7.00	Colorimetric without ppt.
	µg/dl	220	181	259	19.50	39.00	
Magnesium	mmol/l	1.73	1.53	1.93	0.10	0.20	Xylidyl Blue
	mg/dl	4.20	3.72	4.68	0.24	0.48	
Phosphate Inorganic	mmol/l	2.37	2.01	2.73	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.35	6.23	8.47	0.56	1.12	
Potassium	mmol/l	5.96	5.48	6.44	0.24	0.48	ISE method - direct
Protein Total	g/l	47.5	38.0	57.0	4.75	9.50	Biuret reaction end point
	g/dl	4.75	3.80	5.70	0.48	0.95	
Sodium	mmol/l	151	144	158	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	3.15	2.64	3.66	0.26	0.51	Lipase/GPO-PAP no correction
	mg/dl	279	234	324	22.50	45.00	
Uric Acid (Urate)	mmol/l	0.57	0.50	0.64	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.56	8.32	10.8	0.62	1.24	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	18.7	15.9	21.5	1.40	2.80	Urease kinetic
	mg/dl	112	95.6	128	8.20	16.40	
	mmol/l	18.7	15.9	21.5	1.40	2.80	BUN
	mg/dl	52.5	44.6	60.4	3.95	7.90	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.5	25.9	35.1	2.30	4.60	Bromocresol Green
	g/dl	3.05	2.59	3.51	0.23	0.46	
	g/l	29.1	24.7	33.5	2.20	4.40	Bromocresol Purple
	g/dl	2.91	2.47	3.35	0.22	0.44	
	g/l	29.8	25.4	34.2	2.20	4.40	Ortho Vitros Microslide Systems
	g/dl	2.98	2.54	3.42	0.22	0.44	
	g/l	28.1	23.9	32.3	2.10	4.20	Turbidimetric Assays
	g/dl	2.81	2.39	3.23	0.21	0.42	
Alkaline Phosphatase	U/l	283	241	325	21.00	42.00	Ortho Vitros Microslide Systems 37°C
	U/l	546	464	628	41.00	82.00	Diethanolamine buffer DEA 37°C
	U/l	425	361	489	32.00	64.00	Diethanolamine buffer DEA 30°C
	U/l	349	296	402	26.50	53.00	Diethanolamine buffer DEA 25°C
	U/l	386	328	444	29.00	58.00	AMP optimised to IFCC 37°C
	U/l	301	256	346	22.50	45.00	AMP optimised to IFCC 30°C
	U/l	247	210	284	18.50	37.00	AMP optimised to IFCC 25°C
	U/l	367	312	422	27.50	55.00	AMP non-optimised 37°C
	U/l	286	243	329	21.50	43.00	AMP non-optimised 30°C
	U/l	235	199	271	18.00	36.00	AMP non-optimised 25°C
	U/l	351	298	404	26.50	53.00	Colorimetric 37°C
	U/l	273	232	314	20.50	41.00	Colorimetric 30°C
	U/l	224	190	258	17.00	34.00	Colorimetric 25°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	123	99	147	12.00	24.00	Colorimetric 37°C
	U/l	91	73	109	9.00	18.00	Colorimetric 30°C
	U/l	69	56	82	6.50	13.00	Colorimetric 25°C
	U/l	135	108	162	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	137	110	164	13.50	27.00	Tris buffer with P5P 37°C
	U/l	101	81	121	10.00	20.00	Tris buffer with P5P 30°C
	U/l	77	62	92	7.50	15.00	Tris buffer with P5P 25°C
	U/l	127	102	152	12.50	25.00	Tris buffer without P5P 37°C
	U/l	94	75	113	9.50	19.00	Tris buffer without P5P 30°C
	U/l	72	57	87	7.50	15.00	Tris buffer without P5P 25°C
	U/l	120	96	144	12.00	24.00	Phosphate buffer DGKC 37°C
	U/l	89	71	107	9.00	18.00	Phosphate buffer DGKC 30°C
	U/l	68	54	82	7.00	14.00	Phosphate buffer DGKC 25°C
	U/l	132	105	159	13.50	27.00	Ortho Vitros MicroSlide visible 37°C
Amylase Pancreatic	U/l	254	216	292	19.00	38.00	Immunoinhibition EPS substrate 37°C
	U/l	247	210	284	18.50	37.00	Roche EPS Liquid 37°C
	U/l	292	248	336	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	286	243	329	21.50	43.00	Siemens - blocked pNPG7 37°C
	U/l	312	266	358	23.00	46.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	276	235	317	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	276	234	318	21.00	42.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	182	155	209	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	275	234	316	20.50	41.00	Roche liquid stable pNPG7 37°C
	U/l	332	282	382	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
	U/l	292	248	336	22.00	44.00	Beckman Coulter - blocked pNPG7 37°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	307	261	353	23.00	46.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	271	230	312	20.50	41.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	237	201	273	18.00	36.00	Randox Lyo. Ethylidene pNPG7 37°C
Apolipoprotein A-1	g/l	0.93	0.77	1.10	0.08	0.17	Immunoturbidimetric
	mg/dl	93.4	76.6	110	8.40	16.80	
Apolipoprotein B	g/l	0.72	0.59	0.85	0.07	0.13	Immunoturbidimetric
	mg/dl	72.0	59.0	85.0	6.50	13.00	
Acid Phosphatase (Total)	U/l	40.8	27.3	54.3	6.75	13.50	1-Naphthyl Phosphate substrate Kinetic 37°C
AST (GOT)	U/l	135	108	162	13.50	27.00	Colorimetric 37°C
	U/l	91	73	109	9.00	18.00	Colorimetric 30°C
	U/l	64	51	77	6.50	13.00	Colorimetric 25°C
	U/l	175	140	210	17.50	35.00	Ortho Vitros Microslide visible slide 37°C
	U/l	173	138	208	17.50	35.00	Tris buffer with P5P 37°C
	U/l	117	93	141	12.00	24.00	Tris buffer with P5P 30°C
	U/l	82	66	98	8.00	16.00	Tris buffer with P5P 25°C
	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
	U/l	92	74	110	9.00	18.00	Tris buffer without P5P 30°C
	U/l	65	52	78	6.50	13.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	43.0	34.4	51.6	4.30	8.60	5th Generation Colorimetric
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Colorimetric
	mmol/l	15.8	12.5	19.1	1.65	3.30	Ortho Vitros Microslide Systems
	mmol/l	14.0	11.1	16.9	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	31.2	24.7	37.7	3.25	6.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	µmol/l	33.7	26.6	40.8	3.55	7.10	Diazo with Sulphanilic Acid
	mg/dl	1.97	1.56	2.38	0.21	0.41	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	33.0	26.1	39.9	3.45	6.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.93	1.53	2.33	0.20	0.40	
	µmol/l	32.6	25.7	39.5	3.45	6.90	Oxidation to Biliverdin/Vanadate
	mg/dl	1.91	1.50	2.32	0.21	0.41	
	µmol/l	35.2	27.8	42.6	3.70	7.40	Modified Jendrassik
	mg/dl	2.06	1.63	2.49	0.22	0.43	
Bilirubin Total	µmol/l	85.3	67.4	103	8.95	17.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.99	3.94	6.04	0.53	1.05	
	µmol/l	92.2	72.9	112	9.65	19.30	Diazo with Dichloroaniline (DCA)
	mg/dl	5.39	4.26	6.52	0.57	1.13	
	µmol/l	88.5	69.9	107	9.30	18.60	Diazo with Sulphanilic Acid
	mg/dl	5.18	4.09	6.27	0.55	1.09	
	µmol/l	82.1	64.8	99.4	8.65	17.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.80	3.79	5.81	0.51	1.01	
	µmol/l	90.5	71.5	110	9.50	19.00	Nitrobenzenediazonium salt
	mg/dl	5.29	4.18	6.40	0.56	1.11	
	µmol/l	84.4	66.7	102	8.85	17.70	Diazonium ion
	mg/dl	4.94	3.90	5.98	0.52	1.04	
	µmol/l	99.8	78.8	121	10.50	21.00	Oxidation to Biliverdin/Vanadate
	mg/dl	5.84	4.61	7.07	0.62	1.23	
	µmol/l	99.5	78.6	120	10.45	20.90	Modified Jendrassik
	mg/dl	5.82	4.60	7.04	0.61	1.22	
Calcium	mmol/l	3.18	2.86	3.50	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.5	13.9	0.60	1.20	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	3.15	2.83	3.47	0.16	0.32	Ortho Vitros Microslide Systems
	mg/dl	12.6	11.3	13.9	0.65	1.30	
	mmol/l	3.12	2.81	3.43	0.16	0.31	Ion selective electrode
	mg/dl	12.5	11.3	13.7	0.60	1.20	
	mmol/l	3.16	2.84	3.48	0.16	0.32	Arsenazo III
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.17	2.86	3.48	0.16	0.31	NM-BAPTA
	mg/dl	12.7	11.5	13.9	0.60	1.20	
	mmol/l	1.23	1.11	1.35	0.06	0.12	Ionised calcium
	mg/dl	4.93	4.45	5.41	0.24	0.48	
Cholesterol	mmol/l	7.00	6.09	7.91	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	270	235	305	17.50	35.00	
	mmol/l	7.28	6.34	8.22	0.47	0.94	Cholesterol Oxidase - Abell Kendall
	mg/dl	281	245	317	18.00	36.00	
	mmol/l	7.40	6.44	8.36	0.48	0.96	Cholesterol Oxidase - IDMS
	mg/dl	286	249	323	18.50	37.00	
Chloride	mmol/l	119	110	128	4.50	9.00	Colorimetric
	mmol/l	114	104	124	5.00	10.00	Ortho Vitros Microslide Systems
	mmol/l	111	102	120	4.50	9.00	ISE indirect
	mmol/l	111	102	120	4.50	9.00	ISE direct
Cholinesterase	U/l	5664	4531	6797	566.50	1133.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	438	359	517	39.50	79.00	Ortho Vitros Microslide Systems 37°C
	U/l	506	415	597	45.50	91.00	CK-NAC serum start (DGKC) 37°C
	U/l	317	260	374	28.50	57.00	CK-NAC serum start (DGKC) 30°C
	U/l	215	176	254	19.50	39.00	CK-NAC serum start (DGKC) 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	515	422	608	46.50	93.00	CK-NAC substrate start (DGKC) 37°C
	U/l	322	264	380	29.00	58.00	CK-NAC substrate start (DGKC) 30°C
	U/l	219	179	259	20.00	40.00	CK-NAC substrate start (DGKC) 25°C
	U/l	503	413	593	45.00	90.00	CK-NAC (IFCC) 37°C
	U/l	315	259	371	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	214	176	252	19.00	38.00	CK-NAC (IFCC) 25°C
Copper	µmol/l	27.3	21.9	32.7	2.70	5.40	Atomic absorption
	µg/dl	174	139	209	17.50	35.00	
	µmol/l	26.5	21.2	31.8	2.65	5.30	Colorimetric
	µg/dl	169	135	203	17.00	34.00	
Cortisol	nmol/l	985	739	1231	123.00	246.00	Roche Cobas 6000/8000
	µg/dl	35.5	26.6	44.4	4.45	8.90	
Creatinine	µmol/l	361	289	433	36.00	72.00	Alkaline picrate with deproteinization
	mg/dl	4.08	3.27	4.89	0.41	0.81	
	µmol/l	358	286	430	36.00	72.00	Alkaline picrate no deproteinization
	mg/dl	4.05	3.23	4.87	0.41	0.82	
	µmol/l	375	300	450	37.50	75.00	Enzymatic UV method
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	373	299	447	37.00	74.00	Creatinine PAP method
	mg/dl	4.21	3.38	5.04	0.42	0.83	
	µmol/l	365	292	438	36.50	73.00	Jaffe rate blanked
	mg/dl	4.12	3.30	4.94	0.41	0.82	
	µmol/l	363	290	436	36.50	73.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.10	3.28	4.92	0.41	0.82	
	µmol/l	355	284	426	35.50	71.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.01	3.21	4.81	0.40	0.80	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	375	300	450	37.50	75.00	Vitros IDMS Traceable
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	363	290	436	36.50	73.00	IDMS traceable
	mg/dl	4.10	3.28	4.92	0.41	0.82	
D-3-Hydroxybutyrate	mmol/l	1.15	0.98	1.32	0.09	0.17	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	3.62	2.90	4.34	0.36	0.72	Immunoturbidimetric
	ng/ml	2.83	2.26	3.40	0.29	0.57	
Folate	nmol/l	6.89	5.24	8.54	0.83	1.65	Roche Cobas 6000/8000
	ng/ml	3.04	2.31	3.77	0.37	0.73	
Free T4	pmol/l	49.4	37.0	61.8	6.20	12.40	Abbott Architect
	ng/dl	3.85	2.89	4.81	0.48	0.96	
	pg/ml	38.5	28.9	48.1	4.80	9.60	Abbott Architect
	pmol/l	66.6	50.0	83.2	8.30	16.60	Siemens Centaur XP/XPT/Classic
	ng/dl	5.19	3.90	6.48	0.65	1.29	
	pg/ml	51.9	39.0	64.8	6.45	12.90	Siemens Centaur XP/XPT/Classic
	pmol/l	65.7	49.3	82.1	8.20	16.40	Beckman DxI800
	ng/dl	5.12	3.85	6.39	0.64	1.27	
	pg/ml	51.2	38.5	63.9	6.35	12.70	Beckman DxI800
	pmol/l	91.7	68.8	115	11.45	22.90	Vitros ECi
	ng/dl	7.15	5.37	8.93	0.89	1.78	
	pg/ml	71.5	53.7	89.3	8.90	17.80	Vitros ECi
	pmol/l	73.1	54.9	91.3	9.10	18.20	Roche Cobas 4000/E411
	ng/dl	5.70	4.28	7.12	0.71	1.42	
	pg/ml	57.0	42.8	71.2	7.10	14.20	Roche Cobas 4000/E411

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	75.0	56.2	93.8	9.40	18.80	Roche Cobas e601/602
	ng/dl	5.85	4.38	7.32	0.74	1.47	
	pg/ml	58.5	43.8	73.2	7.35	14.70	Roche Cobas e601/602
	pmol/l	71.9	53.9	89.9	9.00	18.00	Biomerieux Vidas FT4N Kit
	ng/dl	5.61	4.20	7.02	0.71	1.41	
	pg/ml	56.1	42.0	70.2	7.05	14.10	Biomerieux Vidas FT4N Kit
	pmol/l	79.9	59.9	99.9	10.00	20.00	Roche Cobas e402/e801
	ng/dl	6.23	4.67	7.79	0.78	1.56	
	pg/ml	62.3	46.7	77.9	7.80	15.60	Roche Cobas e402/e801
Gentamicin	µmol/l	20.6	16.5	24.7	2.05	4.10	Immunoturbidimetric
	µg/ml	9.85	7.89	11.8	0.98	1.96	
gamma-GT	U/l	174	148	200	13.00	26.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	137	117	157	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	107	91	123	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	212	180	244	16.00	32.00	Ortho Vitros Microslide Systems 37°C
	U/l	160	136	184	12.00	24.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	126	107	145	9.50	19.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	99	84	114	7.50	15.00	Gamma glutamyl-4-nitroanilide 25°C
	U/l	183	155	211	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	144	122	166	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	113	96	130	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	200	170	230	15.00	30.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	158	134	182	12.00	24.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	123	105	141	9.00	18.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	31	24	38	3.50	7.00	Triethanolamine buffer 50 mmol 37°C
	U/l	24	18	30	3.00	6.00	Triethanolamine buffer 50 mmol 30°C
	U/l	19	15	23	2.00	4.00	Triethanolamine buffer 50 mmol 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	14.6	12.4	16.8	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	263	223	303	20.00	40.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
	mmol/l	15.3	13.0	17.6	1.15	2.30	Glucose oxidase
	mg/dl	276	234	318	21.00	42.00	
alpha-HBDH	U/l	452	357	547	47.50	95.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	341	270	412	35.50	71.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	256	202	310	27.00	54.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	2.61	2.21	3.01	0.20	0.40	Direct HDL PPD
	mg/dl	101	85.3	117	7.85	15.70	
	mmol/l	2.57	2.18	2.96	0.20	0.39	Direct HDL Immunoseparation
	mg/dl	99.2	84.1	114	7.55	15.10	
	mmol/l	2.38	2.02	2.74	0.18	0.36	Vitros Magnetic HDL
	mg/dl	91.9	78.0	106	6.95	13.90	
	mmol/l	3.05	2.59	3.51	0.23	0.46	Direct HDL PEGME
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	2.50	2.13	2.87	0.19	0.37	Direct Clearance Method
	mg/dl	96.5	82.2	111	7.15	14.30	
	mmol/l	2.46	2.09	2.83	0.19	0.37	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	95.0	80.7	109	7.15	14.30	
	mmol/l	2.56	2.18	2.94	0.19	0.38	HDL - Ultra
	mg/dl	98.8	84.1	114	7.35	14.70	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	3.07	2.61	3.53	0.23	0.46	Direct HDL Roche 4th Generation
	mg/dl	119	101	137	9.00	18.00	
Immunoglobulin A	g/l	1.80	1.35	2.25	0.23	0.45	Immunoturbidimetric
	mg/dl	180	135	225	22.50	45.00	
Immunoglobulin G	g/l	6.28	5.15	7.41	0.57	1.13	Immunoturbidimetric
	mg/dl	628	515	741	56.50	113.00	
Immunoglobulin M	g/l	0.60	0.48	0.73	0.06	0.12	Immunoturbidimetric
	mg/dl	60.4	48.3	72.5	6.05	12.10	
Iron	µmol/l	37.7	30.9	44.5	3.40	6.80	Colorimetric with ppt.
	µg/dl	211	173	249	19.00	38.00	
	µmol/l	37.9	31.1	44.7	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
	µmol/l	35.2	28.9	41.5	3.15	6.30	Ortho Vitros Microslide Systems
	µg/dl	197	162	232	17.50	35.00	
Lactate	mmol/l	5.84	4.79	6.89	0.53	1.05	Colorimetric Lactate Oxidase
	mg/dl	52.6	43.2	62.0	4.70	9.40	
	mmol/l	5.28	4.33	6.23	0.48	0.95	Ortho Vitros Microslide Systems
	mg/dl	47.6	39.0	56.2	4.30	8.60	
	mmol/l	5.70	4.67	6.73	0.52	1.03	Enzymatic Electrode
	mg/dl	51.4	42.1	60.7	4.65	9.30	
LD (LDH)	U/l	401	341	461	30.00	60.00	L->P 37°C
	U/l	290	246	334	22.00	44.00	L->P 30°C
	U/l	203	173	233	15.00	30.00	L->P 25°C
	U/l	884	751	1017	66.50	133.00	P->L Scandinavian & Dutch 37°C
	U/l	638	542	734	48.00	96.00	P->L Scandinavian & Dutch 30°C
	U/l	448	381	515	33.50	67.00	P->L Scandinavian & Dutch 25°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	790	671	909	59.50	119.00	P->L German methods 37°C
	U/l	570	484	656	43.00	86.00	P->L German methods 30°C
	U/l	401	340	462	30.50	61.00	P->L German methods 25°C
	U/l	785	667	903	59.00	118.00	P->L SFBC 37°C
	U/l	567	482	652	42.50	85.00	P->L SFBC 30°C
	U/l	398	338	458	30.00	60.00	P->L SFBC 25°C
	U/l	409	348	470	30.50	61.00	L->P IFCC 37°C
	U/l	295	251	339	22.00	44.00	L->P IFCC 30°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 25°C
	U/l	436	370	502	33.00	66.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	58	47	69	5.50	11.00	Other Colorimetric 37°C
	U/l	542	434	650	54.00	108.00	Ortho Vitros Microslide Systems 37°C
	U/l	61	49	73	6.00	12.00	Roche Colorimetric 37°C
	U/l	71	57	85	7.00	14.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.97	1.73	2.21	0.12	0.24	Ion selective electrode
	mg/dl	1.37	1.20	1.54	0.09	0.17	
	mmol/l	1.90	1.68	2.12	0.11	0.22	Spectrophotometric
	mg/dl	1.32	1.17	1.47	0.08	0.15	
Magnesium	mmol/l	1.71	1.50	1.92	0.11	0.21	Arsenazo III
	mg/dl	4.16	3.65	4.67	0.26	0.51	
	mmol/l	1.79	1.58	2.00	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.35	3.84	4.86	0.26	0.51	
	mmol/l	1.76	1.55	1.97	0.11	0.21	Calmagite
	mg/dl	4.28	3.77	4.79	0.26	0.51	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Xylidyl Blue
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.77	1.56	1.98	0.11	0.21	Methylthymol blue
	mg/dl	4.30	3.79	4.81	0.26	0.51	
	mmol/l	1.73	1.52	1.94	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.20	3.69	4.71	0.26	0.51	
	mmol/l	1.73	1.52	1.94	0.11	0.21	Enzymatic
	mg/dl	4.20	3.69	4.71	0.26	0.51	
NEFA	mmol/l	0.51	0.41	0.61	0.05	0.10	Colorimetric
Osmolality	mOsm/kg	342	274	410	34.00	68.00	Calculated
	mOsm/kg	372	298	446	37.00	74.00	Freezing point depression
Paracetamol	mmol/l	0.60	0.48	0.71	0.06	0.12	Gravimetric
	mg/l	90.0	72.0	108	9.00	18.00	
Phosphate Inorganic	mmol/l	2.33	1.98	2.68	0.18	0.35	Ortho Vitros Microslide Systems
	mg/dl	7.22	6.14	8.30	0.54	1.08	
	mmol/l	2.34	1.99	2.69	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.25	6.17	8.33	0.54	1.08	
	mmol/l	2.33	1.98	2.68	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.22	6.14	8.30	0.54	1.08	
Potassium	mmol/l	6.04	5.56	6.52	0.24	0.48	Ortho Vitros Microslide Systems
	mmol/l	5.95	5.48	6.42	0.24	0.47	ISE method - direct
	mmol/l	6.08	5.59	6.57	0.25	0.49	ISE method - indirect
	mmol/l	6.23	5.73	6.73	0.25	0.50	Enzymatic
Protein Total	g/l	47.8	38.3	57.3	4.75	9.50	Ortho Vitros Microslide Systems
	g/dl	4.78	3.83	5.73	0.48	0.95	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	45.9	36.7	55.1	4.60	9.20	Biuret reaction end point
	g/dl	4.59	3.67	5.51	0.46	0.92	
	g/l	45.3	36.2	54.4	4.55	9.10	Biuret reaction kinetic
	g/dl	4.53	3.62	5.44	0.46	0.91	
PSA Total	ng/ml =	16.6	12.4	20.8	2.10	4.20	Siemens Centaur XP/XPT/Classic
	ng/ml =	16.4	12.3	20.5	2.05	4.10	Abbott Architect
	ng/ml =	18.6	14.0	23.2	2.30	4.60	Cobas E411
	ng/ml =	19.3	14.5	24.1	2.40	4.80	Roche Cobas 6000/8000
Salicylate	mmol/l	0.87	0.70	1.04	0.09	0.17	Gravimetric
	mg/dl	12.0	9.59	14.4	1.21	2.41	
Sodium	mmol/l	153	145	161	4.00	8.00	Ortho Vitros Microslide Systems
	mmol/l	154	147	161	3.50	7.00	ISE method - direct
	mmol/l	156	148	164	4.00	8.00	ISE method - indirect
	mmol/l	157	149	165	4.00	8.00	Enzymatic
Theophylline	µmol/l	139	111	166	13.85	27.70	Gravimetric
	µg/ml	25.0	20.0	30.0	2.50	5.00	
Thyroid Stimulating Hormone	µU/ml =	1.14	0.91	1.37	0.11	0.23	Abbott Architect
	µU/ml =	1.44	1.15	1.73	0.15	0.29	bioMerieux VIDAS TSH
	µU/ml =	1.63	1.30	1.96	0.17	0.33	Roche Cobas 4000/E411
	µU/ml =	1.63	1.30	1.96	0.17	0.33	Roche Cobas e601/602
	µU/ml =	1.29	1.03	1.55	0.13	0.26	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Beckman DxI 600/800 Access (3rd IS)
	µU/ml =	1.57	1.26	1.88	0.16	0.31	Roche Cobas e402/e801
TIBC	µmol/l	38.8	30.7	46.9	4.05	8.10	Removal of excess free iron
	µg/dl	217	172	262	22.50	45.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	41.3	32.6	50.0	4.35	8.70	FE+UIBC(saturation with iron)
	µg/dl	231	182	280	24.50	49.00	
	µmol/l	46.0	36.4	55.6	4.80	9.60	Direct Colorimetric
	µg/dl	257	203	311	27.00	54.00	
	µmol/l	42.3	33.4	51.2	4.45	8.90	Calculated from Transferrin
	µg/dl	236	187	285	24.50	49.00	
	µmol/l	46.9	37.1	56.7	4.90	9.80	Randox Direct
	µg/dl	262	207	317	27.50	55.00	
Tobramycin	µmol/l	15.6	12.5	18.7	1.55	3.10	Gravimetric
	µg/ml	7.30	5.85	8.75	0.73	1.45	
Total T3	nmol/l	2.92	2.19	3.65	0.37	0.73	Abbott Architect
	ng/ml	1.90	1.43	2.37	0.24	0.47	
	ng/dl	190	143	237	23.50	47.00	Abbott Architect
	nmol/l	3.78	2.83	4.73	0.48	0.95	Roche Cobas 4000/E411
	ng/ml	2.46	1.84	3.08	0.31	0.62	
	ng/dl	246	184	308	31.00	62.00	Roche Cobas 4000/E411
	nmol/l	3.71	2.78	4.64	0.47	0.93	Roche Cobas e601/602
	ng/ml	2.42	1.81	3.03	0.31	0.61	
	ng/dl	242	181	303	30.50	61.00	Roche Cobas e601/602
Total T4	nmol/l	231	173	289	29.00	58.00	Abbott Architect
	µg/dl	18.0	13.5	22.5	2.25	4.50	
	ng/ml	180	135	225	22.50	45.00	Abbott Architect
	nmol/l	214	161	267	26.50	53.00	Siemens Immulite 2000/2500
	µg/dl	16.7	12.6	20.8	2.05	4.10	
	ng/ml	167	126	208	20.50	41.00	Siemens Immulite 2000/2500

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	207	156	258	25.50	51.00	Roche Cobas 4000/E411
	µg/dl	16.1	12.2	20.0	1.95	3.90	
	ng/ml	161	122	200	19.50	39.00	Roche Cobas 4000/E411
	nmol/l	200	150	250	25.00	50.00	Roche Cobas e601/602
	µg/dl	15.6	11.7	19.5	1.95	3.90	
	ng/ml	156	117	195	19.50	39.00	Roche Cobas e601/602
	nmol/l	189	142	236	23.50	47.00	Microgenics DRI assay
	µg/dl	14.7	11.1	18.3	1.80	3.60	
	ng/ml	147	111	183	18.00	36.00	Microgenics DRI assay
Transferrin	g/l	1.66	1.33	1.99	0.17	0.33	Immunoturbidimetric
	mg/dl	166	133	199	16.50	33.00	
Triglycerides	mmol/l	3.02	2.54	3.50	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	267	225	309	21.00	42.00	
	mmol/l	2.99	2.51	3.47	0.24	0.48	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	265	222	308	21.50	43.00	
	mmol/l	3.02	2.53	3.51	0.25	0.49	L/G Kinase EP. no correction
	mg/dl	267	224	310	21.50	43.00	
	mmol/l	2.83	2.37	3.29	0.23	0.46	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	250	210	290	20.00	40.00	
	mmol/l	3.00	2.52	3.48	0.24	0.48	Lipase/Glycerol Dehydrogenase
	mg/dl	266	223	309	21.50	43.00	
	mmol/l	3.45	2.90	4.00	0.28	0.55	Ortho Vitros Microslide Systems
	mg/dl	305	257	353	24.00	48.00	
UIBC	µmol/l	9.00	7.38	10.6	0.81	1.62	TIBC - FE
	µg/dl	50.3	41.3	59.3	4.50	9.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.84	7.68	10.0	0.58	1.16	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.37	8.16	10.6	0.61	1.21	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.37	8.16	10.6	0.61	1.21	
	mmol/l	0.56	0.49	0.63	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.39	8.16	10.6	0.62	1.23	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.26	8.05	10.5	0.61	1.21	
Urea	mmol/l	18.2	15.4	21.0	1.40	2.80	Ortho Vitros Microslide Systems
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	19.5	16.5	22.5	1.50	3.00	Urease end point
	mg/dl	117	99.2	135	8.90	17.80	
	mmol/l	19.7	16.7	22.7	1.50	3.00	Urease kinetic
	mg/dl	118	100	136	9.00	18.00	
	mmol/l	19.7	16.7	22.7	1.50	3.00	BUN
	mg/dl	55.3	47.0	63.6	4.15	8.30	
	mmol/l	19.3	16.4	22.2	1.45	2.90	Urease - hypochlorite
	mg/dl	116	98.6	133	8.70	17.40	
Vitamin B12	pmol/l	233	186	280	23.50	47.00	Roche Cobas 6000/8000
	pg/ml	316	252	380	32.00	64.00	
Zinc	µmol/l	34.8	27.8	41.8	3.50	7.00	Colorimetric with deproteinisation
	µg/dl	227	182	272	22.50	45.00	

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MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-1-globulin		8.2	6.2	10.2	0.98	1.97	% of total Protein (Beckman Capillary)
alpha-2-globulin		10.0	7.6	12.4	1.20	2.40	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		59.1	53.2	65.0	2.95	5.90	% of total Protein (Beckman Capillary)
beta-globulin		12.2	9.3	15.1	1.47	2.93	% of total Protein (Beckman Capillary)
gamma-globulin		10.5	8.0	13.0	1.26	2.52	% of total Protein (Beckman Capillary)

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Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.8	25.4	34.2	2.20	4.40	Ortho Vitros Microslide Systems
	g/dl	2.98	2.54	3.42	0.22	0.44	
Alkaline Phosphatase	U/l	283	241	325	21.00	42.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	135	108	162	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	132	105	159	13.50	27.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	182	155	209	13.50	27.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	175	140	210	17.50	35.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	85.3	67.4	103	8.95	17.90	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	4.99	3.94	6.04	0.53	1.05	
Bilirubin, Unconjugated Vitros BU	µmol/l	80.5	63.6	97.4	8.45	16.90	BuBc Vitros Slide
	mg/dl	4.71	3.72	5.70	0.50	0.99	
Calcium	mmol/l	3.15	2.83	3.47	0.16	0.32	Ortho Vitros Microslide Systems
	mg/dl	12.6	11.3	13.9	0.65	1.30	
Cholesterol	mmol/l	7.00	6.09	7.91	0.46	0.91	Ortho Vitros Microslide Systems
	mg/dl	270	235	305	17.50	35.00	
Chloride	mmol/l	114	104	124	5.00	10.00	Ortho Vitros Microslide Systems
CK Total	U/l	438	359	517	39.50	79.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	375	300	450	37.50	75.00	Vitros IDMS Traceable
	mg/dl	4.24	3.39	5.09	0.43	0.85	
Free T4	pmol/l	91.7	68.8	115	11.45	22.90	Vitros ECi
	ng/dl	7.15	5.37	8.93	0.89	1.78	
	pg/ml	71.5	53.7	89.3	8.90	17.80	Vitros ECi

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	212	180	244	16.00	32.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	14.6	12.4	16.8	1.10	2.20	Ortho Vitros Microslide Systems
	mg/dl	263	223	303	20.00	40.00	
HDL - Cholesterol	mmol/l	2.38	2.02	2.74	0.18	0.36	Vitros Magnetic HDL
	mg/dl	91.9	78.0	106	6.95	13.90	
	mmol/l	2.46	2.09	2.83	0.19	0.37	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	95.0	80.7	109	7.15	14.30	
Iron	µmol/l	35.2	28.9	41.5	3.15	6.30	Ortho Vitros Microslide Systems
	µg/dl	197	162	232	17.50	35.00	
Lactate	mmol/l	5.28	4.33	6.23	0.48	0.95	Ortho Vitros Microslide Systems
	mg/dl	47.6	39.0	56.2	4.30	8.60	
LD (LDH)	U/l	436	370	502	33.00	66.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	542	434	650	54.00	108.00	Ortho Vitros Microslide Systems 37°C
Magnesium	mmol/l	1.79	1.58	2.00	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.35	3.84	4.86	0.26	0.51	
Phosphate Inorganic	mmol/l	2.33	1.98	2.68	0.18	0.35	Ortho Vitros Microslide Systems
	mg/dl	7.22	6.14	8.30	0.54	1.08	
Potassium	mmol/l	6.04	5.56	6.52	0.24	0.48	Ortho Vitros Microslide Systems
Protein Total	g/l	47.8	38.3	57.3	4.75	9.50	Ortho Vitros Microslide Systems
	g/dl	4.78	3.83	5.73	0.48	0.95	
Sodium	mmol/l	153	145	161	4.00	8.00	Ortho Vitros Microslide Systems
Triglycerides	mmol/l	3.45	2.90	4.00	0.28	0.55	Ortho Vitros Microslide Systems
	mg/dl	305	257	353	24.00	48.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.53	0.46	0.60	0.03	0.07	Ortho Vitros Microslide Systems
	mg/dl	8.84	7.68	10.0	0.58	1.16	
Urea	mmol/l	18.2	15.4	21.0	1.40	2.80	Ortho Vitros Microslide Systems
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	18.2	15.5	20.9	1.35	2.70	BUN
	mg/dl	51.1	43.4	58.8	3.85	7.70	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.6	26.9	36.3	2.35	4.70	Bromocresol Green
	g/dl	3.16	2.69	3.63	0.24	0.47	
	g/l	27.5	23.4	31.6	2.05	4.10	Turbidimetric Assays
	g/dl	2.75	2.34	3.16	0.21	0.41	
Alkaline Phosphatase	U/l	347	295	399	26.00	52.00	Roche Integra AMP buffer 37°C
	U/l	270	230	310	20.00	40.00	Roche Integra AMP buffer 30°C
	U/l	222	189	255	16.50	33.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	124	99	149	12.50	25.00	Tris buffer without P5P 37°C
	U/l	92	73	111	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	249	211	287	19.00	38.00	Roche EPS Liquid 37°C
Amylase Total	U/l	277	235	319	21.00	42.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	274	233	315	20.50	41.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	273	232	314	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 30°C
	U/l	64	51	77	6.50	13.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	43.1	34.5	51.7	4.30	8.60	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.3	11.4	17.2	1.45	2.90	Colorimetric
	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	34.7	27.4	42.0	3.65	7.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.03	1.60	2.46	0.22	0.43	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	34.8	27.5	42.1	3.65	7.30	Diazo with Sulphanilic Acid
	mg/dl	2.04	1.61	2.47	0.22	0.43	
	µmol/l	35.1	27.7	42.5	3.70	7.40	Roche DPD JG standardised
	mg/dl	2.05	1.62	2.48	0.22	0.43	
	µmol/l	30.3	23.9	36.7	3.20	6.40	Roche DPD Doumas standardised
	mg/dl	1.77	1.40	2.14	0.19	0.37	
Bilirubin Total	µmol/l	79.3	62.7	95.9	8.30	16.60	Diazo with Sulphanilic Acid
	mg/dl	4.64	3.67	5.61	0.49	0.97	
	µmol/l	80.8	63.8	97.8	8.50	17.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.73	3.73	5.73	0.50	1.00	
	µmol/l	80.6	63.7	97.5	8.45	16.90	Diazonium ion
	mg/dl	4.72	3.73	5.71	0.50	0.99	
Calcium	mmol/l	3.17	2.85	3.49	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.18	2.86	3.50	0.16	0.32	NM-BAPTA
	mg/dl	12.7	11.5	13.9	0.60	1.20	
Cholesterol	mmol/l	7.28	6.34	8.22	0.47	0.94	Cholesterol Oxidase - Abell Kendall
	mg/dl	281	245	317	18.00	36.00	
	mmol/l	7.27	6.33	8.21	0.47	0.94	Cholesterol Oxidase - IDMS
	mg/dl	281	244	318	18.50	37.00	
Chloride	mmol/l	109	100	118	4.50	9.00	ISE indirect
Cholinesterase	U/l	5313	4250	6376	531.50	1063.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	506	415	597	45.50	91.00	CK-NAC substrate start (DGKC) 37°C
	U/l	317	260	374	28.50	57.00	CK-NAC substrate start (DGKC) 30°C
	U/l	215	176	254	19.50	39.00	CK-NAC substrate start (DGKC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	496	407	585	44.50	89.00	CK-NAC (IFCC) 37°C
	U/l	310	255	365	27.50	55.00	CK-NAC (IFCC) 30°C
	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	362	289	435	36.50	73.00	Alkaline picrate no deproteinization
	mg/dl	4.09	3.27	4.91	0.41	0.82	
	µmol/l	376	301	451	37.50	75.00	Roche Creatinine Plus
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	361	289	433	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.08	3.27	4.89	0.41	0.81	
	µmol/l	363	290	436	36.50	73.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	4.10	3.28	4.92	0.41	0.82	
D-3-Hydroxybutyrate	mmol/l	1.16	0.98	1.34	0.09	0.18	Tris buffer 100mmol pH 8.5
Free T4	pmol/l	74.6	55.9	93.3	9.35	18.70	Roche Cobas e601/602
	ng/dl	5.82	4.36	7.28	0.73	1.46	
	pg/ml	58.2	43.6	72.8	7.30	14.60	Roche Cobas e601/602
gamma-GT	U/l	164	140	188	12.00	24.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	129	110	148	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	86	116	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	186	158	214	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	97	133	9.00	18.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
GLDH	U/l	28	22	34	3.00	6.00	Triethanolamine buffer 50 mmol 37°C
	U/l	22	17	27	2.50	5.00	Triethanolamine buffer 50 mmol 30°C
	U/l	17	14	20	1.50	3.00	Triethanolamine buffer 50 mmol 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	3.07	2.61	3.53	0.23	0.46	Direct HDL Roche 4th Generation
	mg/dl	119	101	137	9.00	18.00	
Iron	µmol/l	37.1	30.5	43.7	3.30	6.60	Colorimetric with ppt.
	µg/dl	207	170	244	18.50	37.00	
	µmol/l	37.6	30.8	44.4	3.40	6.80	Colorimetric without ppt.
	µg/dl	210	172	248	19.00	38.00	
Lactate	mmol/l	5.80	4.75	6.85	0.53	1.05	Colorimetric Lactate Oxidase
	mg/dl	52.3	42.8	61.8	4.75	9.50	
LD (LDH)	U/l	409	348	470	30.50	61.00	L->P 37°C
	U/l	295	251	339	22.00	44.00	L->P 30°C
	U/l	207	176	238	15.50	31.00	L->P 25°C
	U/l	415	353	477	31.00	62.00	P->L German methods 37°C
	U/l	300	255	345	22.50	45.00	P->L German methods 30°C
	U/l	210	179	241	15.50	31.00	P->L German methods 25°C
	U/l	413	351	475	31.00	62.00	L->P IFCC 37°C
	U/l	298	253	343	22.50	45.00	L->P IFCC 30°C
	U/l	209	178	240	15.50	31.00	L->P IFCC 25°C
Lipase	U/l	61	49	73	6.00	12.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.92	1.69	2.15	0.12	0.23	Spectrophotometric
	mg/dl	1.33	1.17	1.49	0.08	0.16	
Magnesium	mmol/l	1.74	1.53	1.95	0.11	0.21	Xylidyl Blue
	mg/dl	4.23	3.72	4.74	0.26	0.51	
	mmol/l	1.74	1.53	1.95	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.23	3.72	4.74	0.26	0.51	

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RANDOX

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Osmolality	mOsm/kg	335	268	402	33.50	67.00	Calculated
Phosphate Inorganic	mmol/l	2.34	1.99	2.69	0.18	0.35	Phosphomolybdate enzymatic
	mg/dl	7.25	6.17	8.33	0.54	1.08	
	mmol/l	2.32	1.97	2.67	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.19	6.11	8.27	0.54	1.08	
Potassium	mmol/l	6.11	5.62	6.60	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.4	36.3	54.5	4.55	9.10	Biuret reaction end point
	g/dl	4.54	3.63	5.45	0.46	0.91	
	g/l	44.9	35.9	53.9	4.50	9.00	Biuret reaction kinetic
	g/dl	4.49	3.59	5.39	0.45	0.90	
PSA Total	ng/ml =	19.3	14.5	24.1	2.40	4.80	Roche Cobas 6000/8000
Sodium	mmol/l	155	148	162	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.63	1.30	1.96	0.17	0.33	Roche Cobas e601/602
TIBC	µmol/l	39.6	31.3	47.9	4.15	8.30	FE+UIBC(saturation with iron)
	µg/dl	221	175	267	23.00	46.00	
	µmol/l	44.6	35.3	53.9	4.65	9.30	Calculated from Transferrin
	µg/dl	249	197	301	26.00	52.00	
Total T3	nmol/l	3.71	2.78	4.64	0.47	0.93	Roche Cobas e601/602
	ng/ml	2.42	1.81	3.03	0.31	0.61	
	ng/dl	242	181	303	30.50	61.00	Roche Cobas e601/602
Triglycerides	mmol/l	3.01	2.53	3.49	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	224	308	21.00	42.00	
	mmol/l	3.01	2.53	3.49	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	224	308	21.00	42.00	

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RANDOX

Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.12	7.93	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.09	7.91	10.3	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.11	7.91	10.3	0.60	1.20	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease kinetic
	mg/dl	117	99.8	134	8.60	17.20	
	mmol/l	19.5	16.6	22.4	1.45	2.90	BUN
	mg/dl	54.7	46.5	62.9	4.10	8.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	32.0	27.2	36.8	2.40	4.80	Bromocresol Green
	g/dl	3.20	2.72	3.68	0.24	0.48	
Alkaline Phosphatase	U/l	356	303	409	26.50	53.00	Roche Integra AMP buffer 37°C
	U/l	277	236	318	20.50	41.00	Roche Integra AMP buffer 30°C
	U/l	227	194	260	16.50	33.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	127	101	153	13.00	26.00	Tris buffer without P5P 37°C
	U/l	94	75	113	9.50	19.00	Tris buffer without P5P 30°C
	U/l	72	57	87	7.50	15.00	Tris buffer without P5P 25°C
Amylase Total	U/l	279	237	321	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	135	108	162	13.50	27.00	Tris buffer without P5P 37°C
	U/l	91	73	109	9.00	18.00	Tris buffer without P5P 30°C
	U/l	64	51	77	6.50	13.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	83.1	65.6	101	8.75	17.50	Diazo with Sulphanilic Acid
	mg/dl	4.86	3.84	5.88	0.51	1.02	
	µmol/l	82.1	64.9	99.3	8.60	17.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.80	3.80	5.80	0.50	1.00	
Calcium	mmol/l	3.16	2.84	3.48	0.16	0.32	NM-BAPTA
	mg/dl	12.7	11.4	14.0	0.65	1.30	
Cholesterol	mmol/l	7.31	6.36	8.26	0.48	0.95	Cholesterol Oxidase - Abell Kendall
	mg/dl	282	245	319	18.50	37.00	
	mmol/l	7.02	6.11	7.93	0.46	0.91	Cholesterol Oxidase - IDMS
	mg/dl	271	236	306	17.50	35.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	372	298	446	37.00	74.00	Roche Creatinine Plus
	mg/dl	4.20	3.37	5.03	0.42	0.83	
	µmol/l	353	283	423	35.00	70.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	3.99	3.20	4.78	0.40	0.79	
Glucose	mmol/l	15.5	13.2	17.8	1.15	2.30	Hexokinase
	mg/dl	279	238	320	20.50	41.00	
HDL - Cholesterol	mmol/l	3.22	2.74	3.70	0.24	0.48	Direct HDL Roche 4th Generation
	mg/dl	124	106	142	9.00	18.00	
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Chlorphosphonazo III
	mg/dl	4.13	3.65	4.61	0.24	0.48	
Phosphate Inorganic	mmol/l	2.37	2.01	2.73	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.35	6.23	8.47	0.56	1.12	
Protein Total	g/l	47.8	38.2	57.4	4.80	9.60	Biuret reaction end point
	g/dl	4.78	3.82	5.74	0.48	0.96	
Triglycerides	mmol/l	2.87	2.41	3.33	0.23	0.46	Lipase/GPO-PAP no correction
	mg/dl	254	213	295	20.50	41.00	
Uric Acid (Urate)	mmol/l	0.56	0.48	0.63	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.34	8.13	10.6	0.61	1.21	
	mmol/l	0.53	0.46	0.60	0.03	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	8.92	7.76	10.1	0.58	1.16	
Urea	mmol/l	19.2	16.3	22.1	1.45	2.90	Urease kinetic
	mg/dl	115	98.0	132	8.50	17.00	
	mmol/l	19.2	16.3	22.1	1.45	2.90	BUN
	mg/dl	53.9	45.8	62.0	4.05	8.10	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.6	26.8	36.4	2.40	4.80	Bromocresol Green
	g/dl	3.16	2.68	3.64	0.24	0.48	
	g/l	29.3	24.9	33.7	2.20	4.40	Bromocresol Purple
	g/dl	2.93	2.49	3.37	0.22	0.44	
Alkaline Phosphatase	U/l	338	288	388	25.00	50.00	Roche Integra AMP buffer 37°C
	U/l	263	224	302	19.50	39.00	Roche Integra AMP buffer 30°C
	U/l	216	184	248	16.00	32.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	125	100	150	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	74	112	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	249	212	286	18.50	37.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	273	232	314	20.50	41.00	BM/Roche Colorimetric pNPG7 37°C
	U/l	278	236	320	21.00	42.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
	U/l	92	74	110	9.00	18.00	Tris buffer without P5P 30°C
	U/l	65	52	78	6.50	13.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	35.2	27.8	42.6	3.70	7.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.06	1.63	2.49	0.22	0.43	
	µmol/l	35.0	27.6	42.4	3.70	7.40	Diazo with Sulphanilic Acid
	mg/dl	2.05	1.61	2.49	0.22	0.44	
	µmol/l	34.4	27.2	41.6	3.60	7.20	Roche DPD JG standardised
	mg/dl	2.01	1.59	2.43	0.21	0.42	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	83.7	66.1	101	8.80	17.60	Diazo with Sulphanilic Acid
	mg/dl	4.90	3.87	5.93	0.52	1.03	
	µmol/l	82.4	65.1	99.7	8.65	17.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.82	3.81	5.83	0.51	1.01	
	µmol/l	81.2	64.1	98.3	8.55	17.10	Diazonium ion
	mg/dl	4.75	3.75	5.75	0.50	1.00	
Calcium	mmol/l	3.19	2.87	3.51	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.8	11.5	14.1	0.65	1.30	
	mmol/l	3.19	2.87	3.51	0.16	0.32	NM-BAPTA
	mg/dl	12.8	11.5	14.1	0.65	1.30	
Cholesterol	mmol/l	7.35	6.40	8.30	0.48	0.95	Cholesterol Oxidase - Abell Kendall
	mg/dl	284	247	321	18.50	37.00	
	mmol/l	7.18	6.25	8.11	0.47	0.93	Cholesterol Oxidase - IDMS
	mg/dl	277	241	313	18.00	36.00	
Chloride	mmol/l	109	99.9	118	4.55	9.10	ISE indirect
CK Total	U/l	506	415	597	45.50	91.00	CK-NAC (IFCC) 37°C
	U/l	317	260	374	28.50	57.00	CK-NAC (IFCC) 30°C
	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	379	303	455	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.28	3.42	5.14	0.43	0.86	
	µmol/l	384	307	461	38.50	77.00	Enzymatic UV method
	mg/dl	4.34	3.47	5.21	0.44	0.87	
	µmol/l	381	305	457	38.00	76.00	Roche Creatinine Plus
	mg/dl	4.31	3.45	5.17	0.43	0.86	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	374	299	449	37.50	75.00	Jaffe rate blanked
	mg/dl	4.23	3.38	5.08	0.43	0.85	
	µmol/l	366	292	440	37.00	74.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.14	3.30	4.98	0.42	0.84	
gamma-GT	U/l	166	141	191	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	131	111	151	10.00	20.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	102	87	117	7.50	15.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	187	159	215	14.00	28.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	147	125	169	11.00	22.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	115	98	132	8.50	17.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.4	13.1	17.7	1.15	2.30	Hexokinase
	mg/dl	278	236	320	21.00	42.00	
	mmol/l	15.6	13.3	17.9	1.15	2.30	Glucose oxidase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	3.04	2.58	3.50	0.23	0.46	Direct HDL Roche 4th Generation
	mg/dl	117	99.6	134	8.70	17.40	
Iron	µmol/l	37.8	31.0	44.6	3.40	6.80	Colorimetric without ppt.
	µg/dl	211	173	249	19.00	38.00	
Lactate	mmol/l	5.93	4.86	7.00	0.54	1.07	Colorimetric Lactate Oxidase
	mg/dl	53.4	43.8	63.0	4.80	9.60	
LD (LDH)	U/l	412	351	473	30.50	61.00	L->P IFCC 37°C
	U/l	297	253	341	22.00	44.00	L->P IFCC 30°C
	U/l	209	178	240	15.50	31.00	L->P IFCC 25°C
Lipase	U/l	60	48	72	6.00	12.00	Roche Colorimetric 37°C
	U/l	59	48	70	5.50	11.00	

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Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.75	1.54	1.96	0.11	0.21	Xylidyl Blue
	mg/dl	4.25	3.74	4.76	0.26	0.51	
	mmol/l	1.73	1.52	1.94	0.11	0.21	Chlorphosphonazo III
	mg/dl	4.20	3.69	4.71	0.26	0.51	
Phosphate Inorganic	mmol/l	2.32	1.97	2.67	0.18	0.35	Phosphomolybdate UV
	mg/dl	7.19	6.11	8.27	0.54	1.08	
Potassium	mmol/l	6.11	5.62	6.60	0.25	0.49	ISE method - indirect
Protein Total	g/l	45.3	36.3	54.3	4.50	9.00	Biuret reaction end point
	g/dl	4.53	3.63	5.43	0.45	0.90	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
TIBC	µmol/l	40.0	31.6	48.4	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	224	177	271	23.50	47.00	
Triglycerides	mmol/l	3.02	2.53	3.51	0.25	0.49	Lipase/GPO-PAP no correction
	mg/dl	267	224	310	21.50	43.00	
UIBC	µmol/l	3.05	2.50	3.60	0.28	0.55	Direct Colorimetric
	µg/dl	17.0	14.0	20.0	1.50	3.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.04	7.86	10.2	0.59	1.18	
	mmol/l	0.55	0.48	0.62	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.26	8.05	10.5	0.61	1.21	
	mmol/l	0.55	0.48	0.63	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.29	8.08	10.5	0.61	1.21	
Urea	mmol/l	19.8	16.9	22.7	1.45	2.90	Urease kinetic
	mg/dl	119	102	136	8.50	17.00	
	mmol/l	19.8	16.8	22.8	1.50	3.00	BUN
	mg/dl	55.6	47.3	63.9	4.15	8.30	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.7	27.0	36.4	2.35	4.70	Bromocresol Green
	g/dl	3.17	2.70	3.64	0.24	0.47	
	g/l	27.7	23.6	31.8	2.05	4.10	Bromocresol Purple
	g/dl	2.77	2.36	3.18	0.21	0.41	
	g/l	28.9	24.5	33.3	2.20	4.40	Turbidimetric Assays
	g/dl	2.89	2.45	3.33	0.22	0.44	
Alkaline Phosphatase	U/l	340	289	391	25.50	51.00	Roche Integra AMP buffer 37°C
	U/l	265	225	305	20.00	40.00	Roche Integra AMP buffer 30°C
	U/l	217	185	249	16.00	32.00	Roche Integra AMP buffer 25°C
ALT (GPT)	U/l	125	100	150	12.50	25.00	Tris buffer without P5P 37°C
	U/l	93	74	112	9.50	19.00	Tris buffer without P5P 30°C
	U/l	70	56	84	7.00	14.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	246	209	283	18.50	37.00	Roche EPS Liquid 37°C
Amylase Total	U/l	275	234	316	20.50	41.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
	U/l	92	74	110	9.00	18.00	Tris buffer without P5P 30°C
	U/l	65	52	78	6.50	13.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	44.1	35.3	52.9	4.40	8.80	Enzymatic Colorimetric
Bicarbonate	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	36.1	28.5	43.7	3.80	7.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	2.11	1.67	2.55	0.22	0.44	

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RANDOX

Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	34.1	26.9	41.3	3.60	7.20	Diazo with Sulphanilic Acid
	mg/dl	1.99	1.57	2.41	0.21	0.42	
	µmol/l	35.0	27.6	42.4	3.70	7.40	Roche DPD JG standardised
	mg/dl	2.05	1.61	2.49	0.22	0.44	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Bilirubin Total	µmol/l	80.8	63.9	97.7	8.45	16.90	Diazo with Sulphanilic Acid
	mg/dl	4.73	3.74	5.72	0.50	0.99	
	µmol/l	81.7	64.5	98.9	8.60	17.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	4.78	3.77	5.79	0.51	1.01	
	µmol/l	81.1	64.1	98.1	8.50	17.00	Diazonium ion
	mg/dl	4.74	3.75	5.73	0.50	0.99	
Calcium	mmol/l	3.16	2.84	3.48	0.16	0.32	Cresolphthalein complexone
	mg/dl	12.7	11.4	14.0	0.65	1.30	
	mmol/l	3.15	2.84	3.46	0.16	0.31	NM-BAPTA
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Cholesterol	mmol/l	7.27	6.32	8.22	0.48	0.95	Cholesterol Oxidase - Abell Kendall
	mg/dl	281	244	318	18.50	37.00	
	mmol/l	7.29	6.34	8.24	0.48	0.95	Cholesterol Oxidase - IDMS
	mg/dl	281	245	317	18.00	36.00	
Cholinesterase	U/l	5198	4158	6238	520.00	1040.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	497	407	587	45.00	90.00	CK-NAC (IFCC) 37°C
	U/l	311	255	367	28.00	56.00	CK-NAC (IFCC) 30°C
	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	379	303	455	38.00	76.00	Roche Creatinine Plus
	mg/dl	4.28	3.42	5.14	0.43	0.86	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	369	295	443	37.00	74.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.17	3.33	5.01	0.42	0.84	
gamma-GT	U/l	163	138	188	12.50	25.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	128	109	147	9.50	19.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	101	85	117	8.00	16.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	182	155	209	13.50	27.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	143	122	164	10.50	21.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	112	96	128	8.00	16.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	15.2	12.9	17.5	1.15	2.30	Hexokinase
	mg/dl	274	232	316	21.00	42.00	
HDL - Cholesterol	mmol/l	3.06	2.60	3.52	0.23	0.46	Direct HDL Roche 4th Generation
	mg/dl	118	100	136	9.00	18.00	
Iron	µmol/l	36.9	30.3	43.5	3.30	6.60	Colorimetric with ppt.
	µg/dl	206	169	243	18.50	37.00	
	µmol/l	36.1	29.6	42.6	3.25	6.50	Colorimetric without ppt.
	µg/dl	202	165	239	18.50	37.00	
Lactate	mmol/l	5.75	4.71	6.79	0.52	1.04	Colorimetric Lactate Oxidase
	mg/dl	51.8	42.4	61.2	4.70	9.40	
LD (LDH)	U/l	412	351	473	30.50	61.00	L->P IFCC 37°C
	U/l	297	253	341	22.00	44.00	L->P IFCC 30°C
	U/l	209	178	240	15.50	31.00	L->P IFCC 25°C
Lipase	U/l	62	50	74	6.00	12.00	
Lithium	mmol/l	1.91	1.68	2.14	0.12	0.23	Spectrophotometric
	mg/dl	1.33	1.17	1.49	0.08	0.16	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.30	1.96	2.64	0.17	0.34	Phosphomolybdate UV
	mg/dl	7.13	6.08	8.18	0.53	1.05	
Protein Total	g/l	45.1	36.1	54.1	4.50	9.00	Biuret reaction end point
	g/dl	4.51	3.61	5.41	0.45	0.90	
TIBC	µmol/l	40.9	32.3	49.5	4.30	8.60	FE+UIBC(saturation with iron)
	µg/dl	229	181	277	24.00	48.00	
Triglycerides	mmol/l	2.99	2.52	3.46	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	265	223	307	21.00	42.00	
	mmol/l	3.01	2.53	3.49	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	266	224	308	21.00	42.00	
Uric Acid (Urate)	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase with ascorbate oxidase
	mg/dl	9.04	7.86	10.2	0.59	1.18	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.09	7.90	10.3	0.60	1.19	
	mmol/l	0.54	0.47	0.61	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.09	7.91	10.3	0.59	1.18	
Urea	mmol/l	19.5	16.6	22.4	1.45	2.90	Urease kinetic
	mg/dl	117	99.8	134	8.60	17.20	
	mmol/l	19.5	16.6	22.4	1.45	2.90	BUN
	mg/dl	54.7	46.5	62.9	4.10	8.20	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	31.4	26.7	36.1	2.35	4.70	Bromocresol Green
	g/dl	3.14	2.67	3.61	0.24	0.47	
Alkaline Phosphatase	U/l	562	478	646	42.00	84.00	Diethanolamine buffer DEA 37°C
	U/l	388	330	446	29.00	58.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	136	109	163	13.50	27.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	292	248	336	22.00	44.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	312	266	358	23.00	46.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	151	121	181	15.00	30.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	14.9	11.8	18.0	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	34.2	27.0	41.4	3.60	7.20	Diazo with Sulphanilic Acid
	mg/dl	2.00	1.58	2.42	0.21	0.42	
	µmol/l	30.2	23.9	36.5	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.77	1.40	2.14	0.19	0.37	
Bilirubin Total	µmol/l	90.9	71.8	110	9.55	19.10	Diazo with Sulphanilic Acid
	mg/dl	5.32	4.20	6.44	0.56	1.12	
	µmol/l	98.5	77.8	119	10.35	20.70	Oxidation to Biliverdin/Vanadate
	mg/dl	5.76	4.55	6.97	0.61	1.21	
Calcium	mmol/l	3.22	2.90	3.54	0.16	0.32	Arsenazo III
	mg/dl	12.9	11.6	14.2	0.65	1.30	
Cholesterol	mmol/l	8.08	7.03	9.13	0.53	1.05	Cholesterol Oxidase - Abell Kendall
	mg/dl	312	271	353	20.50	41.00	

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	108	99.8	116	4.10	8.20	ISE direct
CK Total	U/l	559	458	660	50.50	101.00	CK-NAC substrate start (DGKC) 37°C
	U/l	599	491	707	54.00	108.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	325	260	390	32.50	65.00	Alkaline picrate no deproteinization
	mg/dl	3.67	2.94	4.40	0.37	0.73	
	µmol/l	378	303	453	37.50	75.00	Enzymatic UV method
	mg/dl	4.27	3.42	5.12	0.43	0.85	
gamma-GT	U/l	196	166	226	15.00	30.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.3	13.0	17.6	1.15	2.30	Hexokinase
	mg/dl	276	234	318	21.00	42.00	
	mmol/l	16.0	13.6	18.4	1.20	2.40	Glucose oxidase
	mg/dl	288	245	331	21.50	43.00	
Iron	µmol/l	40.1	32.9	47.3	3.60	7.20	Colorimetric without ppt.
	µg/dl	224	184	264	20.00	40.00	
Lactate	mmol/l	5.85	4.80	6.90	0.53	1.05	Colorimetric Lactate Oxidase
	mg/dl	52.7	43.2	62.2	4.75	9.50	
LD (LDH)	U/l	873	742	1004	65.50	131.00	P->L German methods 37°C
	U/l	410	349	471	30.50	61.00	L->P IFCC 37°C
Lipase	U/l	70	56	84	7.00	14.00	Randox Colorimetric 37°C
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Xylidyl Blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.39	2.03	2.75	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.41	6.29	8.53	0.56	1.12	
Potassium	mmol/l	6.00	5.52	6.48	0.24	0.48	ISE method - direct
	mmol/l	6.23	5.73	6.73	0.25	0.50	Enzymatic

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	47.4	37.9	56.9	4.75	9.50	Biuret reaction end point
	g/dl	4.74	3.79	5.69	0.48	0.95	
Sodium	mmol/l	154	147	161	3.50	7.00	ISE method - direct
	mmol/l	157	149	165	4.00	8.00	Enzymatic
TIBC	µmol/l	46.9	37.1	56.7	4.90	9.80	Direct Colorimetric
	µg/dl	262	207	317	27.50	55.00	
Triglycerides	mmol/l	3.00	2.52	3.48	0.24	0.48	Lipase/GPO-PAP no correction
	mg/dl	266	223	309	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.60	0.52	0.68	0.04	0.08	Uricase peroxidase no ascorbate oxidase
	mg/dl	10.1	8.77	11.4	0.67	1.33	
	mmol/l	0.57	0.50	0.65	0.04	0.07	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	9.61	8.37	10.9	0.62	1.24	
Urea	mmol/l	19.1	16.2	22.0	1.45	2.90	Urease kinetic
	mg/dl	115	97.4	133	8.80	17.60	
	mmol/l	19.1	16.2	22.0	1.45	2.90	BUN
	mg/dl	53.6	45.6	61.6	4.00	8.00	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.1	25.6	34.6	2.25	4.50	Bromocresol Green
	g/dl	3.01	2.56	3.46	0.23	0.45	
	g/l	28.3	24.1	32.5	2.10	4.20	Bromocresol Purple
	g/dl	2.83	2.41	3.25	0.21	0.42	
Alkaline Phosphatase	U/l	347	295	399	26.00	52.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	147	117	177	15.00	30.00	Tris buffer without P5P 37°C
Amylase Total	U/l	286	243	329	21.50	43.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	153	122	184	15.50	31.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.2	12.1	18.3	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	32.2	25.5	38.9	3.35	6.70	Oxidation to Biliverdin/Vanadate
	mg/dl	1.88	1.49	2.27	0.20	0.39	
Bilirubin Total	µmol/l	99.0	78.2	120	10.40	20.80	Oxidation to Biliverdin/Vanadate
	mg/dl	5.79	4.57	7.01	0.61	1.22	
Calcium	mmol/l	3.22	2.89	3.55	0.17	0.33	Cresolphthalein complexone
	mg/dl	12.9	11.6	14.2	0.65	1.30	
	mmol/l	3.15	2.84	3.46	0.16	0.31	Arsenazo III
	mg/dl	12.6	11.4	13.8	0.60	1.20	
Cholesterol	mmol/l	7.47	6.50	8.44	0.49	0.97	Cholesterol Oxidase - Abell Kendall
	mg/dl	288	251	325	18.50	37.00	
Chloride	mmol/l	114	105	123	4.50	9.00	ISE indirect
CK Total	U/l	535	439	631	48.00	96.00	CK-NAC (IFCC) 37°C

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ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	376	301	451	37.50	75.00	Enzymatic UV method
	mg/dl	4.25	3.40	5.10	0.43	0.85	
	µmol/l	359	287	431	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.06	3.24	4.88	0.41	0.82	
gamma-GT	U/l	168	142	194	13.00	26.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.1	12.8	17.4	1.15	2.30	Hexokinase
	mg/dl	272	231	313	20.50	41.00	
	mmol/l	15.4	13.1	17.7	1.15	2.30	Glucose oxidase
	mg/dl	278	236	320	21.00	42.00	
HDL - Cholesterol	mmol/l	2.17	1.84	2.50	0.17	0.33	Direct Clearance Method
	mg/dl	83.8	71.0	96.6	6.40	12.80	
Iron	µmol/l	38.2	31.3	45.1	3.45	6.90	Colorimetric without ppt.
	µg/dl	214	175	253	19.50	39.00	
Lactate	mmol/l	5.84	4.78	6.90	0.53	1.06	Colorimetric Lactate Oxidase
	mg/dl	52.6	43.1	62.1	4.75	9.50	
LD (LDH)	U/l	798	678	918	60.00	120.00	P->L German methods 37°C
	U/l	408	347	469	30.50	61.00	L->P IFCC 37°C
Lipase	U/l	64	51	77	6.50	13.00	Other Colorimetric 37°C
Magnesium	mmol/l	1.71	1.50	1.92	0.11	0.21	Xylidyl Blue
	mg/dl	4.16	3.65	4.67	0.26	0.51	
Phosphate Inorganic	mmol/l	2.42	2.06	2.78	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.50	6.39	8.61	0.56	1.11	
Potassium	mmol/l	6.16	5.66	6.66	0.25	0.50	ISE method - indirect
Protein Total	g/l	46.0	36.8	55.2	4.60	9.20	Biuret reaction end point
	g/dl	4.60	3.68	5.52	0.46	0.92	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	157	150	164	3.50	7.00	ISE method - indirect
TIBC	µmol/l	41.1	32.4	49.8	4.35	8.70	Calculated from Transferrin
	µg/dl	230	181	279	24.50	49.00	
Triglycerides	mmol/l	3.11	2.61	3.61	0.25	0.50	Lipase/GPO-PAP no correction
	mg/dl	275	231	319	22.00	44.00	
Uric Acid (Urate)	mmol/l	0.56	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.46	8.23	10.7	0.62	1.23	
Urea	mmol/l	20.3	17.2	23.4	1.55	3.10	Urease kinetic
	mg/dl	122	103	141	9.50	19.00	
	mmol/l	20.3	17.3	23.3	1.50	3.00	BUN
	mg/dl	57.0	48.5	65.5	4.25	8.50	

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Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	30.3	25.7	34.9	2.30	4.60	Bromocresol Green
	g/dl	3.03	2.57	3.49	0.23	0.46	
	g/l	28.2	23.9	32.5	2.15	4.30	Bromocresol Purple
	g/dl	2.82	2.39	3.25	0.22	0.43	
Alkaline Phosphatase	U/l	346	294	398	26.00	52.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	143	114	172	14.50	29.00	Tris buffer without P5P 37°C
Amylase Total	U/l	305	260	350	22.50	45.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	155	124	186	15.50	31.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	15.7	12.5	18.9	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	34.8	27.5	42.1	3.65	7.30	Oxidation to Biliverdin/Vanadate
	mg/dl	2.04	1.61	2.47	0.22	0.43	
Bilirubin Total	µmol/l	101	79.5	123	10.75	21.50	Oxidation to Biliverdin/Vanadate
	mg/dl	5.91	4.65	7.17	0.63	1.26	
Calcium	mmol/l	3.24	2.92	3.56	0.16	0.32	Cresolphthalein complexone
	mg/dl	13.0	11.7	14.3	0.65	1.30	
	mmol/l	3.18	2.87	3.49	0.16	0.31	Arsenazo III
	mg/dl	12.7	11.5	13.9	0.60	1.20	
Cholesterol	mmol/l	7.48	6.50	8.46	0.49	0.98	Cholesterol Oxidase - Abell Kendall
	mg/dl	289	251	327	19.00	38.00	
	mmol/l	7.55	6.57	8.53	0.49	0.98	Cholesterol Oxidase - IDMS
	mg/dl	291	254	328	18.50	37.00	

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RANDOX

Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	115	106	124	4.50	9.00	ISE indirect
CK Total	U/l	508	416	600	46.00	92.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	356	285	427	35.50	71.00	Alkaline picrate no deproteinization
	mg/dl	4.02	3.22	4.82	0.40	0.80	
	µmol/l	358	286	430	36.00	72.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	4.05	3.23	4.87	0.41	0.82	
gamma-GT	U/l	165	140	190	12.50	25.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	15.0	12.7	17.3	1.15	2.30	Hexokinase
	mg/dl	270	229	311	20.50	41.00	
	mmol/l	15.1	12.9	17.3	1.10	2.20	Glucose oxidase
	mg/dl	272	232	312	20.00	40.00	
HDL - Cholesterol	mmol/l	2.40	2.04	2.76	0.18	0.36	Direct Clearance Method
	mg/dl	92.6	78.7	107	6.95	13.90	
Iron	µmol/l	38.0	31.2	44.8	3.40	6.80	Colorimetric without ppt.
	µg/dl	212	174	250	19.00	38.00	
Lactate	mmol/l	6.15	5.04	7.26	0.56	1.11	Colorimetric Lactate Oxidase
	mg/dl	55.4	45.4	65.4	5.00	10.00	
LD (LDH)	U/l	397	338	456	29.50	59.00	L->P IFCC 37°C
Lipase	U/l	61	49	73	6.00	12.00	Other Colorimetric 37°C
Lithium	mmol/l	1.89	1.66	2.12	0.12	0.23	Spectrophotometric
	mg/dl	1.31	1.15	1.47	0.08	0.16	
Magnesium	mmol/l	1.70	1.50	1.90	0.10	0.20	Xylidyl Blue
	mg/dl	4.13	3.65	4.61	0.24	0.48	
Phosphate Inorganic	mmol/l	2.44	2.07	2.81	0.19	0.37	Phosphomolybdate UV
	mg/dl	7.56	6.42	8.70	0.57	1.14	

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Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	5.94	5.46	6.42	0.24	0.48	ISE method - indirect
Protein Total	g/l	44.7	35.8	53.6	4.45	8.90	Biuret reaction end point
	g/dl	4.47	3.58	5.36	0.45	0.89	
Sodium	mmol/l	155	147	163	4.00	8.00	ISE method - indirect
TIBC	µmol/l	47.6	37.6	57.6	5.00	10.00	Direct Colorimetric
	µg/dl	266	210	322	28.00	56.00	
Triglycerides	mmol/l	3.18	2.67	3.69	0.26	0.51	Lipase/GPO-PAP no correction
	mg/dl	281	236	326	22.50	45.00	
Uric Acid (Urate)	mmol/l	0.57	0.49	0.64	0.04	0.07	Uricase peroxidase no ascorbate oxidase
	mg/dl	9.49	8.27	10.7	0.61	1.22	
Urea	mmol/l	20.1	17.1	23.1	1.50	3.00	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.1	17.1	23.1	1.50	3.00	BUN
	mg/dl	56.4	47.9	64.9	4.25	8.50	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	29.0	24.7	33.3	2.15	4.30	Bromocresol Purple
	g/dl	2.90	2.47	3.33	0.22	0.43	
Alkaline Phosphatase	U/l	345	293	397	26.00	52.00	Siemens Dimension AMP buffer 37°C
ALT (GPT)	U/l	145	116	174	14.50	29.00	Tris buffer with P5P 37°C
	U/l	137	110	164	13.50	27.00	Tris buffer with P5P NVKC 37°C
	U/l	141	113	169	14.00	28.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	332	282	382	25.00	50.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	167	134	200	16.50	33.00	Tris buffer with P5P 37°C
	U/l	168	135	201	16.50	33.00	Tris buffer with P5P NVKC 37°C
	U/l	166	132	200	17.00	34.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bilirubin Direct	µmol/l	22.5	17.8	27.2	2.35	4.70	Diazo/Sulphanilic Siemens Dimension
	mg/dl	1.32	1.04	1.60	0.14	0.28	
Bilirubin Total	µmol/l	90.1	71.2	109	9.45	18.90	Diazo with Sulphanilic Acid
	mg/dl	5.27	4.17	6.37	0.55	1.10	
Calcium	mmol/l	3.13	2.82	3.44	0.16	0.31	Cresolphthalein complexone
	mg/dl	12.5	11.3	13.7	0.60	1.20	
Cholesterol	mmol/l	7.03	6.12	7.94	0.46	0.91	Dimension-Siemens reagents
	mg/dl	271	236	306	17.50	35.00	
Chloride	mmol/l	113	104	122	4.50	9.00	ISE indirect
CK Total	U/l	486	398	574	44.00	88.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	380	304	456	38.00	76.00	Alkaline picrate no deproteinization
	mg/dl	4.29	3.44	5.14	0.43	0.85	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	375	300	450	37.50	75.00	Creatinine PAP method
	mg/dl	4.24	3.39	5.09	0.43	0.85	
	µmol/l	383	307	459	38.00	76.00	Jaffe rate blanked
	mg/dl	4.33	3.47	5.19	0.43	0.86	
gamma-GT	U/l	194	165	223	14.50	29.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	209	178	240	15.50	31.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	15.6	13.3	17.9	1.15	2.30	Hexokinase
	mg/dl	281	240	322	20.50	41.00	
HDL - Cholesterol	mmol/l	3.03	2.58	3.48	0.23	0.45	Direct HDL PEGME
	mg/dl	117	99.6	134	8.70	17.40	
Iron	µmol/l	36.3	29.8	42.8	3.25	6.50	Colorimetric without ppt.
	µg/dl	203	167	239	18.00	36.00	
LD (LDH)	U/l	400	340	460	30.00	60.00	L->P IFCC 37°C
Magnesium	mmol/l	1.76	1.55	1.97	0.11	0.21	Methylthymol blue
	mg/dl	4.28	3.77	4.79	0.26	0.51	
Phosphate Inorganic	mmol/l	2.43	2.07	2.79	0.18	0.36	Phosphomolybdate enzymatic
	mg/dl	7.53	6.42	8.64	0.56	1.11	
	mmol/l	2.38	2.02	2.74	0.18	0.36	Phosphomolybdate UV
	mg/dl	7.38	6.26	8.50	0.56	1.12	
Potassium	mmol/l	6.11	5.62	6.60	0.25	0.49	ISE method - indirect
Protein Total	g/l	47.6	38.1	57.1	4.75	9.50	Biuret reaction end point
	g/dl	4.76	3.81	5.71	0.48	0.95	
Sodium	mmol/l	156	148	164	4.00	8.00	ISE method - indirect
Triglycerides	mmol/l	2.97	2.50	3.44	0.24	0.47	Lipase/GPO-PAP no correction
	mg/dl	263	221	305	21.00	42.00	

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SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 3 (HUM ASY CONTROL 3)

Lot. No. 1211UE Cat. No. HE1532 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-08-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	2.98	2.50	3.46	0.24	0.48	L/G Kinase EP. no correction
	mg/dl	264	221	307	21.50	43.00	
Uric Acid (Urate)	mmol/l	0.55	0.48	0.62	0.04	0.07	Spectrophotometric at 280-290
	mg/dl	9.17	7.98	10.4	0.60	1.19	
Urea	mmol/l	20.2	17.2	23.2	1.50	3.00	Urease kinetic
	mg/dl	121	103	139	9.00	18.00	
	mmol/l	20.2	17.2	23.2	1.50	3.00	BUN
	mg/dl	56.7	48.2	65.2	4.25	8.50	

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RANDOX 2797 CE

HUMAN ASSAYED MULTI-SERA - LEVEL 2 (HUM ASY CONTROL 2)

CAT. NO. HN1530 **GTIN:** 05055273203783 **SIZE:** 20 x 5ml
CAT. NO. HS2611 **GTIN:** 05055273203813 **SIZE:** 5 x 5ml
LOT NO. 1549UN **EXPIRY:** 2025-03-28

INTENDED USE
This product is intended for *in vitro* diagnostic use, in the quality control of diagnostic assays. The Human Assayed Multi-sera is for the control of accuracy.

DEVICE DESCRIPTION
The Human Assayed Multi-sera is supplied at 2 levels, level 2 and 3. Target values and ranges are supplied for the analytes listed in the values section at both levels.

SAFETY PRECAUTIONS AND WARNINGS
For *in vitro* diagnostic use only. Do not pipette by mouth. Exercise the normal precautions required for handling laboratory reagents.

Human source material, from which this product has been derived, has been tested at donor level for the Human Immunodeficiency Virus (HIV 1, HIV 2) antibody, Hepatitis B Surface Antigen (HbsAg), and Hepatitis C Virus (HCV) antibody and found to be NON-REACTIVE. FDA approved methods have been used to conduct these tests.
However, since no method can offer complete assurance as to the absence of infectious agents, this material and all patient samples should be handled as though capable of transmitting infectious diseases and disposed of accordingly.

Health and Safety Data Sheets are available on request.

STORAGE AND STABILITY
OPENED: Store refrigerated (+2°C to +8°C). Reconstituted serum is stable for 8 hours at +15°C to +25°C or 7 days at +2°C to +8°C, and 28 days when frozen once at –18°C to –24°C. (See Limitations)

UNOPENED: Store refrigerated (+2°C to +8°C). Stable to expiration date printed on individual vials.

LIMITATIONS
For Total & Prostatic Acid Phosphatase, the material should be stabilised by adding 1 drop (25µl - 30µl) of 0.7M Acetic acid solution to 1ml of the serum exactly 30 minutes after reconstitution. After stabilisation Total and Prostatic Acid Phosphatase is stable for 2 hours at +15°C to +25°C, 2 days at +2°C to +8°C, and 28 days when frozen once at –18°C to –24°C.
Alkaline Phosphatase levels in the reconstituted serum will rise over the stability period. It is recommended that the reconstituted serum is allowed to stand for 1 hour at +15°C to +25°C before measurement.
Bilirubin in the serum is light sensitive and it is recommended that the serum is stored in the dark. Stored in the dark, it is stable for 4 days at +2°C to +8°C. Do not store at +15°C to +25°C. Do not freeze.
GLDH is stable for 2 days at 2-8°C.
NEFA is stable for 1 day at +2°C to +8°C.
Total PSA is stable for 4 days at +2°C to +8°C, or 28 days in aliquots frozen at –18°C to –24°C.
Bacterial contamination of the reconstituted serum will cause reductions in the stability of many components.
Different lot numbers of this control should not be interchanged, as the values assigned to the controls vary from lot to lot.
The control should not be used as a calibration material.
Due to the zinc content in some batches of rubber stoppers, the QC and calibrator material should be aliquoted into polypropylene tubes and stored at +2°C to +8°C to ensure stable zinc levels throughout the stability period.

PREPARATION FOR USE
The Human Assayed Multi-sera is supplied lyophilised.

1. Carefully reconstitute each vial of lyophilised serum with exactly 5ml of distilled water at +15°C to +25°C. Close the bottle and allow to stand for 30 minutes before use. Ensure contents are completely dissolved by swirling gently. Avoid formation of foam. Do not shake.

2. Refer to the Control section of the individual analyser application.

3. Refrigerate any unused material. Prior to reuse, mix contents thoroughly.

MATERIALS PROVIDED
Human Assayed Multi-sera - Level 2 20 x 5ml / 5 x 5ml

MATERIALS REQUIRED BUT NOT PROVIDED
Volumetric pipette

ASSIGNED VALUES
Due to the variation caused by test equipment, test reagents and laboratory technique, the quoted ranges are provided for guidance. It is recommended that these ranges are used until each laboratory has established its own ranges, based on individual laboratory requirements.

Each batch of assayed human serum is submitted to reference laboratories for assignment against international Reference Standards. Where international Reference Standards are unavailable, Reference Methods are used. Values are also collected from approx. 3000 laboratories worldwide and using a unique statistical analysis, a value is assigned.

With each batch, a control range is provided for individual parameters and each parameter method. The control range is equivalent to the assigned mean ±2S.D.

If an instrument specific value is not available, refer to the Mean of all Instruments section. If necessary, contact Randox Laboratories - Technical Services, Northern Ireland, tel: +44 (0) 28 9445 1070 or email Technical.Services@randox.com.

NOTES
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(1) Applies only in Germany. Ranges established according to the Guidelines of the Federal Chamber of Physicians in Germany.
(2) Values established by reference laboratories officially recognised by the Federal Chamber of Physicians in Germany.
(3) DGKC: German Society for Clinical Chemistry.
(4) IFCC: International Federation of Clinical Chemistry.
(5) SCE: Scandinavian Committee on Enzymes.

The presence of a vertical bar in the margin indicates a technical update from the previous revision.

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Dungloe, Donegal,
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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
	g/l	41.0	34.8	47.2	3.10	6.20	Bromocresol Purple
	g/dl	4.10	3.48	4.72	0.31	0.62	
Alkaline Phosphatase	U/l	186	158	214	14.00	28.00	Diethanolamine buffer DEA 37°C
	U/l	195	166	224	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	193	164	222	14.50	29.00	AMP non-optimised 37°C
	U/l	191	163	219	14.00	28.00	Colorimetric 37°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	64	54	74	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	97	83	111	7.00	14.00	Abbott Architect IFCC Cal. 37°C
	U/l	93	79	107	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	26.7	21.3	32.1	2.70	5.40	Enzymatic Colorimetric
Bicarbonate	mmol/l	13.3	10.6	16.0	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	21.4	16.9	25.9	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.25	0.989	1.51	0.13	0.26	
	µmol/l	21.6	17.1	26.1	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	µmol/l	21.8	17.3	26.3	2.25	4.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.28	1.01	1.55	0.14	0.27	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Bilirubin Total	µmol/l	26.0	20.5	31.5	2.75	5.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	26.0	20.5	31.5	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.52	1.20	1.84	0.16	0.32	
	µmol/l	25.6	20.2	31.0	2.70	5.40	Diazonium ion
	mg/dl	1.50	1.18	1.82	0.16	0.32	
Calcium	mmol/l	2.13	1.92	2.34	0.11	0.21	Arsenazo III
	mg/dl	8.54	7.70	9.38	0.42	0.84	
Cholesterol	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	157	137	177	10.00	20.00	
	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Dehydrogenase
	mg/dl	158	137	179	10.50	21.00	
Chloride	mmol/l	95.6	88.0	103	3.80	7.60	ISE indirect
Cholinesterase	U/l	6634	5307	7961	663.50	1327.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	202	166	238	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	216	177	255	19.50	39.00	CK-NAC substrate start (DGKC) 37°C
	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	210	172	248	19.00	38.00	Abbott CK-NAC (IFCC) 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	128	102	154	13.00	26.00	Enzymatic UV method
	mg/dl	1.45	1.15	1.75	0.15	0.30	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Creatinine	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	IDMS traceable
	mg/dl	1.48	1.19	1.77	0.15	0.29	
Free T4	pmol/l	17.7	13.3	22.1	2.20	4.40	Abbott Architect
	ng/dl	1.38	1.04	1.72	0.17	0.34	
	pg/ml	13.8	10.4	17.2	1.70	3.40	Abbott Architect
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	50	43	57	3.50	7.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
Glucose	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
	mmol/l	5.98	5.08	6.88	0.45	0.90	Glucose oxidase
	mg/dl	108	91.5	125	8.25	16.50	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PPD
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct Clearance Method
	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra
	mg/dl	54.4	46.3	62.5	4.05	8.10	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric with ppt.
	µg/dl	106	87.2	125	9.40	18.80	

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RANDOX

Abbott Alinity/ Architect c/ci Systems®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.63	1.33	1.93	0.15	0.30	Colorimetric Lactate Oxidase
	mg/dl	14.7	12.0	17.4	1.35	2.70	
LD (LDH)	U/l	200	170	230	15.00	30.00	L->P 37°C
	U/l	202	171	233	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.08	0.95	1.21	0.06	0.13	Spectrophotometric
	mg/dl	0.750	0.662	0.838	0.04	0.09	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.14	1.88	2.40	0.13	0.26	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Enzymatic
	mg/dl	2.15	1.89	2.41	0.13	0.26	
Osmolality	mOsm/kg	290	232	348	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.30	1.11	1.49	0.10	0.19	Phosphomolybdate enzymatic
	mg/dl	4.03	3.44	4.62	0.30	0.59	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.06	3.44	4.68	0.31	0.62	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.3	45.9	68.7	5.70	11.40	Biuret reaction end point
	g/dl	5.73	4.59	6.87	0.57	1.14	
	g/l	58.2	46.6	69.8	5.80	11.60	Biuret reaction kinetic
	g/dl	5.82	4.66	6.98	0.58	1.16	
PSA Total	ng/ml =	9.54	7.15	11.9	1.20	2.39	Abbott Architect
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect

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Abbott Alinitv/ Architect c/ci Svstems®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Thyroid Stimulating Hormone	µU/ml =	1.00	0.80	1.20	0.10	0.20	Abbott Architect
TIBC	µmol/l	38.0	30.0	46.0	4.00	8.00	FE+UIBC(saturation with iron)
	µg/dl	212	168	256	22.00	44.00	
	µmol/l	41.8	33.0	50.6	4.40	8.80	Calculated from Transferrin
	µg/dl	234	184	284	25.00	50.00	
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.3	107	7.35	14.70	
	mmol/l	1.02	0.85	1.19	0.08	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	90.3	75.6	105	7.35	14.70	
	mmol/l	1.05	0.88	1.22	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	77.9	108	7.50	15.00	
	mmol/l	1.03	0.87	1.19	0.08	0.16	Lipase/Glycerol Dehydrogenase
	mg/dl	91.2	76.6	106	7.30	14.60	
UIBC	µmol/l	19.9	16.3	23.5	1.80	3.60	Direct Colorimetric
	µg/dl	111	91.1	131	9.95	19.90	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease end point
	mg/dl	43.3	36.8	49.8	3.25	6.50	

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Abbott Alinitv/ Architect c/ci Svstems®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.21	6.13	8.29	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

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ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.5	33.6	45.4	2.95	5.90	Bromocresol Green
	g/dl	3.95	3.36	4.54	0.30	0.59	
Alkaline Phosphatase	U/l	192	164	220	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	24.2	19.1	29.3	2.55	5.10	Diazo with Sulphanilic Acid
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	23.0	18.2	27.8	2.40	4.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.35	1.06	1.64	0.15	0.29	
Bilirubin Total	µmol/l	28.9	22.8	35.0	3.05	6.10	Diazo with Dichloroaniline (DCA)
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
Chloride	mmol/l	97.0	89.2	105	3.90	7.80	ISE direct
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.31	5.36	7.26	0.48	0.95	Hexokinase
	mg/dl	114	96.6	131	8.70	17.40	
	mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	
HDL - Cholesterol	mmol/l	1.38	1.18	1.58	0.10	0.20	Direct HDL PPD
	mg/dl	53.3	45.5	61.1	3.90	7.80	
Iron	µmol/l	18.1	14.9	21.3	1.60	3.20	Colorimetric without ppt.
	µg/dl	101	83.3	119	8.85	17.70	
LD (LDH)	U/l	199	169	229	15.00	30.00	L->P IFCC 37°C
Magnesium	mmol/l	0.89	0.78	1.00	0.05	0.11	Xylidyl Blue
	mg/dl	2.16	1.90	2.42	0.13	0.26	
Phosphate Inorganic	mmol/l	1.50	1.28	1.72	0.11	0.22	Phosphomolybdate UV
	mg/dl	4.65	3.97	5.33	0.34	0.68	
Potassium	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - direct
Protein Total	g/l	57.2	45.8	68.6	5.70	11.40	Biuret reaction end point
	g/dl	5.72	4.58	6.86	0.57	1.14	
Sodium	mmol/l	137	130	144	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.4	115	7.85	15.70	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.58	4.86	6.30	0.36	0.72	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	

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ABX Pentra 400®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.59	4.87	6.31	0.36	0.72	
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Urease kinetic
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.91	5.87	7.95	0.52	1.04	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.1	33.2	45.0	2.95	5.90	Bromocresol Green
	g/dl	3.91	3.32	4.50	0.30	0.59	
	g/l	39.3	33.4	45.2	2.95	5.90	Bromocresol Purple
	g/dl	3.93	3.34	4.52	0.30	0.59	
Alkaline Phosphatase	U/l	223	190	256	16.50	33.00	AMP optimised to IFCC 37°C
	U/l	212	180	244	16.00	32.00	AMP non-optimised 37°C
	U/l	217	184	250	16.50	33.00	Beckman (Extinction Coefficient) 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Beckman (Extinction Coefficient) 37°C
	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	62	53	71	4.50	9.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	89	76	102	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	89	76	102	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	89	76	102	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	82	70	94	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	82	70	94	6.00	12.00	Other 2-chloro-pNPG3 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Beckman (Extinction Coefficient) 37°C
	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bicarbonate	mmol/l	13.8	10.9	16.7	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	22.1	17.5	26.7	2.30	4.60	Diazo/ Sulphanilic Beckman DxC
	mg/dl	1.29	1.02	1.56	0.14	0.27	
	µmol/l	22.3	17.6	27.0	2.35	4.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.30	1.03	1.57	0.14	0.27	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	21.9	17.3	26.5	2.30	4.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.28	1.01	1.55	0.14	0.27	
	µmol/l	22.0	17.4	26.6	2.30	4.60	Diazo with Sulphanilic Acid
	mg/dl	1.29	1.02	1.56	0.14	0.27	
Bilirubin Total	µmol/l	31.2	24.6	37.8	3.30	6.60	DPD (Beckman AU)
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	µmol/l	31.2	24.6	37.8	3.30	6.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.83	1.44	2.22	0.20	0.39	
	µmol/l	31.4	24.8	38.0	3.30	6.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.84	1.45	2.23	0.20	0.39	
	µmol/l	31.3	24.7	37.9	3.30	6.60	Diazo with Sulphanilic Acid
	mg/dl	1.83	1.44	2.22	0.20	0.39	
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Ion selective electrode
	mg/dl	8.82	7.94	9.70	0.44	0.88	
	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Dehydrogenase
	mg/dl	160	139	181	10.50	21.00	
	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	138	178	10.00	20.00	
	mmol/l	4.21	3.66	4.76	0.28	0.55	Cholesterol Oxidase - IDMS
	mg/dl	163	141	185	11.00	22.00	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	93.9	86.4	101	3.75	7.50	ISE indirect
Cholinesterase	U/l	5483	4386	6580	548.50	1097.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	211	173	249	19.00	38.00	Beckman (Extinction Coefficient) 37°C
	U/l	215	176	254	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	222	182	262	20.00	40.00	Monothioglycerol 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	124	99.2	149	12.40	24.80	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	Enzymatic UV method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	124	99.2	149	12.40	24.80	IDMS traceable
	mg/dl	1.40	1.12	1.68	0.14	0.28	
D-3-Hydroxybutyrate	mmol/l	0.28	0.24	0.32	0.02	0.04	Tris buffer 100mmol pH 8.5
gamma-GT	U/l	51	43	59	4.00	8.00	Beckman Szasz (Extinction Coeff) 37°C
	U/l	53	45	61	4.00	8.00	DCL gamma glutamyl-3-carboxy-4-nitroanilide 37°C
	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	52	44	60	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	52	44	60	4.00	8.00	Gamma glutamyl-4-nitroanilide 37°C

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
GLDH	U/l	15	12	18	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
Glucose	mmol/l	6.27	5.33	7.21	0.47	0.94	GOD/02-Beckman method
	mg/dl	113	96.0	130	8.50	17.00	
	mmol/l	6.27	5.33	7.21	0.47	0.94	Glucose dehydrogenase
	mg/dl	113	96.0	130	8.50	17.00	
	mmol/l	6.29	5.35	7.23	0.47	0.94	Hexokinase
	mg/dl	113	96.4	130	8.30	16.60	
	mmol/l	6.33	5.38	7.28	0.48	0.95	Glucose oxidase
	mg/dl	114	96.9	131	8.55	17.10	
HDL - Cholesterol	mmol/l	1.39	1.18	1.60	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	53.7	45.5	61.9	4.10	8.20	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct Clearance Method
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PPD
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.37	1.16	1.58	0.11	0.21	HDL - Ultra
	mg/dl	52.9	44.8	61.0	4.05	8.10	
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric with ppt.
	µg/dl	104	85.5	123	9.25	18.50	
	µmol/l	18.7	15.3	22.1	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	85.5	125	9.75	19.50	
Lactate	mmol/l	1.54	1.26	1.82	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	206	175	237	15.50	31.00	L to P Beckman (Extinction Coeff) 37°C
	U/l	205	174	236	15.50	31.00	L->P IFCC 37°C

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
LD (LDH)	U/l	197	167	227	15.00	30.00	L->P 37°C
	U/l	445	378	512	33.50	67.00	P->L Scandinavian & Dutch 37°C
	U/l	436	371	501	32.50	65.00	P->L German methods 37°C
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.05	0.92	1.18	0.06	0.13	Spectrophotometric
	mg/dl	0.729	0.642	0.816	0.04	0.09	
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Calmagite
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.21	1.95	2.47	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Osmolality	mOsm/kg	294	235	353	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.31	1.11	1.51	0.10	0.20	Beckman PHOSm (365nm)
	mg/dl	4.06	3.44	4.68	0.31	0.62	
	mmol/l	1.30	1.11	1.49	0.10	0.19	Phosphomolybdate enzymatic
	mg/dl	4.03	3.44	4.62	0.30	0.59	
	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	
Potassium	mmol/l	3.95	3.63	4.27	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.9	45.5	68.3	5.70	11.40	Biuret reaction end point
	g/dl	5.69	4.55	6.83	0.57	1.14	
	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction kinetic
	g/dl	5.70	4.56	6.84	0.57	1.14	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	43.3	34.2	52.4	4.55	9.10	Direct Colorimetric
	µg/dl	242	191	293	25.50	51.00	
	µmol/l	40.4	31.9	48.9	4.25	8.50	Calculated from Transferrin
	µg/dl	226	178	274	24.00	48.00	
	µmol/l	42.7	33.7	51.7	4.50	9.00	FE+UIBC(saturation with iron)
	µg/dl	239	188	290	25.50	51.00	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.08	0.91	1.25	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	95.6	80.3	111	7.65	15.30	
	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	97.4	81.8	113	7.80	15.60	
UIBC	µmol/l	24.1	19.8	28.4	2.15	4.30	Direct Colorimetric
	µg/dl	135	111	159	12.00	24.00	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase 293nm UV
	mg/dl	5.86	5.11	6.61	0.38	0.75	

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Beckman Coulter AU Series®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.49	6.37	8.61	0.56	1.12	Beckman-Conductivity
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	mmol/l	7.45	6.33	8.57	0.56	1.12	Urease end point
	mg/dl	44.8	38.0	51.6	3.40	6.80	
	mmol/l	7.43	6.32	8.54	0.56	1.11	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.43	6.32	8.54	0.56	1.11	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	
Zinc	µmol/l	20.6	16.5	24.7	2.05	4.10	Colorimetric without deprot.
	µg/dl	135	108	162	13.50	27.00	

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Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Purple
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	207	176	238	15.50	31.00	AMP optimised to IFCC 37°C
	U/l	198	168	228	15.00	30.00	AMP non-optimised 37°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Beckman Mod. IFCC Ref. without P5P 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	91	78	104	6.50	13.00	Beckman Synchron AMY7 37°C
AST (GOT)	U/l	34	28	40	3.00	6.00	Beckman Mod. IFCC Ref. without P5P 37°C
Bilirubin Direct	µmol/l	15.7	12.4	19.0	1.65	3.30	Diazo/ Sulphanilic Beckman DxC
	mg/dl	0.918	0.725	1.11	0.10	0.19	
Bilirubin Total	µmol/l	31.0	24.5	37.5	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Ion selective electrode
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Cholesterol	mmol/l	4.15	3.61	4.69	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	160	139	181	10.50	21.00	
Chloride	mmol/l	93.6	86.1	101	3.75	7.50	ISE indirect
Cholinesterase	U/l	5519	4415	6623	552.00	1104.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C
	U/l	216	177	255	19.50	39.00	Monothioglycerol 37°C
Creatinine	µmol/l	124	99.0	149	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.40	1.12	1.68	0.14	0.28	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	126	101	151	12.50	25.00	Jaffe rate blanked
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	126	101	151	12.50	25.00	IDMS traceable
	mg/dl	1.42	1.14	1.70	0.14	0.28	
gamma-GT	U/l	40	34	46	3.00	6.00	Gamma glutamyl-4-nitroanilide 37°C
Glucose	mmol/l	5.69	4.84	6.54	0.43	0.85	GOD/02-Beckman method
	mg/dl	103	87.2	119	7.90	15.80	
	mmol/l	6.04	5.13	6.95	0.46	0.91	Hexokinase
	mg/dl	109	92.4	126	8.30	16.60	
HDL - Cholesterol	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PPD
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	mmol/l	1.37	1.17	1.57	0.10	0.20	HDL - Ultra
	mg/dl	52.9	45.2	60.6	3.85	7.70	
Iron	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.3	121	9.35	18.70	
Lactate	mmol/l	1.60	1.31	1.89	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.4	11.8	17.0	1.30	2.60	
LD (LDH)	U/l	166	141	191	12.50	25.00	L->P 37°C
	U/l	504	429	579	37.50	75.00	Pyruvate 1.4 mM - Beckman LD-P 37°C
	U/l	253	215	291	19.00	38.00	L->P IFCC 37°C
Lipase	U/l	38	31	45	3.50	7.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Calmagite
	mg/dl	2.17	1.91	2.43	0.13	0.26	
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	

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Beckman DxC600/800®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - indirect
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
	g/l	54.3	43.4	65.2	5.45	10.90	Biuret reaction kinetic
	g/dl	5.43	4.34	6.52	0.55	1.09	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.3	110	7.70	15.40	
	mmol/l	1.07	0.90	1.24	0.08	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.8	110	7.45	14.90	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
Urea	mmol/l	7.34	6.24	8.44	0.55	1.10	Beckman-Conductivity
	mg/dl	44.1	37.5	50.7	3.30	6.60	
	mmol/l	7.59	6.45	8.73	0.57	1.14	Urease kinetic
	mg/dl	45.6	38.8	52.4	3.40	6.80	
	mmol/l	7.59	6.45	8.73	0.57	1.14	BUN
	mg/dl	21.3	18.1	24.5	1.60	3.20	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.7	33.7	45.7	3.00	6.00	Bromocresol Green
	g/dl	3.97	3.37	4.57	0.30	0.60	
Alkaline Phosphatase	U/l	193	164	222	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	150	128	172	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	123	105	141	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	42	34	50	4.00	8.00	Tris buffer without P5P 37°C
	U/l	31	25	37	3.00	6.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	19	15	23	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	28.9	22.8	35.0	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.69	1.33	2.05	0.18	0.36	
Calcium	mmol/l	2.13	1.91	2.35	0.11	0.22	Arsenazo III
	mg/dl	8.54	7.66	9.42	0.44	0.88	
Cholesterol	mmol/l	4.10	3.57	4.63	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	138	178	10.00	20.00	
Creatinine	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	127	101	153	13.00	26.00	Jaffe rate blanked
	mg/dl	1.44	1.14	1.74	0.15	0.30	

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BIOSYSTEMS A15

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.10	5.19	7.01	0.46	0.91	Glucose oxidase
	mg/dl	110	93.5	127	8.25	16.50	
Phosphate Inorganic	mmol/l	1.41	1.20	1.62	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.37	3.72	5.02	0.33	0.65	
Protein Total	g/l	58.5	46.8	70.2	5.85	11.70	Biuret reaction end point
	g/dl	5.85	4.68	7.02	0.59	1.17	
Triglycerides	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	94.7	79.5	110	7.60	15.20	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.78	5.02	6.54	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.85	5.09	6.61	0.38	0.76	
Urea	mmol/l	7.16	6.09	8.23	0.54	1.07	Urease end point
	mg/dl	43.0	36.6	49.4	3.20	6.40	
	mmol/l	7.10	6.04	8.16	0.53	1.06	Urease kinetic
	mg/dl	42.7	36.3	49.1	3.20	6.40	
	mmol/l	7.10	6.04	8.16	0.53	1.06	BUN
	mg/dl	19.9	16.9	22.9	1.50	3.00	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Green
	g/dl	4.14	3.52	4.76	0.31	0.62	
Alkaline Phosphatase	U/l	192	163	221	14.50	29.00	AMP optimised to IFCC 37°C
	U/l	150	127	173	11.50	23.00	AMP optimised to IFCC 30°C
	U/l	123	104	142	9.50	19.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	45	36	54	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	20	16	24	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Total	µmol/l	27.0	21.4	32.6	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.58	1.25	1.91	0.17	0.33	
Calcium	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	136	176	10.00	20.00	
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	119	95.2	143	11.90	23.80	Jaffe rate blanked
	mg/dl	1.34	1.08	1.60	0.13	0.26	
gamma-GT	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Glucose oxidase
	mg/dl	109	93.0	125	8.00	16.00	
HDL - Cholesterol	mmol/l	1.41	1.20	1.62	0.11	0.21	Direct Clearance Method
	mg/dl	54.4	46.3	62.5	4.05	8.10	
LD (LDH)	U/l	431	366	496	32.50	65.00	P->L SFBC 37°C
	U/l	311	264	358	23.50	47.00	P->L SFBC 30°C
	U/l	219	186	252	16.50	33.00	P->L SFBC 25°C
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
Triglycerides	mmol/l	1.08	0.90	1.26	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	95.6	79.9	111	7.85	15.70	
	mmol/l	1.04	0.87	1.21	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.0	76.9	107	7.55	15.10	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.33	0.29	0.37	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.53	4.80	6.26	0.37	0.73	
Urea	mmol/l	7.19	6.11	8.27	0.54	1.08	Urease end point
	mg/dl	43.2	36.7	49.7	3.25	6.50	
	mmol/l	7.00	5.95	8.05	0.53	1.05	Urease kinetic
	mg/dl	42.1	35.8	48.4	3.15	6.30	

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BIOSYSTEMS A25

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.00	5.95	8.05	0.53	1.05	BUN
	mg/dl	19.6	16.7	22.5	1.45	2.90	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.2	35.1	47.3	3.05	6.10	Bromocresol Green
	g/dl	4.12	3.51	4.73	0.31	0.61	
Alkaline Phosphatase	U/l	307	261	353	23.00	46.00	Diethanolamine buffer DEA 37°C
	U/l	239	203	275	18.00	36.00	Diethanolamine buffer DEA 30°C
	U/l	196	167	225	14.50	29.00	Diethanolamine buffer DEA 25°C
	U/l	201	171	231	15.00	30.00	AMP optimised to IFCC 37°C
	U/l	157	133	181	12.00	24.00	AMP optimised to IFCC 30°C
	U/l	128	109	147	9.50	19.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	42	33	51	4.50	9.00	Tris buffer without P5P 37°C
	U/l	31	24	38	3.50	7.00	Tris buffer without P5P 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	18.0	14.2	21.8	1.90	3.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	28.8	22.8	34.8	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	25.1	19.8	30.4	2.65	5.30	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.47	1.16	1.78	0.16	0.31	

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.17	1.95	2.39	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.12	3.59	4.65	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	159	139	179	10.00	20.00	
	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	
Chloride	mmol/l	96.6	88.9	104	3.85	7.70	Colorimetric
	mmol/l	101	92.9	109	4.05	8.10	ISE direct
Cholinesterase	U/l	5354	4283	6425	535.50	1071.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	107	155	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	133	106	160	13.50	27.00	Jaffe rate blanked
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	31	26	36	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Glucose oxidase
	mg/dl	110	93.7	126	8.15	16.30	
HDL - Cholesterol	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct Clearance Method
	mg/dl	53.3	45.2	61.4	4.05	8.10	
LD (LDH)	U/l	396	337	455	29.50	59.00	P->L Scandinavian & Dutch 37°C
	U/l	286	243	329	21.50	43.00	P->L Scandinavian & Dutch 30°C
	U/l	201	171	231	15.00	30.00	P->L Scandinavian & Dutch 25°C
	U/l	381	324	438	28.50	57.00	P->L German methods 37°C
	U/l	275	234	316	20.50	41.00	P->L German methods 30°C
	U/l	193	164	222	14.50	29.00	P->L German methods 25°C
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.28	2.01	2.55	0.14	0.27	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - direct
Protein Total	g/l	60.4	48.3	72.5	6.05	12.10	Biuret reaction end point
	g/dl	6.04	4.83	7.25	0.61	1.21	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.4	113	8.00	16.00	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.80	5.04	6.56	0.38	0.76	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.68	4.94	6.42	0.37	0.74	
Urea	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease kinetic
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.39	6.28	8.50	0.56	1.11	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.7	36.3	49.1	3.20	6.40	Bromocresol Green
	g/dl	4.27	3.63	4.91	0.32	0.64	
	g/l	40.0	34.0	46.0	3.00	6.00	Turbidimetric Assays
	g/dl	4.00	3.40	4.60	0.30	0.60	
Alkaline Phosphatase	U/l	186	158	214	14.00	28.00	Roche Integra AMP buffer 37°C
	U/l	145	123	167	11.00	22.00	Roche Integra AMP buffer 30°C
	U/l	119	101	137	9.00	18.00	Roche Integra AMP buffer 25°C
	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	146	125	167	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	120	102	138	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	190	162	218	14.00	28.00	Colorimetric 37°C
	U/l	148	126	170	11.00	22.00	Colorimetric 30°C
	U/l	121	104	138	8.50	17.00	Colorimetric 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	34	27	41	3.50	7.00	Tris buffer without P5P 37°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 30°C
	U/l	16	13	19	1.50	3.00	Tris buffer without P5P 25°C

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Enzymatic
	mmol/l	13.6	10.8	16.4	1.40	2.80	
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	21.1	16.7	25.5	2.20	4.40	Diazo with Sulphanilic Acid
	mg/dl	1.23	0.977	1.48	0.13	0.25	
	µmol/l	21.1	16.7	25.5	2.20	4.40	Roche DPD JG standardised
	mg/dl	1.23	0.977	1.48	0.13	0.25	
	µmol/l	20.7	16.4	25.0	2.15	4.30	Diazo with Dichloroaniline (DCA)
	mg/dl	1.21	0.959	1.46	0.13	0.25	
	µmol/l	21.3	16.8	25.8	2.25	4.50	Roche DPD Doumas standardised
	mg/dl	1.25	0.983	1.52	0.13	0.27	
Bilirubin Total	µmol/l	28.1	22.2	34.0	2.95	5.90	Diazo with Dichloroaniline (DCA)
	mg/dl	1.64	1.30	1.98	0.17	0.34	
	µmol/l	27.1	21.4	32.8	2.85	5.70	Diazo with Sulphanilic Acid
	mg/dl	1.59	1.25	1.93	0.17	0.34	
	µmol/l	27.0	21.4	32.6	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.58	1.25	1.91	0.17	0.33	
	µmol/l	27.2	21.5	32.9	2.85	5.70	Diazonium ion
	mg/dl	1.59	1.26	1.92	0.17	0.33	
Calcium	mmol/l	2.15	1.93	2.37	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.62	7.74	9.50	0.44	0.88	
	mmol/l	2.15	1.94	2.36	0.11	0.21	Arsenazo III
	mg/dl	8.62	7.78	9.46	0.42	0.84	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	NM-BAPTA
	mg/dl	8.66	7.78	9.54	0.44	0.88	
Cholesterol	mmol/l	3.99	3.47	4.51	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	154	134	174	10.00	20.00	
	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	155	135	175	10.00	20.00	
Chloride	mmol/l	94.8	87.2	102	3.80	7.60	ISE indirect
CK Total	U/l	201	165	237	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	203	166	240	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	127	104	150	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	203	166	240	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	127	104	150	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	126	101	151	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	118	94.6	141	11.70	23.40	Jaffe rate blanked
	mg/dl	1.33	1.07	1.59	0.13	0.26	
	µmol/l	125	99.7	150	12.65	25.30	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	125	100	150	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.41	1.13	1.69	0.14	0.28	
	µmol/l	129	103	155	13.00	26.00	IDMS traceable
	mg/dl	1.46	1.16	1.76	0.15	0.30	
gamma-GT	U/l	48	40	56	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	38	32	44	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.24	5.30	7.18	0.47	0.94	Hexokinase
	mg/dl	112	95.5	129	8.25	16.50	
	mmol/l	6.18	5.25	7.11	0.47	0.93	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.53	1.30	1.76	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	59.1	50.2	68.0	4.45	8.90	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric with ppt.
	µg/dl	106	87.2	125	9.40	18.80	
	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.62	1.33	1.91	0.15	0.29	Colorimetric Lactate Oxidase
	mg/dl	14.6	12.0	17.2	1.30	2.60	
LD (LDH)	U/l	220	187	253	16.50	33.00	L->P 37°C
	U/l	159	135	183	12.00	24.00	L->P 30°C
	U/l	112	95	129	8.50	17.00	L->P 25°C

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RANDOX

COBAS INTEGRA®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	419	356	482	31.50	63.00	P->L German methods 37°C
	U/l	303	257	349	23.00	46.00	P->L German methods 30°C
	U/l	212	180	244	16.00	32.00	P->L German methods 25°C
	U/l	216	183	249	16.50	33.00	L->P IFCC 37°C
	U/l	156	132	180	12.00	24.00	L->P IFCC 30°C
	U/l	110	93	127	8.50	17.00	L->P IFCC 25°C
Lipase	U/l	37	29	45	4.00	8.00	Roche Colorimetric 37°C
	U/l	37	30	44	3.50	7.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.07	0.13	Ion selective electrode
	mg/dl	0.743	0.652	0.834	0.05	0.09	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.21	1.95	2.47	0.13	0.26	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.23	1.96	2.50	0.14	0.27	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
Protein Total	g/l	55.4	44.3	66.5	5.55	11.10	Biuret reaction end point
	g/dl	5.54	4.43	6.65	0.56	1.11	
	g/l	55.8	44.6	67.0	5.60	11.20	Biuret reaction kinetic
	g/dl	5.58	4.46	6.70	0.56	1.12	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	39.2	31.0	47.4	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	219	173	265	23.00	46.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.2	114	8.00	16.00	
	mmol/l	1.08	0.91	1.26	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	95.6	80.1	111	7.75	15.50	
	mmol/l	1.11	0.94	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.7	114	7.75	15.50	
	mmol/l	1.11	0.94	1.29	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	98.2	82.7	114	7.75	15.50	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	99.1	83.2	115	7.95	15.90	
UIBC	µmol/l	20.8	17.1	24.5	1.85	3.70	Direct Colorimetric
	µg/dl	116	95.6	136	10.20	20.40	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.91	5.14	6.68	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	
Urea	mmol/l	7.03	5.98	8.08	0.53	1.05	Urease end point
	mg/dl	42.3	35.9	48.7	3.20	6.40	
	mmol/l	7.01	5.96	8.06	0.53	1.05	Urease kinetic
	mg/dl	42.1	35.8	48.4	3.15	6.30	
	mmol/l	7.01	5.96	8.06	0.53	1.05	BUN
	mg/dl	19.7	16.7	22.7	1.50	3.00	

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RANDOX

Elitech/Vitalab Selectra Series

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.3	35.1	47.5	3.10	6.20	Bromocresol Green
	g/dl	4.13	3.51	4.75	0.31	0.62	
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
AST (GOT)	U/l	37	29	45	4.00	8.00	Tris buffer without P5P 37°C
Bilirubin Direct	µmol/l	14.9	11.8	18.0	1.55	3.10	Diazo with Sulphanilic Acid
	mg/dl	0.872	0.690	1.05	0.09	0.18	
Bilirubin Total	µmol/l	22.8	18.0	27.6	2.40	4.80	Diazo with Sulphanilic Acid
	mg/dl	1.33	1.05	1.61	0.14	0.28	
Calcium	mmol/l	2.12	1.91	2.33	0.11	0.21	Arsenazo III
	mg/dl	8.50	7.66	9.34	0.42	0.84	
Cholesterol	mmol/l	4.09	3.56	4.62	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	158	137	179	10.50	21.00	
	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	160	139	181	10.50	21.00	
CK Total	U/l	221	181	261	20.00	40.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	124	99.6	148	12.20	24.40	Alkaline picrate no deproteinization
	mg/dl	1.40	1.13	1.67	0.14	0.27	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	U/l	51	44	58	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Glucose oxidase
	mg/dl	111	94.6	127	8.20	16.40	
HDL - Cholesterol	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct Clearance Method
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.33	1.13	1.53	0.10	0.20	HDL - Ultra
	mg/dl	51.3	43.6	59.0	3.85	7.70	
Iron	µmol/l	17.3	14.2	20.4	1.55	3.10	Colorimetric without ppt.
	µg/dl	96.7	79.4	114	8.65	17.30	
LD (LDH)	U/l	223	190	256	16.50	33.00	L->P IFCC 37°C
Lipase	U/l	47	38	56	4.50	9.00	Other Colorimetric 37°C
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Protein Total	g/l	56.4	45.1	67.7	5.65	11.30	Biuret reaction end point
	g/dl	5.64	4.51	6.77	0.57	1.13	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.1	112	7.70	15.40	
	mmol/l	1.10	0.93	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.9	113	7.75	15.50	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
Urea	mmol/l	7.15	6.08	8.22	0.54	1.07	Urease kinetic
	mg/dl	43.0	36.5	49.5	3.25	6.50	
	mmol/l	7.15	6.08	8.22	0.54	1.07	BUN
	mg/dl	20.1	17.1	23.1	1.50	3.00	

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
Alkaline Phosphatase	U/l	187	159	215	14.00	28.00	Diethanolamine buffer DEA 37°C
	U/l	146	124	168	11.00	22.00	Diethanolamine buffer DEA 30°C
	U/l	119	102	136	8.50	17.00	Diethanolamine buffer DEA 25°C
	U/l	178	151	205	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	139	118	160	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	114	96	132	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	212	180	244	16.00	32.00	Randox AMP 37°C
	U/l	165	140	190	12.50	25.00	Randox AMP 30°C
	U/l	135	115	155	10.00	20.00	Randox AMP 25°C
ALT (GPT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	74	63	85	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	84	71	97	6.50	13.00	Other 2-chloro-pNPG3 37°C
	U/l	97	82	112	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bile Acids	µmol/l	25.8	20.6	31.0	2.60	5.20	5th Generation Colorimetric
Bilirubin Total	µmol/l	29.0	22.9	35.1	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.34	2.06	0.18	0.36	
Calcium	mmol/l	2.01	1.81	2.21	0.10	0.20	Cresolphthalein complexone
	mg/dl	8.06	7.25	8.87	0.41	0.81	
	mmol/l	2.14	1.93	2.35	0.11	0.21	Arsenazo III
	mg/dl	8.58	7.74	9.42	0.42	0.84	
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
Chloride	mmol/l	92.5	85.1	99.9	3.70	7.40	ISE indirect
Cholinesterase	U/l	4946	3957	5935	494.50	989.00	Colorimetric Butyrylthiocholine 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	124	99.2	149	12.40	24.80	Jaffe rate blanked
	mg/dl	1.40	1.12	1.68	0.14	0.28	
	µmol/l	137	110	164	13.50	27.00	Enzymatic UV method
	mg/dl	1.55	1.24	1.86	0.16	0.31	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	33	45	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	26	34	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	57	48	66	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	45	38	52	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
Iron	µmol/l	18.2	14.9	21.5	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.3	121	9.35	18.70	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.88	0.77	0.98	0.05	0.11	Xylidyl Blue
	mg/dl	2.13	1.87	2.39	0.13	0.26	
Phosphate Inorganic	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	3.92	3.61	4.23	0.16	0.31	ISE method - indirect
Protein Total	g/l	56.3	45.0	67.6	5.65	11.30	Biuret reaction end point
	g/dl	5.63	4.50	6.76	0.57	1.13	
Sodium	mmol/l	137	130	144	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.8	113	7.80	15.60	
	mmol/l	1.07	0.90	1.24	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	94.7	79.6	110	7.55	15.10	
	mmol/l	1.17	0.98	1.36	0.09	0.19	Lipase/Glycerol Dehydrogenase
	mg/dl	104	87.0	121	8.50	17.00	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.59	4.87	6.31	0.36	0.72	

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RANDOX

HITACHI SERIES®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.68	4.94	6.42	0.37	0.74	
	mmol/l	0.33	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.59	4.87	6.31	0.36	0.72	
Urea	mmol/l	7.41	6.30	8.52	0.56	1.11	Urease end point
	mg/dl	44.5	37.9	51.1	3.30	6.60	
	mmol/l	7.36	6.26	8.46	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.36	6.26	8.46	0.55	1.10	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.4	34.3	46.5	3.05	6.10	Bromocresol Green
	g/dl	4.04	3.43	4.65	0.31	0.61	
Alkaline Phosphatase	U/l	211	180	242	15.50	31.00	Diethanolamine buffer DEA 37°C
	U/l	164	140	188	12.00	24.00	Diethanolamine buffer DEA 30°C
	U/l	135	115	155	10.00	20.00	Diethanolamine buffer DEA 25°C
	U/l	203	172	234	15.50	31.00	AMP optimised to IFCC 37°C
	U/l	158	134	182	12.00	24.00	AMP optimised to IFCC 30°C
	U/l	130	110	150	10.00	20.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	39	32	46	3.50	7.00	Tris buffer without P5P 37°C
	U/l	29	24	34	2.50	5.00	Tris buffer without P5P 30°C
	U/l	22	18	26	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	87	74	100	6.50	13.00	I.L. 2-chloro-pNPG3 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	15.2	12.0	18.4	1.60	3.20	Diazo with Sulphanilic Acid
	mg/dl	0.889	0.702	1.08	0.09	0.19	
Bilirubin Total	µmol/l	29.5	23.3	35.7	3.10	6.20	Diazo with Sulphanilic Acid
	mg/dl	1.73	1.36	2.10	0.19	0.37	
	µmol/l	28.5	22.5	34.5	3.00	6.00	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.67	1.32	2.02	0.18	0.35	

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RANDOX

ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.14	1.93	2.35	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.58	7.74	9.42	0.42	0.84	
	mmol/l	2.11	1.90	2.32	0.11	0.21	Arsenazo III
	mg/dl	8.46	7.62	9.30	0.42	0.84	
Cholesterol	mmol/l	4.05	3.52	4.58	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
Chloride	mmol/l	92.8	85.4	100	3.70	7.40	ISE indirect
Cholinesterase	U/l	5597	4477	6717	560.00	1120.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	209	171	247	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	131	107	155	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	89	73	105	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	127	102	152	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Creatinine PAP method
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	140	112	168	14.00	28.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.58	1.27	1.89	0.16	0.31	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	48	41	55	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	38	32	44	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	25	35	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.26	5.32	7.20	0.47	0.94	Glucose oxidase
	mg/dl	113	95.9	130	8.55	17.10	
HDL - Cholesterol	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct HDL Immunoseparation
	mg/dl	48.3	40.9	55.7	3.70	7.40	
	mmol/l	1.26	1.07	1.45	0.10	0.19	Direct HDL PEGME
	mg/dl	48.6	41.3	55.9	3.65	7.30	
	mmol/l	1.24	1.06	1.42	0.09	0.18	HDL - Ultra
	mg/dl	47.9	40.9	54.9	3.50	7.00	
Iron	µmol/l	18.5	15.2	21.8	1.65	3.30	Colorimetric without ppt.
	µg/dl	103	85.0	121	9.00	18.00	
LD (LDH)	U/l	387	329	445	29.00	58.00	P->L German methods 37°C
	U/l	279	238	320	20.50	41.00	P->L German methods 30°C
	U/l	196	167	225	14.50	29.00	P->L German methods 25°C
Lipase	U/l	41	33	49	4.00	8.00	Other Colorimetric 37°C
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Xylidyl Blue
	mg/dl	2.23	1.96	2.50	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Enzymatic
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Phosphate Inorganic	mmol/l	1.29	1.10	1.48	0.10	0.19	Phosphomolybdate UV
	mg/dl	4.00	3.41	4.59	0.30	0.59	
Potassium	mmol/l	4.07	3.74	4.40	0.17	0.33	ISE method - indirect
Protein Total	g/l	56.8	45.4	68.2	5.70	11.40	Biuret reaction end point
	g/dl	5.68	4.54	6.82	0.57	1.14	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.0	117	8.00	16.00	

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ILab 600®/650®/Aries/Taurus

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.63	4.89	6.37	0.37	0.74	
Urea	mmol/l	7.56	6.43	8.69	0.57	1.13	Urease kinetic
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.56	6.43	8.69	0.57	1.13	BUN
	mg/dl	21.2	18.0	24.4	1.60	3.20	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	39.3	33.4	45.2	2.95	5.90	Bromocresol Green
	g/dl	3.93	3.34	4.52	0.30	0.59	
Alkaline Phosphatase	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	146	125	167	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	120	102	138	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	38	31	45	3.50	7.00	Tris buffer without P5P 37°C
	U/l	26	21	31	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	15	21	1.50	3.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	17.6	13.9	21.3	1.85	3.70	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.03	0.813	1.25	0.11	0.22	
Bilirubin Total	µmol/l	27.7	21.9	33.5	2.90	5.80	Diazo with Sulphanilic Acid
	mg/dl	1.62	1.28	1.96	0.17	0.34	
	µmol/l	24.8	19.6	30.0	2.60	5.20	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	26.0	20.5	31.5	2.75	5.50	Nitrobenzenediazonium salt
	mg/dl	1.52	1.20	1.84	0.16	0.32	
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Arsenazo III
	mg/dl	8.66	7.78	9.54	0.44	0.88	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
	mmol/l	3.98	3.46	4.50	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	154	134	174	10.00	20.00	
Chloride	mmol/l	98.9	91.0	107	3.95	7.90	Colorimetric
	mmol/l	97.6	89.8	105	3.90	7.80	ISE direct
CK Total	U/l	211	173	249	19.00	38.00	CK-NAC (IFCC) 37°C
	U/l	132	108	156	12.00	24.00	CK-NAC (IFCC) 30°C
	U/l	90	74	106	8.00	16.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Enzymatic UV method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	U/l	50	42	58	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	26	36	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.41	5.45	7.37	0.48	0.96	Hexokinase
	mg/dl	116	98.2	134	8.90	17.80	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Glucose oxidase
	mg/dl	111	94.2	128	8.40	16.80	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.37	1.17	1.57	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.9	45.2	60.6	3.85	7.70	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PEGME
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Direct Clearance Method
	mg/dl	51.7	44.0	59.4	3.85	7.70	
Iron	µmol/l	19.4	15.9	22.9	1.75	3.50	Colorimetric without ppt.
	µg/dl	108	88.9	127	9.55	19.10	
LD (LDH)	U/l	212	180	244	16.00	32.00	L->P IFCC 37°C
	U/l	153	130	176	11.50	23.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.84	3.53	4.15	0.16	0.31	ISE method - direct
Protein Total	g/l	57.7	46.2	69.2	5.75	11.50	Biuret reaction end point
	g/dl	5.77	4.62	6.92	0.58	1.15	
Sodium	mmol/l	137	130	144	3.50	7.00	ISE method - direct
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.05	5.26	6.84	0.40	0.79	

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Konelab 20/30/60®/Thermo Scientific Indiko Plus ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease end point
	mg/dl	45.7	38.9	52.5	3.40	6.80	
	mmol/l	7.14	6.07	8.21	0.54	1.07	Urease kinetic
	mg/dl	42.9	36.5	49.3	3.20	6.40	
	mmol/l	7.14	6.07	8.21	0.54	1.07	BUN
	mg/dl	20.0	17.0	23.0	1.50	3.00	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Green
	g/dl	4.06	3.45	4.67	0.31	0.61	
	g/l	41.6	35.3	47.9	3.15	6.30	Bromocresol Purple
	g/dl	4.16	3.53	4.79	0.32	0.63	
	g/l	40.2	34.2	46.2	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.02	3.42	4.62	0.30	0.60	
	g/l	40.6	34.5	46.7	3.05	6.10	Turbidimetric Assays
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	181	154	208	13.50	27.00	Ortho Vitros Microslide Systems 37°C
	U/l	261	222	300	19.50	39.00	Diethanolamine buffer DEA 37°C
	U/l	203	173	233	15.00	30.00	Diethanolamine buffer DEA 30°C
	U/l	167	142	192	12.50	25.00	Diethanolamine buffer DEA 25°C
	U/l	203	173	233	15.00	30.00	AMP optimised to IFCC 37°C
	U/l	158	135	181	11.50	23.00	AMP optimised to IFCC 30°C
	U/l	130	111	149	9.50	19.00	AMP optimised to IFCC 25°C
	U/l	200	170	230	15.00	30.00	AMP non-optimised 37°C
	U/l	156	132	180	12.00	24.00	AMP non-optimised 30°C
	U/l	128	109	147	9.50	19.00	AMP non-optimised 25°C
	U/l	191	163	219	14.00	28.00	Colorimetric 37°C
	U/l	149	127	171	11.00	22.00	Colorimetric 30°C
	U/l	122	104	140	9.00	18.00	Colorimetric 25°C

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
ALT (GPT)	U/l	42	33	51	4.50	9.00	Colorimetric 37°C
	U/l	31	24	38	3.50	7.00	Colorimetric 30°C
	U/l	24	19	29	2.50	5.00	Colorimetric 25°C
	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	45	36	54	4.50	9.00	Tris buffer with P5P 37°C
	U/l	33	27	39	3.00	6.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C
	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	19	27	2.00	4.00	Tris buffer without P5P 25°C
	U/l	42	33	51	4.50	9.00	Tris buffer with P5P NVKC 37°C
	U/l	31	24	38	3.50	7.00	Tris buffer with P5P NVKC 30°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P NVKC 25°C
	U/l	40	32	48	4.00	8.00	Tris buffer SCE 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer SCE 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer SCE 25°C
	U/l	46	37	55	4.50	9.00	Ortho Vitros MicroSlide visible 37°C
Amylase Pancreatic	U/l	66	56	76	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	64	55	73	4.50	9.00	Roche EPS Liquid 37°C
	U/l	74	63	85	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	88	75	101	6.50	13.00	pNP Maltotrioside substrates 37°C
	U/l	92	78	106	7.00	14.00	Siemens - blocked pNPG7 37°C
	U/l	73	62	84	5.50	11.00	Randox Lyo. Ethylidene pNPG7 37°C
	U/l	97	82	112	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
	U/l	88	75	101	6.50	13.00	Beckman Synchron CX4/CX5/CX7 37°C

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	89	75	103	7.00	14.00	Siemens 2-chloro-pNP linked substrate 37°C
	U/l	87	74	100	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	68	57	79	5.50	11.00	Ortho Vitros Microslide Systems 37°C
	U/l	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	94	80	108	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
	U/l	88	75	101	6.50	13.00	bioMerieux 2-chloro-pNPG3 37°C
	U/l	89	76	102	6.50	13.00	Beckman Coulter - blocked pNPG7 37°C
	U/l	90	77	103	6.50	13.00	Beckman Synchron AMY7 37°C
	U/l	88	75	101	6.50	13.00	I.L. 2-chloro-pNPG3 37°C
	U/l	97	82	112	7.50	15.00	Abbott Architect IFCC Cal. 37°C
	U/l	93	79	107	7.00	14.00	Abbott Architect Non-IFCC Cal. 37°C
	U/l	84	72	96	6.00	12.00	Beckman CNPG3 (Extinction Coeff) 37°C
	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
Apolipoprotein A-1	g/l	1.19	0.98	1.40	0.11	0.21	Immunoturbidimetric
	mg/dl	119	97.6	140	10.70	21.40	
Apolipoprotein B	g/l	0.59	0.48	0.70	0.05	0.11	Immunoturbidimetric
	mg/dl	59.0	48.4	69.6	5.30	10.60	
Acid Phosphatase (Total)	U/l	17.1	11.5	22.7	2.80	5.60	1-Naphthyl Phosphate substrate Kinetic 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Colorimetric 37°C
	U/l	24	19	29	2.50	5.00	Colorimetric 30°C
	U/l	17	13	21	2.00	4.00	Colorimetric 25°C
	U/l	58	46	70	6.00	12.00	Ortho Vitros Microslide visible slide 37°C
	U/l	53	43	63	5.00	10.00	Tris buffer with P5P 37°C
	U/l	36	29	43	3.50	7.00	Tris buffer with P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer with P5P 25°C

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
AST (GOT)	U/l	36	29	43	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	20	28	2.00	4.00	Tris buffer without P5P 30°C
	U/l	17	14	20	1.50	3.00	Tris buffer without P5P 25°C
	U/l	36	29	43	3.50	7.00	Phosphate buffer DGKC 37°C
	U/l	24	20	28	2.00	4.00	Phosphate buffer DGKC 30°C
	U/l	17	14	20	1.50	3.00	Phosphate buffer DGKC 25°C
	U/l	35	28	42	3.50	7.00	Tris buffer with P5P NVKC 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer with P5P NVKC 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer with P5P NVKC 25°C
	U/l	35	28	42	3.50	7.00	Tris buffer SCE 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer SCE 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer SCE 25°C
Bile Acids	µmol/l	27.2	21.8	32.6	2.70	5.40	4th Generation Colorimetric
	µmol/l	25.8	20.6	31.0	2.60	5.20	5th Generation Colorimetric
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Colorimetric
	mmol/l	14.5	11.5	17.5	1.50	3.00	Ortho Vitros Microslide Systems
	mmol/l	14.1	11.2	17.0	1.45	2.90	Enzymatic
	mmol/l	14.7	11.7	17.7	1.50	3.00	Ion selective electrode
	mmol/l	14.8	11.7	17.9	1.55	3.10	Manometric
Bilirubin Direct	µmol/l	21.7	17.2	26.2	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.27	1.01	1.53	0.13	0.26	
	µmol/l	19.2	15.2	23.2	2.00	4.00	Diazo with Sulphanilic Acid
	mg/dl	1.12	0.889	1.35	0.12	0.23	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Direct	µmol/l	21.3	16.8	25.8	2.25	4.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.25	0.983	1.52	0.13	0.27	
	µmol/l	19.1	15.1	23.1	2.00	4.00	Oxidation to Biliverdin/Vanadate
	mg/dl	1.12	0.883	1.36	0.12	0.24	
	µmol/l	14.6	11.5	17.7	1.55	3.10	Modified Jendrassik
	mg/dl	0.854	0.673	1.04	0.09	0.18	
Bilirubin Total	µmol/l	24.2	19.1	29.3	2.55	5.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.42	1.12	1.72	0.15	0.30	
	µmol/l	27.6	21.8	33.4	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.61	1.28	1.94	0.17	0.33	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.68	1.33	2.03	0.18	0.35	
	µmol/l	27.4	21.6	33.2	2.90	5.80	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Nitrobenzenediazonium salt
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	26.4	20.8	32.0	2.80	5.60	Diazonium ion
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	30.1	23.8	36.4	3.15	6.30	Oxidation to Biliverdin/Vanadate
	mg/dl	1.76	1.39	2.13	0.19	0.37	
	µmol/l	32.3	25.5	39.1	3.40	6.80	Modified Jendrassik
	mg/dl	1.89	1.49	2.29	0.20	0.40	
Calcium	mmol/l	2.14	1.92	2.36	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.58	7.70	9.46	0.44	0.88	
	mmol/l	2.21	1.99	2.43	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.86	7.98	9.74	0.44	0.88	

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.16	1.94	2.38	0.11	0.22	Ion selective electrode
	mg/dl	8.66	7.78	9.54	0.44	0.88	
	mmol/l	2.11	1.90	2.32	0.11	0.21	Methylthymol blue
	mg/dl	8.46	7.62	9.30	0.42	0.84	
	mmol/l	2.18	1.97	2.39	0.11	0.21	Arsenazo III
	mg/dl	8.74	7.90	9.58	0.42	0.84	
	mmol/l	2.15	1.94	2.36	0.11	0.21	Phosphonazo
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
	mmol/l	1.02	0.92	1.12	0.05	0.10	Ionised calcium
	mg/dl	4.09	3.68	4.50	0.21	0.41	
Cholesterol	mmol/l	4.12	3.58	4.66	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	159	138	180	10.50	21.00	
	mmol/l	4.06	3.53	4.59	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	136	178	10.50	21.00	
	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	157	137	177	10.00	20.00	
	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Dehydrogenase
	mg/dl	157	137	177	10.00	20.00	
Chloride	mmol/l	98.0	90.2	106	3.90	7.80	Colorimetric
	mmol/l	95.1	87.5	103	3.80	7.60	Ortho Vitros Microslide Systems
	mmol/l	93.8	86.3	101	3.75	7.50	ISE indirect
	mmol/l	96.0	88.3	104	3.85	7.70	ISE direct

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholinesterase	U/l	5384	4308	6460	538.00	1076.00	Colorimetric Benzoylcholine 37°C
	U/l	5651	4520	6782	565.50	1131.00	Colorimetric Butyrylthiocholine 37°C
	U/l	5271	4217	6325	527.00	1054.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	194	159	229	17.50	35.00	Ortho Vitros Microslide Systems 37°C
	U/l	205	168	242	18.50	37.00	CK-NAC serum start (DGKC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC serum start (DGKC) 25°C
	U/l	205	168	242	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	204	167	241	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC (IFCC) 25°C
	U/l	218	179	257	19.50	39.00	Monothioglycerol 37°C
	U/l	136	112	160	12.00	24.00	Monothioglycerol 30°C
	U/l	93	76	110	8.50	17.00	Monothioglycerol 25°C
	U/l	200	164	236	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 37°C
	U/l	125	103	147	11.00	22.00	Dithioerythritol (DTE) IFCC correlated 30°C
	U/l	85	70	100	7.50	15.00	Dithioerythritol (DTE) IFCC correlated 25°C
Copper	µmol/l	16.9	13.5	20.3	1.70	3.40	Atomic absorption
	µg/dl	107	85.9	128	10.55	21.10	
	µmol/l	15.7	12.6	18.8	1.55	3.10	Colorimetric
	µg/dl	99.9	80.1	120	9.90	19.80	
Cortisol	nmol/l	450	338	562	56.00	112.00	Roche Cobas e801
	µg/dl	16.2	12.2	20.2	2.00	4.00	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate with deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Creatinine PAP method
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	128	102	154	13.00	26.00	IDMS traceable
	mg/dl	1.45	1.15	1.75	0.15	0.30	
D-3-Hydroxybutyrate	mmol/l	0.29	0.24	0.33	0.02	0.04	Tris buffer 100mmol pH 8.5
Digoxin	nmol/l	2.18	1.74	2.62	0.22	0.44	Immunoturbidimetric
	ng/ml	1.70	1.36	2.04	0.17	0.34	
Folate	nmol/l	40.4	30.7	50.1	4.85	9.70	Roche Folate 07027290 e801
	ng/ml	17.8	13.5	22.1	2.15	4.30	
Free T4	pmol/l	18.2	13.6	22.8	2.30	4.60	Abbott Architect
	ng/dl	1.42	1.06	1.78	0.18	0.36	
	pg/ml	14.2	10.6	17.8	1.80	3.60	Abbott Architect

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	21.4	16.0	26.8	2.70	5.40	Siemens Centaur XP/XPT/Classic
	ng/dl	1.67	1.25	2.09	0.21	0.42	
	pg/ml	16.7	12.5	20.9	2.10	4.20	Siemens Centaur XP/XPT/Classic
	pmol/l	23.2	17.4	29.0	2.90	5.80	Siemens Immulite 2000/2500
	ng/dl	1.81	1.36	2.26	0.23	0.45	
	pg/ml	18.1	13.6	22.6	2.25	4.50	Siemens Immulite 2000/2500
	pmol/l	20.6	15.5	25.7	2.55	5.10	Beckman DxI800
	ng/dl	1.61	1.21	2.01	0.20	0.40	
	pg/ml	16.1	12.1	20.1	2.00	4.00	Beckman DxI800
	pmol/l	23.8	17.8	29.8	3.00	6.00	Roche Elecsys
	ng/dl	1.86	1.39	2.33	0.24	0.47	
	pg/ml	18.6	13.9	23.3	2.35	4.70	Roche Elecsys
	pmol/l	20.5	15.4	25.6	2.55	5.10	Beckman Access
	ng/dl	1.60	1.20	2.00	0.20	0.40	
	pg/ml	16.0	12.0	20.0	2.00	4.00	Beckman Access
	pmol/l	26.1	19.6	32.6	3.25	6.50	Tosoh Series
	ng/dl	2.04	1.53	2.55	0.26	0.51	
	pg/ml	20.4	15.3	25.5	2.55	5.10	Tosoh Series
	pmol/l	39.8	29.9	49.7	4.95	9.90	Vitros ECi
	ng/dl	3.10	2.33	3.87	0.39	0.77	
	pg/ml	31.0	23.3	38.7	3.85	7.70	Vitros ECi
	pmol/l	23.3	17.4	29.2	2.95	5.90	Roche Cobas 4000/E411
	ng/dl	1.82	1.36	2.28	0.23	0.46	
	pg/ml	18.2	13.6	22.8	2.30	4.60	Roche Cobas 4000/E411

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Free T4	pmol/l	23.5	17.6	29.4	2.95	5.90	Roche Cobas e601/602
	ng/dl	1.83	1.37	2.29	0.23	0.46	
	pg/ml	18.3	13.7	22.9	2.30	4.60	Roche Cobas e601/602
	pmol/l	18.2	13.7	22.7	2.25	4.50	Monobind Inc. ELISA / CLIA
	ng/dl	1.42	1.07	1.77	0.18	0.35	
	pg/ml	14.2	10.7	17.7	1.75	3.50	Monobind Inc. ELISA / CLIA
	pmol/l	22.4	16.8	28.0	2.80	5.60	Biomerieux Vidas FT4N Kit
	ng/dl	1.75	1.31	2.19	0.22	0.44	
	pg/ml	17.5	13.1	21.9	2.20	4.40	Biomerieux Vidas FT4N Kit
	pmol/l	21.4	16.0	26.8	2.70	5.40	Siemens Dimension Exl LOCI
	ng/dl	1.67	1.25	2.09	0.21	0.42	
	pg/ml	16.7	12.5	20.9	2.10	4.20	Siemens Dimension Exl LOCI
	pmol/l	22.9	17.2	28.6	2.85	5.70	Roche Cobas e801
	ng/dl	1.79	1.34	2.24	0.23	0.45	
	pg/ml	17.9	13.4	22.4	2.25	4.50	Roche Cobas e801
	pmol/l	21.3	16.0	26.6	2.65	5.30	Siemens Atellica IM
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	Siemens Atellica IM
Gentamicin	µmol/l	8.24	6.59	9.89	0.83	1.65	Immunoturbidimetric
	µg/ml	3.94	3.15	4.73	0.40	0.79	
gamma-GT	U/l	49	41	57	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	39	32	46	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	30	25	35	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	47	40	54	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
	U/l	57	48	66	4.50	9.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	45	38	52	3.50	7.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	35	30	40	2.50	5.00	Randox Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
GLDH	U/l	14	11	17	1.50	3.00	Triethanolamine buffer 50 mmol 37°C
	U/l	11	8	14	1.50	3.00	Triethanolamine buffer 50 mmol 30°C
	U/l	9	7	11	1.00	2.00	Triethanolamine buffer 50 mmol 25°C
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	110	93.7	126	8.15	16.30	
	mmol/l	6.17	5.24	7.10	0.47	0.93	Glucose dehydrogenase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.15	5.23	7.07	0.46	0.92	Hexokinase
	mg/dl	111	94.2	128	8.40	16.80	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Oxygen electrode
	mg/dl	112	94.8	129	8.60	17.20	
	mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose oxidase
	mg/dl	111	94.4	128	8.30	16.60	
alpha-HBDH	U/l	223	176	270	23.50	47.00	Oxobutyrate < 10 mmol/l 37°C
	U/l	168	133	203	17.50	35.00	Oxobutyrate < 10 mmol/l 30°C
	U/l	126	100	152	13.00	26.00	Oxobutyrate < 10 mmol/l 25°C
HDL - Cholesterol	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PPD
	mg/dl	54.8	46.7	62.9	4.05	8.10	

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
HDL - Cholesterol	mmol/l	1.38	1.17	1.59	0.11	0.21	Direct HDL Immunoseparation
	mg/dl	53.3	45.2	61.4	4.05	8.10	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Vitros Magnetic HDL
	mg/dl	54.8	46.7	62.9	4.05	8.10	
	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL PEGME
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.31	1.11	1.51	0.10	0.20	Direct Clearance Method
	mg/dl	50.6	42.8	58.4	3.90	7.80	
	mmol/l	1.44	1.23	1.65	0.11	0.21	Vitros 5.1 FS microtip assay
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.50	1.28	1.72	0.11	0.22	Direct HDL Roche 4th Generation
	mg/dl	57.9	49.4	66.4	4.25	8.50	
Immunoglobulin A	g/l	1.68	1.26	2.10	0.21	0.42	Immunoturbidimetric
	mg/dl	168	126	210	21.00	42.00	
Immunoglobulin G	g/l	5.88	4.82	6.94	0.53	1.06	Immunoturbidimetric
	mg/dl	588	482	694	53.00	106.00	
Immunoglobulin M	g/l	0.67	0.54	0.81	0.07	0.14	Immunoturbidimetric
	mg/dl	67.4	53.9	80.9	6.75	13.50	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric with ppt.
	µg/dl	103	84.4	122	9.30	18.60	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	18.6	15.3	21.9	1.65	3.30	Colorimetric without ppt.
	µg/dl	104	85.5	123	9.25	18.50	
	µmol/l	19.2	15.7	22.7	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.57	1.29	1.85	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.1	11.6	16.6	1.25	2.50	
	mmol/l	1.49	1.22	1.76	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.4	11.0	15.8	1.20	2.40	
	mmol/l	1.60	1.31	1.89	0.15	0.29	Ion selective electrode
	mg/dl	14.4	11.8	17.0	1.30	2.60	
	mmol/l	1.57	1.28	1.86	0.15	0.29	UV LDH
	mg/dl	14.1	11.5	16.7	1.30	2.60	
LD (LDH)	U/l	203	172	234	15.50	31.00	L->P 37°C
	U/l	147	124	170	11.50	23.00	L->P 30°C
	U/l	103	87	119	8.00	16.00	L->P 25°C
	U/l	427	363	491	32.00	64.00	P->L Scandinavian & Dutch 37°C
	U/l	308	262	354	23.00	46.00	P->L Scandinavian & Dutch 30°C
	U/l	216	184	248	16.00	32.00	P->L Scandinavian & Dutch 25°C
	U/l	414	352	476	31.00	62.00	P->L German methods 37°C
	U/l	299	254	344	22.50	45.00	P->L German methods 30°C
	U/l	210	178	242	16.00	32.00	P->L German methods 25°C
	U/l	412	350	474	31.00	62.00	P->L SFBC 37°C
	U/l	297	253	341	22.00	44.00	P->L SFBC 30°C
	U/l	209	177	241	16.00	32.00	P->L SFBC 25°C
	U/l	209	178	240	15.50	31.00	L->P IFCC 37°C
	U/l	151	129	173	11.00	22.00	L->P IFCC 30°C
	U/l	106	90	122	8.00	16.00	L->P IFCC 25°C

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	234	199	269	17.50	35.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	40	32	48	4.00	8.00	Other Colorimetric 37°C
	U/l	285	229	341	28.00	56.00	Ortho Vitros Microslide Systems 37°C
	U/l	37	30	44	3.50	7.00	Roche Colorimetric 37°C
	U/l	47	38	56	4.50	9.00	Randox Colorimetric 37°C
Lithium	mmol/l	1.25	1.10	1.40	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.868	0.764	0.972	0.05	0.10	
	mmol/l	1.05	0.92	1.18	0.06	0.13	Flame photometry
	mg/dl	0.729	0.640	0.818	0.04	0.09	
	mmol/l	1.07	0.95	1.20	0.06	0.13	Ion selective electrode
	mg/dl	0.743	0.656	0.830	0.04	0.09	
	mmol/l	1.09	0.96	1.22	0.07	0.13	Spectrophotometric
	mg/dl	0.757	0.665	0.849	0.05	0.09	
Magnesium	mmol/l	0.89	0.78	0.99	0.05	0.11	Arsenazo III
	mg/dl	2.16	1.90	2.42	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.21	1.94	2.48	0.14	0.27	
	mmol/l	0.90	0.79	1.01	0.05	0.11	Atomic absorption
	mg/dl	2.19	1.93	2.45	0.13	0.26	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Calmagite
	mg/dl	2.15	1.89	2.41	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.90	0.80	1.01	0.05	0.11	Methylthymol blue
	mg/dl	2.20	1.93	2.47	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.89	0.79	1.00	0.05	0.11	Enzymatic
	mg/dl	2.17	1.91	2.43	0.13	0.26	
NEFA	mmol/l	1.50	1.20	1.80	0.15	0.30	Colorimetric
Osmolality	mOsm/kg	288	231	345	28.50	57.00	Calculated
	mOsm/kg	301	241	361	30.00	60.00	Freezing point depression
Paracetamol	mmol/l	0.09	0.07	0.10	0.01	0.02	Gravimetric
	mg/l	13.0	10.4	15.6	1.30	2.60	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.31	3.66	4.96	0.33	0.65	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.15	3.53	4.77	0.31	0.62	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	Ortho Vitros Microslide Systems
	mmol/l	4.18	3.85	4.51	0.17	0.33	Enzymatic
	mmol/l	3.91	3.60	4.22	0.16	0.31	Flame photometry
	mmol/l	3.90	3.59	4.21	0.16	0.31	ISE method - direct
	mmol/l	3.96	3.64	4.28	0.16	0.32	ISE method - indirect
	mmol/l	3.80	3.50	4.10	0.15	0.30	Colorimetric
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Ortho Vitros Microslide Systems
	g/dl	5.78	4.63	6.93	0.58	1.15	

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ASSAYED HUMAN SERA LEVEL 2

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	57.4	45.9	68.9	5.75	11.50	Biuret reaction end point
	g/dl	5.74	4.59	6.89	0.58	1.15	
	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction kinetic
	g/dl	5.70	4.56	6.84	0.57	1.14	
PSA Total	ng/ml =	8.13	6.10	10.2	1.02	2.03	Tosoh Series
	ng/ml =	10.1	7.60	12.6	1.25	2.50	Siemens Immulite 1000
	ng/ml =	10.8	8.09	13.5	1.36	2.71	Roche Elecsys Modular E170
	ng/ml =	11.0	8.24	13.8	1.38	2.76	Beckman Access standardised to Hybritech
	ng/ml =	11.0	8.25	13.8	1.38	2.75	bioMerieux VIDAS TPSA
	ng/ml =	9.53	7.15	11.9	1.19	2.38	Siemens Centaur XP/XPT/Classic
	ng/ml =	10.5	7.90	13.1	1.30	2.60	Siemens Immulite 2000 1st Generation
	ng/ml =	9.42	7.06	11.8	1.18	2.36	Abbott Architect
	ng/ml =	10.8	8.07	13.5	1.37	2.73	Ortho Vitros ECi
	ng/ml =	11.0	8.25	13.8	1.38	2.75	Siemens Dimension
	ng/ml =	11.3	8.46	14.1	1.42	2.84	Cobas E411
	ng/ml =	11.2	8.39	14.0	1.41	2.81	Roche Cobas 6000/8000
	ng/ml =	11.1	8.36	13.8	1.37	2.74	Ortho Vitros 3600/5600/ECi PSA II
	ng/ml =	10.8	8.14	13.5	1.33	2.66	Beckman DXI standardised to Hybritech
Salicylate	mmol/l	0.43	0.35	0.52	0.04	0.09	Gravimetric
	mg/dl	5.99	4.80	7.18	0.60	1.19	
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
	mmol/l	142	135	149	3.50	7.00	Enzymatic
	mmol/l	139	132	146	3.50	7.00	Flame photometry
	mmol/l	138	131	145	3.50	7.00	ISE method - direct
	mmol/l	140	133	147	3.50	7.00	ISE method - indirect

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Sodium	mmol/l	141	134	148	3.50	7.00	Colorimetric
Theophylline	µmol/l	28.3	22.6	34.0	2.85	5.70	Gravimetric
	µg/ml	5.10	4.07	6.13	0.52	1.03	
Thyroid Stimulating Hormone	µU/ml =	1.02	0.81	1.23	0.10	0.21	Abbott Architect
	µU/ml =	1.31	1.05	1.57	0.13	0.26	bioMerieux VIDAS TSH
	µU/ml =	1.31	1.05	1.57	0.13	0.26	bioMerieux VIDAS TSH3 Ultrasensitive
	µU/ml =	1.39	1.11	1.67	0.14	0.28	Siemens Centaur XP/XPT/Classic
	µU/ml =	1.32	1.06	1.58	0.13	0.26	Siemens Immulite 2000/2500
	µU/ml =	1.40	1.12	1.68	0.14	0.28	Roche Elecsys
	µU/ml =	1.24	0.99	1.49	0.13	0.25	Beckman Access Fast TSH
	µU/ml =	1.16	0.93	1.39	0.11	0.23	Beckman Access hyperTSH 3rd Generation
	µU/ml =	1.20	0.96	1.44	0.12	0.24	Tosoh Series
	µU/ml =	1.17	0.94	1.40	0.12	0.23	Vitros ECi
	µU/ml =	1.44	1.16	1.72	0.14	0.28	Roche Cobas 4000/E411
	µU/ml =	1.44	1.15	1.73	0.15	0.29	Roche Cobas e601/602
	µU/ml =	1.12	0.90	1.34	0.11	0.22	Beckman DxI800 Hyper TSH
	µU/ml =	1.27	1.02	1.52	0.13	0.25	Monobind Inc. ELISA / CLIA
	µU/ml =	1.14	0.91	1.37	0.12	0.23	Siemens Centaur XP/XPT/Classic TSH3-Ultra
	µU/ml =	1.12	0.90	1.34	0.11	0.22	Siemens Centaur CP
	µU/ml =	1.17	0.94	1.40	0.12	0.23	Siemens Centaur CP TSH3-Ultra
	µU/ml =	1.12	0.90	1.34	0.11	0.22	Beckman DxI 600/800 Access (3rd IS)
	µU/ml =	1.39	1.11	1.67	0.14	0.28	Roche Cobas e801
	µU/ml =	1.15	0.92	1.38	0.12	0.23	Siemens Atellica IM
TIBC	µmol/l	46.3	36.6	56.0	4.85	9.70	Ortho Vitros Microslide Systems
	µg/dl	259	205	313	27.00	54.00	

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Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
TIBC	µmol/l	38.6	30.5	46.7	4.05	8.10	Removal of excess free iron
	µg/dl	216	170	262	23.00	46.00	
	µmol/l	39.7	31.3	48.1	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	222	175	269	23.50	47.00	
	µmol/l	41.4	32.7	50.1	4.35	8.70	Direct Colorimetric
	µg/dl	231	183	279	24.00	48.00	
	µmol/l	40.7	32.2	49.2	4.25	8.50	Calculated from Transferrin
	µg/dl	228	180	276	24.00	48.00	
	µmol/l	48.9	38.6	59.2	5.15	10.30	Randox Direct
	µg/dl	273	216	330	28.50	57.00	
Tobramycin	µmol/l	6.30	5.04	7.56	0.63	1.26	Gravimetric
	µg/ml	2.95	2.36	3.54	0.30	0.59	
Total T3	nmol/l	1.87	1.40	2.34	0.24	0.47	Abbott Architect
	ng/ml	1.22	0.911	1.53	0.15	0.31	
	ng/dl	122	91.1	153	15.45	30.90	Abbott Architect
	nmol/l	2.05	1.54	2.56	0.26	0.51	BioMerieux Vidas
	ng/ml	1.33	1.00	1.66	0.17	0.33	
	ng/dl	133	100	166	16.50	33.00	BioMerieux Vidas
	nmol/l	2.18	1.63	2.73	0.28	0.55	Siemens Centaur XP/XPT/Classic
	ng/ml	1.42	1.06	1.78	0.18	0.36	
	ng/dl	142	106	178	18.00	36.00	Siemens Centaur XP/XPT/Classic
	nmol/l	1.76	1.32	2.20	0.22	0.44	Siemens Immulite 2000/2500
	ng/ml	1.15	0.859	1.44	0.15	0.29	
	ng/dl	115	85.9	144	14.55	29.10	Siemens Immulite 2000/2500
	nmol/l	2.09	1.57	2.61	0.26	0.52	Beckman DxI800
	ng/ml	1.36	1.02	1.70	0.17	0.34	
	ng/dl	136	102	170	17.00	34.00	Beckman DxI800

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T3	nmol/l	2.36	1.77	2.95	0.30	0.59	Roche Elecsys
	ng/ml	1.54	1.15	1.93	0.20	0.39	
	ng/dl	154	115	193	19.50	39.00	Roche Elecsys
	nmol/l	2.24	1.68	2.80	0.28	0.56	Beckman Access
	ng/ml	1.46	1.09	1.83	0.19	0.37	
	ng/dl	146	109	183	18.50	37.00	Beckman Access
	nmol/l	2.03	1.52	2.54	0.26	0.51	Tosoh Series
	ng/ml	1.32	0.990	1.65	0.17	0.33	
	ng/dl	132	99.0	165	16.50	33.00	Tosoh Series
	nmol/l	2.62	1.97	3.27	0.33	0.65	Vitros ECi
	ng/ml	1.71	1.28	2.14	0.22	0.43	
	ng/dl	171	128	214	21.50	43.00	Vitros ECi
	nmol/l	2.20	1.65	2.75	0.28	0.55	Roche Cobas 4000/E411
	ng/ml	1.43	1.07	1.79	0.18	0.36	
	ng/dl	143	107	179	18.00	36.00	Roche Cobas 4000/E411
	nmol/l	2.21	1.66	2.76	0.28	0.55	Roche Cobas e601/602
	ng/ml	1.44	1.08	1.80	0.18	0.36	
	ng/dl	144	108	180	18.00	36.00	Roche Cobas e601/602
	nmol/l	2.22	1.66	2.78	0.28	0.56	Siemens Centaur CP
	ng/ml	1.45	1.08	1.82	0.19	0.37	
	ng/dl	145	108	182	18.50	37.00	Siemens Centaur CP
	nmol/l	2.31	1.73	2.89	0.29	0.58	Roche Cobas e801
	ng/ml	1.50	1.13	1.87	0.19	0.37	
	ng/dl	150	113	187	18.50	37.00	Roche Cobas e801

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RANDOX

MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	97.1	72.8	121	12.15	24.30	Abbott Architect
	µg/dl	7.57	5.68	9.46	0.95	1.89	
	ng/ml	75.7	56.8	94.6	9.45	18.90	Abbott Architect
	nmol/l	92.9	69.7	116	11.60	23.20	BioMerieux Vidas
	µg/dl	7.25	5.44	9.06	0.91	1.81	
	ng/ml	72.5	54.4	90.6	9.05	18.10	BioMerieux Vidas
	nmol/l	95.8	71.8	120	12.00	24.00	Siemens Centaur XP/XPT/Classic
	µg/dl	7.47	5.60	9.34	0.94	1.87	
	ng/ml	74.7	56.0	93.4	9.35	18.70	Siemens Centaur XP/XPT/Classic
	nmol/l	102	76.1	128	12.95	25.90	Siemens Immulite 2000/2500
	µg/dl	7.96	5.94	9.98	1.01	2.02	
	ng/ml	79.6	59.4	99.8	10.10	20.20	Siemens Immulite 2000/2500
	nmol/l	85.9	64.4	107	10.75	21.50	Beckman DxI800
	µg/dl	6.70	5.02	8.38	0.84	1.68	
	ng/ml	67.0	50.2	83.8	8.40	16.80	Beckman DxI800
	nmol/l	98.0	73.5	123	12.25	24.50	Roche Elecsys
	µg/dl	7.64	5.73	9.55	0.96	1.91	
	ng/ml	76.4	57.3	95.5	9.55	19.10	Roche Elecsys
	nmol/l	106	79.3	133	13.35	26.70	Beckman Access
	µg/dl	8.27	6.19	10.4	1.04	2.08	
	ng/ml	82.7	61.9	104	10.40	20.80	Beckman Access
	nmol/l	91.3	68.5	114	11.40	22.80	Tosoh Series
	µg/dl	7.12	5.34	8.90	0.89	1.78	
	ng/ml	71.2	53.4	89.0	8.90	17.80	Tosoh Series

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Total T4	nmol/l	92.2	69.2	115	11.50	23.00	Vitros ECi
	µg/dl	7.19	5.40	8.98	0.90	1.79	
	ng/ml	71.9	54.0	89.8	8.95	17.90	Vitros ECi
	nmol/l	96.5	72.4	121	12.05	24.10	Roche Cobas 4000/E411
	µg/dl	7.53	5.65	9.41	0.94	1.88	
	ng/ml	75.3	56.5	94.1	9.40	18.80	Roche Cobas 4000/E411
	nmol/l	95.4	71.6	119	11.90	23.80	Roche Cobas e601/602
	µg/dl	7.44	5.58	9.30	0.93	1.86	
	ng/ml	74.4	55.8	93.0	9.30	18.60	Roche Cobas e601/602
	nmol/l	97.7	73.3	122	12.20	24.40	Monobind Inc. ELISA / CLIA
	µg/dl	7.62	5.72	9.52	0.95	1.90	
	ng/ml	76.2	57.2	95.2	9.50	19.00	Monobind Inc. ELISA / CLIA
	nmol/l	97.1	72.8	121	12.15	24.30	Siemens Centaur CP
	µg/dl	7.57	5.68	9.46	0.95	1.89	
	ng/ml	75.7	56.8	94.6	9.45	18.90	Siemens Centaur CP
	nmol/l	91.6	68.7	115	11.45	22.90	Roche Cobas e801
	µg/dl	7.14	5.36	8.92	0.89	1.78	
	ng/ml	71.4	53.6	89.2	8.90	17.80	Roche Cobas e801
Transferrin	g/l	1.87	1.50	2.24	0.19	0.37	Immunoturbidimetric
	mg/dl	187	150	224	18.50	37.00	
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.2	112	7.65	15.30	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.3	112	7.60	15.20	
	mmol/l	1.09	0.91	1.27	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	96.5	80.7	112	7.90	15.80	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	97.4	82.0	113	7.70	15.40	
	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	97.4	81.4	113	8.00	16.00	
	mmol/l	1.27	1.07	1.47	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	112	94.7	129	8.65	17.30	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.61	4.89	6.33	0.36	0.72	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Reduction methods
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.75	5.01	6.49	0.37	0.74	
Urea	mmol/l	6.94	5.90	7.98	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.7	35.5	47.9	3.10	6.20	
	mmol/l	7.31	6.21	8.41	0.55	1.10	Urease end point
	mg/dl	43.9	37.3	50.5	3.30	6.60	

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MEAN OF ALL INSTRUMENTS

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.31	6.21	8.41	0.55	1.10	Urease kinetic
	mg/dl	43.9	37.3	50.5	3.30	6.60	
	mmol/l	7.39	6.28	8.50	0.56	1.11	Urease hypochlorite
	mg/dl	44.4	37.7	51.1	3.35	6.70	
	mmol/l	7.31	6.21	8.41	0.55	1.10	BUN
	mg/dl	20.5	17.4	23.6	1.55	3.10	
Vitamin B12	pmol/l	422	338	506	42.00	84.00	Roche Cobas e801
	pg/ml	572	458	686	57.00	114.00	
Zinc	µmol/l	22.5	18.0	27.0	2.25	4.50	Colorimetric with deproteinisation
	µg/dl	147	118	176	14.50	29.00	

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MEAN OF ALL INSTRUMENTS (Elec.)

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
alpha-1-globulin		6.2	4.7	7.7	0.75	1.49	% of total Protein (Beckman Capillary)
alpha-2-globulin		7.2	5.5	8.9	0.87	1.73	% of total Protein (Beckman Capillary)
Albumin (electrophoresis)		66.8	60.2	73.4	3.30	6.60	% of total Protein (Beckman Capillary)
beta-globulin		9.9	7.5	12.3	1.19	2.38	% of total Protein (Beckman Capillary)
gamma-globulin		9.9	7.5	12.3	1.19	2.38	% of total Protein (Beckman Capillary)

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Ortho VITROS®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.2	34.2	46.2	3.00	6.00	Ortho Vitros Microslide Systems
	g/dl	4.02	3.42	4.62	0.30	0.60	
Alkaline Phosphatase	U/l	181	154	208	13.50	27.00	Ortho Vitros Microslide Systems 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Ortho Vitros Microslide Systems 37°C
	U/l	46	37	55	4.50	9.00	Ortho Vitros MicroSlide visible 37°C
Amylase Total	U/l	68	57	79	5.50	11.00	Ortho Vitros Microslide Systems 37°C
AST (GOT)	U/l	58	46	70	6.00	12.00	Ortho Vitros Microslide visible slide 37°C
Bicarbonate	mmol/l	14.5	11.5	17.5	1.50	3.00	Ortho Vitros Microslide Systems
Bilirubin Total	µmol/l	24.2	19.1	29.3	2.55	5.10	Vitros 250/500/700/950 Total Bilirubin
	mg/dl	1.42	1.12	1.72	0.15	0.30	
Bilirubin, Unconjugated Vitros BU	µmol/l	12.4	9.80	15.0	1.30	2.60	BuBc Vitros Slide
	mg/dl	0.725	0.573	0.877	0.08	0.15	
Calcium	mmol/l	2.21	1.99	2.43	0.11	0.22	Ortho Vitros Microslide Systems
	mg/dl	8.86	7.98	9.74	0.44	0.88	
Cholesterol	mmol/l	4.12	3.58	4.66	0.27	0.54	Ortho Vitros Microslide Systems
	mg/dl	159	138	180	10.50	21.00	
Chloride	mmol/l	95.1	87.5	103	3.80	7.60	Ortho Vitros Microslide Systems
Cholinesterase	U/l	5271	4217	6325	527.00	1054.00	Ortho Vitros Microslide Systems 37°C
CK Total	U/l	194	159	229	17.50	35.00	Ortho Vitros Microslide Systems 37°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Vitros DT60/DT60 II/DTSC II
	mg/dl	1.46	1.16	1.76	0.15	0.30	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	128	103	153	12.50	25.00	Vitros IDMS Traceable
	mg/dl	1.45	1.16	1.74	0.15	0.29	
Free T4	pmol/l	39.8	29.9	49.7	4.95	9.90	Vitros ECi
	ng/dl	3.10	2.33	3.87	0.39	0.77	
	pg/ml	31.0	23.3	38.7	3.85	7.70	Vitros ECi
gamma-GT	U/l	62	53	71	4.50	9.00	Ortho Vitros Microslide Systems 37°C
Glucose	mmol/l	6.12	5.20	7.04	0.46	0.92	Ortho Vitros Microslide Systems
	mg/dl	110	93.7	126	8.15	16.30	
HDL - Cholesterol	mmol/l	1.44	1.23	1.65	0.11	0.21	Vitros 5.1 FS microtip assay
	mg/dl	55.6	47.5	63.7	4.05	8.10	
	mmol/l	1.41	1.20	1.62	0.11	0.21	Vitros dHDL PTA/MgCl2 direct precipitation
	mg/dl	54.4	46.3	62.5	4.05	8.10	
Iron	µmol/l	19.2	15.7	22.7	1.75	3.50	Ortho Vitros Microslide Systems
	µg/dl	107	87.8	126	9.60	19.20	
Lactate	mmol/l	1.49	1.22	1.76	0.14	0.27	Ortho Vitros Microslide Systems
	mg/dl	13.4	11.0	15.8	1.20	2.40	
LD (LDH)	U/l	234	199	269	17.50	35.00	Ortho Vitros IFCC Traceable 37°C
Lipase	U/l	285	229	341	28.00	56.00	Ortho Vitros Microslide Systems 37°C
Lithium	mmol/l	1.25	1.10	1.40	0.08	0.15	Ortho Vitros Microslide Systems
	mg/dl	0.868	0.764	0.972	0.05	0.10	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Ortho Vitros Microslide Systems
	mg/dl	2.21	1.94	2.48	0.14	0.27	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Ortho Vitros Microslide Systems
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	Ortho Vitros Microslide Systems

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	57.8	46.3	69.3	5.75	11.50	Ortho Vitros Microslide Systems
	g/dl	5.78	4.63	6.93	0.58	1.15	
PSA Total	ng/ml =	10.8	8.07	13.5	1.37	2.73	Ortho Vitros ECi
	ng/ml =	11.1	8.36	13.8	1.37	2.74	Ortho Vitros 3600/5600/ECi PSA II
Sodium	mmol/l	141	134	148	3.50	7.00	Ortho Vitros Microslide Systems
Thyroid Stimulating Hormone	µU/ml =	1.17	0.94	1.40	0.12	0.23	Vitros ECi
TIBC	µmol/l	46.3	36.6	56.0	4.85	9.70	Ortho Vitros Microslide Systems
	µg/dl	259	205	313	27.00	54.00	
Total T3	nmol/l	2.62	1.97	3.27	0.33	0.65	Vitros ECi
	ng/ml	1.71	1.28	2.14	0.22	0.43	
	ng/dl	171	128	214	21.50	43.00	Vitros ECi
Total T4	nmol/l	92.2	69.2	115	11.50	23.00	Vitros ECi
	µg/dl	7.19	5.40	8.98	0.90	1.79	
	ng/ml	71.9	54.0	89.8	8.95	17.90	Vitros ECi
Triglycerides	mmol/l	1.27	1.07	1.47	0.10	0.20	Ortho Vitros Microslide Systems
	mg/dl	112	94.7	129	8.65	17.30	
Uric Acid (Urate)	mmol/l	0.33	0.29	0.38	0.02	0.04	Ortho Vitros Microslide Systems
	mg/dl	5.61	4.89	6.33	0.36	0.72	
Urea	mmol/l	6.94	5.90	7.98	0.52	1.04	Ortho Vitros Microslide Systems
	mg/dl	41.7	35.5	47.9	3.10	6.20	
	mmol/l	6.94	5.90	7.98	0.52	1.04	BUN
	mg/dl	19.5	16.6	22.4	1.45	2.90	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.8	34.7	46.9	3.05	6.10	Bromocresol Green
	g/dl	4.08	3.47	4.69	0.31	0.61	
Alkaline Phosphatase	U/l	303	257	349	23.00	46.00	Diethanolamine buffer DEA 37°C
	U/l	236	200	272	18.00	36.00	Diethanolamine buffer DEA 30°C
	U/l	194	164	224	15.00	30.00	Diethanolamine buffer DEA 25°C
	U/l	218	185	251	16.50	33.00	AMP optimised to IFCC 37°C
	U/l	170	144	196	13.00	26.00	AMP optimised to IFCC 30°C
	U/l	139	118	160	10.50	21.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	44	35	53	4.50	9.00	Tris buffer without P5P 37°C
	U/l	33	26	40	3.50	7.00	Tris buffer without P5P 30°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	77	65	89	6.00	12.00	Immunoinhibition EPS substrate 37°C
AST (GOT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	26	20	32	3.00	6.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	20.7	16.3	25.1	2.20	4.40	Diazo with Dichloroaniline (DCA)
	mg/dl	1.21	0.954	1.47	0.13	0.26	
Bilirubin Total	µmol/l	33.2	26.3	40.1	3.45	6.90	Diazo with Sulphanilic Acid
	mg/dl	1.94	1.54	2.34	0.20	0.40	
	µmol/l	31.0	24.5	37.5	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.81	1.43	2.19	0.19	0.38	

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
Cholesterol	mmol/l	4.21	3.67	4.75	0.27	0.54	Cholesterol Oxidase - Abell Kendall
	mg/dl	163	142	184	10.50	21.00	
	mmol/l	4.14	3.60	4.68	0.27	0.54	Cholesterol Oxidase - IDMS
	mg/dl	160	139	181	10.50	21.00	
CK Total	U/l	222	182	262	20.00	40.00	CK-NAC (IFCC) 37°C
	U/l	139	114	164	12.50	25.00	CK-NAC (IFCC) 30°C
	U/l	94	77	111	8.50	17.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	127	102	152	12.50	25.00	Enzymatic UV method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	U/l	53	45	61	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	42	35	49	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	33	28	38	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.40	5.44	7.36	0.48	0.96	Glucose oxidase
	mg/dl	115	98.0	132	8.50	17.00	
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL Immunoseparation
	mg/dl	52.5	44.8	60.2	3.85	7.70	
	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct Clearance Method
	mg/dl	55.6	47.1	64.1	4.25	8.50	
Iron	µmol/l	18.1	14.8	21.4	1.65	3.30	Colorimetric without ppt.
	µg/dl	101	82.7	119	9.15	18.30	
LD (LDH)	U/l	428	364	492	32.00	64.00	P->L German methods 37°C
	U/l	309	263	355	23.00	46.00	P->L German methods 30°C
	U/l	217	185	249	16.00	32.00	P->L German methods 25°C

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PRESTIGE 24i

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Protein Total	g/l	57.3	45.8	68.8	5.75	11.50	Biuret reaction end point
	g/dl	5.73	4.58	6.88	0.58	1.15	
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
	mmol/l	1.15	0.96	1.34	0.09	0.19	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	102	85.1	119	8.45	16.90	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	99.1	83.5	115	7.80	15.60	
Uric Acid (Urate)	mmol/l	0.36	0.32	0.41	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.08	5.29	6.87	0.40	0.79	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.70	4.96	6.44	0.37	0.74	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
	g/l	41.4	35.2	47.6	3.10	6.20	Bromocresol Purple
	g/dl	4.14	3.52	4.76	0.31	0.62	
	g/l	40.6	34.5	46.7	3.05	6.10	Turbidimetric Assays
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	185	158	212	13.50	27.00	Roche Integra AMP buffer 37°C
	U/l	144	123	165	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	118	101	135	8.50	17.00	Roche Integra AMP buffer 25°C
	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	145	123	167	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	119	101	137	9.00	18.00	AMP optimised to IFCC 25°C
	U/l	184	157	211	13.50	27.00	Colorimetric 37°C
	U/l	143	122	164	10.50	21.00	Colorimetric 30°C
	U/l	118	100	136	9.00	18.00	Colorimetric 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	85	72	98	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	85	72	98	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Amylase Total	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bile Acids	µmol/l	25.9	20.7	31.1	2.60	5.20	Enzymatic Colorimetric
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Colorimetric
	mmol/l	13.6	10.8	16.4	1.40	2.80	Enzymatic
Bilirubin Direct	µmol/l	21.3	16.9	25.7	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.25	0.989	1.51	0.13	0.26	
	µmol/l	21.5	17.0	26.0	2.25	4.50	Diazo with Sulphanilic Acid
	mg/dl	1.26	0.995	1.53	0.13	0.27	
	µmol/l	21.7	17.1	26.3	2.30	4.60	Roche DPD JG standardised
	mg/dl	1.27	1.00	1.54	0.14	0.27	
	µmol/l	21.6	17.1	26.1	2.25	4.50	Diazo with Dichloroaniline (DCA)
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	µmol/l	20.1	15.9	24.3	2.10	4.20	Roche DPD Doumas standardised
	mg/dl	1.18	0.930	1.43	0.13	0.25	
Bilirubin Total	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Dichloroaniline (DCA)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.3	20.8	31.8	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.54	1.22	1.86	0.16	0.32	
	µmol/l	27.0	21.3	32.7	2.85	5.70	Nitrobenzenediazonium salt
	mg/dl	1.58	1.25	1.91	0.17	0.33	

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	26.3	20.7	31.9	2.80	5.60	Diazonium ion
	mg/dl	1.54	1.21	1.87	0.17	0.33	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.66	7.82	9.50	0.42	0.84	
	mmol/l	2.19	1.97	2.41	0.11	0.22	Arsenazo III
	mg/dl	8.78	7.90	9.66	0.44	0.88	
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Cholesterol	mmol/l	4.02	3.50	4.54	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.00	20.00	
	mmol/l	4.03	3.50	4.56	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
Chloride	mmol/l	91.3	84.0	98.6	3.65	7.30	ISE indirect
Cholinesterase	U/l	5317	4254	6380	531.50	1063.00	Colorimetric Benzoylcholine 37°C
	U/l	5308	4246	6370	531.00	1062.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	198	162	234	18.00	36.00	CK-NAC serum start (DGKC) 37°C
	U/l	124	101	147	11.50	23.00	CK-NAC serum start (DGKC) 30°C
	U/l	84	69	99	7.50	15.00	CK-NAC serum start (DGKC) 25°C
	U/l	204	167	241	18.50	37.00	CK-NAC substrate start (DGKC) 37°C
	U/l	128	105	151	11.50	23.00	CK-NAC substrate start (DGKC) 30°C
	U/l	87	71	103	8.00	16.00	CK-NAC substrate start (DGKC) 25°C
	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Copper	µmol/l	15.0	12.0	18.0	1.50	3.00	Colorimetric
	µg/dl	95.4	76.3	115	9.55	19.10	
Creatinine	µmol/l	129	103	155	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	133	106	160	13.50	27.00	Enzymatic UV method
	mg/dl	1.50	1.20	1.80	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	Creatinine PAP method
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	132	105	159	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.49	1.19	1.79	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	133	106	160	13.50	27.00	IDMS traceable
	mg/dl	1.50	1.20	1.80	0.15	0.30	
Free T4	pmol/l	23.5	17.6	29.4	2.95	5.90	Roche Cobas e601/602
	ng/dl	1.83	1.37	2.29	0.23	0.46	
	pg/ml	18.3	13.7	22.9	2.30	4.60	Roche Cobas e601/602
gamma-GT	U/l	45	39	51	3.00	6.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	35	31	39	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	28	24	32	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	44	58	3.50	7.00	Gamma glutamyl-4-nitroanilide 37°C
	U/l	40	35	45	2.50	5.00	Gamma glutamyl-4-nitroanilide 30°C
	U/l	31	27	35	2.00	4.00	Gamma glutamyl-4-nitroanilide 25°C

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Roche Cobas 6000 c501 e601

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.07	5.16	6.98	0.46	0.91	Glucose dehydrogenase
	mg/dl	109	93.0	125	8.00	16.00	
	mmol/l	6.09	5.18	7.00	0.46	0.91	Hexokinase
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.00	5.10	6.90	0.45	0.90	Glucose oxidase
	mg/dl	108	91.9	124	8.05	16.10	
HDL - Cholesterol	mmol/l	1.51	1.29	1.73	0.11	0.22	Direct HDL Immunoseparation
	mg/dl	58.3	49.8	66.8	4.25	8.50	
	mmol/l	1.49	1.27	1.71	0.11	0.22	Direct HDL PEGME
	mg/dl	57.5	49.0	66.0	4.25	8.50	
	mmol/l	1.41	1.20	1.62	0.11	0.21	HDL - Ultra
	mg/dl	54.4	46.3	62.5	4.05	8.10	
	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	57.9	49.0	66.8	4.45	8.90	
Iron	µmol/l	19.0	15.6	22.4	1.70	3.40	Colorimetric with ppt.
	µg/dl	106	87.2	125	9.40	18.80	
	µmol/l	18.9	15.5	22.3	1.70	3.40	Colorimetric without ppt.
	µg/dl	106	86.6	125	9.70	19.40	
Lactate	mmol/l	1.59	1.31	1.87	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.3	11.8	16.8	1.25	2.50	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	209	177	241	16.00	32.00	L->P 37°C
	U/l	151	128	174	11.50	23.00	L->P 30°C
	U/l	106	90	122	8.00	16.00	L->P 25°C
	U/l	425	361	489	32.00	64.00	P->L German methods 37°C
	U/l	307	261	353	23.00	46.00	P->L German methods 30°C
	U/l	215	183	247	16.00	32.00	P->L German methods 25°C
	U/l	211	180	242	15.50	31.00	L->P IFCC 37°C
	U/l	152	130	174	11.00	22.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	37	30	44	3.50	7.00	Other Colorimetric 37°C
	U/l	38	30	46	4.00	8.00	Roche Colorimetric 37°C
	U/l	38	30	46	4.00	8.00	Roche Turbidimetric with colipase 37°C
Lithium	mmol/l	1.07	0.94	1.20	0.06	0.13	Ion selective electrode
	mg/dl	0.743	0.656	0.830	0.04	0.09	
	mmol/l	1.08	0.95	1.21	0.06	0.13	Spectrophotometric
	mg/dl	0.750	0.662	0.838	0.04	0.09	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Arsenazo III
	mg/dl	2.21	1.94	2.48	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Atomic absorption
	mg/dl	2.22	1.96	2.48	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.95	2.49	0.14	0.27	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Magnesium	mmol/l	0.92	0.81	1.03	0.06	0.11	Enzymatic
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Osmolality	mOsm/kg	289	231	347	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.15	3.53	4.77	0.31	0.62	
	mmol/l	1.33	1.13	1.53	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.12	3.50	4.74	0.31	0.62	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction end point
	g/dl	5.70	4.56	6.84	0.57	1.14	
	g/l	57.3	45.8	68.8	5.75	11.50	Biuret reaction kinetic
	g/dl	5.73	4.58	6.88	0.58	1.15	
PSA Total	ng/ml =	11.2	8.40	14.0	1.40	2.80	Roche Cobas 6000/8000
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.44	1.15	1.73	0.15	0.29	Roche Cobas e601/602
TIBC	µmol/l	39.1	30.9	47.3	4.10	8.20	FE+UIBC(saturation with iron)
	µg/dl	219	173	265	23.00	46.00	
	µmol/l	43.9	34.6	53.2	4.65	9.30	Calculated from Transferrin
	µg/dl	245	193	297	26.00	52.00	
Total T3	nmol/l	2.21	1.66	2.76	0.28	0.55	Roche Cobas e601/602
	ng/ml	1.44	1.08	1.80	0.18	0.36	
	ng/dl	144	108	180	18.00	36.00	Roche Cobas e601/602
Total T4	nmol/l	95.7	71.8	120	11.95	23.90	Roche Cobas e601/602
	µg/dl	7.46	5.60	9.32	0.93	1.86	
	ng/ml	74.6	56.0	93.2	9.30	18.60	Roche Cobas e601/602

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	98.2	82.5	114	7.85	15.70	
	mmol/l	1.11	0.93	1.29	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	98.2	82.3	114	7.95	15.90	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.4	114	7.90	15.80	
UIBC	µmol/l	20.3	16.6	24.0	1.85	3.70	Direct Colorimetric
	µg/dl	113	92.8	133	10.10	20.20	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.70	4.96	6.44	0.37	0.74	
	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease end point
	mg/dl	43.6	37.1	50.1	3.25	6.50	
	mmol/l	7.26	6.17	8.35	0.55	1.09	Urease kinetic
	mg/dl	43.6	37.1	50.1	3.25	6.50	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Urea	mmol/l	7.26	6.17	8.35	0.55	1.09	BUN
	mg/dl	20.4	17.3	23.5	1.55	3.10	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
Alkaline Phosphatase	U/l	180	153	207	13.50	27.00	Roche Integra AMP buffer 37°C
	U/l	140	119	161	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	115	98	132	8.50	17.00	Roche Integra AMP buffer 25°C
	U/l	186	158	214	14.00	28.00	AMP optimised to IFCC 37°C
	U/l	145	123	167	11.00	22.00	AMP optimised to IFCC 30°C
	U/l	119	101	137	9.00	18.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	38	30	46	4.00	8.00	Tris buffer without P5P 37°C
	U/l	28	22	34	3.00	6.00	Tris buffer without P5P 30°C
	U/l	21	17	25	2.00	4.00	Tris buffer without P5P 25°C
Amylase Total	U/l	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C
Bilirubin Direct	µmol/l	21.0	16.6	25.4	2.20	4.40	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.23	0.971	1.49	0.13	0.26	
	µmol/l	20.7	16.3	25.1	2.20	4.40	Roche DPD JG standardised
	mg/dl	1.21	0.954	1.47	0.13	0.26	
	µmol/l	20.4	16.2	24.6	2.10	4.20	Diazo with Dichloroaniline (DCA)
	mg/dl	1.19	0.948	1.43	0.12	0.24	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bilirubin Total	µmol/l	27.4	21.6	33.2	2.90	5.80	Diazo with Dichloroaniline (DCA)
	mg/dl	1.60	1.26	1.94	0.17	0.34	
	µmol/l	26.2	20.7	31.7	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	26.8	21.2	32.4	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.57	1.24	1.90	0.17	0.33	
	µmol/l	28.7	22.7	34.7	3.00	6.00	Diazonium ion
	mg/dl	1.68	1.33	2.03	0.18	0.35	
Calcium	mmol/l	2.12	1.90	2.34	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.50	7.62	9.38	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.16	1.95	2.37	0.11	0.21	NM-BAPTA
	mg/dl	8.66	7.82	9.50	0.42	0.84	
Cholesterol	mmol/l	3.96	3.44	4.48	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	
	mmol/l	3.88	3.37	4.39	0.26	0.51	Cholesterol Oxidase - IDMS
	mg/dl	150	130	170	10.00	20.00	
Chloride	mmol/l	95.2	87.6	103	3.80	7.60	ISE indirect
CK Total	U/l	195	160	230	17.50	35.00	CK-NAC (IFCC) 37°C
	U/l	122	100	144	11.00	22.00	CK-NAC (IFCC) 30°C
	U/l	83	68	98	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	125	100	150	12.50	25.00	Alkaline picrate no deproteinization
	mg/dl	1.41	1.13	1.69	0.14	0.28	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	126	101	151	12.50	25.00	Roche Creatinine Plus
	mg/dl	1.42	1.14	1.70	0.14	0.28	
	µmol/l	123	98.1	148	12.45	24.90	Jaffe rate blanked
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	123	98.5	148	12.25	24.50	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.39	1.11	1.67	0.14	0.28	
	µmol/l	127	102	152	12.50	25.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	37	32	42	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	29	25	33	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.18	5.25	7.11	0.47	0.93	Hexokinase
	mg/dl	111	94.6	127	8.20	16.40	
	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL PEGME
	mg/dl	57.9	49.0	66.8	4.45	8.90	
	mmol/l	1.50	1.27	1.73	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	57.9	49.0	66.8	4.45	8.90	
Iron	µmol/l	18.4	15.1	21.7	1.65	3.30	Colorimetric with ppt.
	µg/dl	103	84.4	122	9.30	18.60	
	µmol/l	18.6	15.2	22.0	1.70	3.40	Colorimetric without ppt.
	µg/dl	104	85.0	123	9.50	19.00	

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Roche Cobas C111®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	211	180	242	15.50	31.00	L->P IFCC 37°C
	U/l	152	130	174	11.00	22.00	L->P IFCC 30°C
	U/l	107	91	123	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	34	27	41	3.50	7.00	Roche Colorimetric 37°C
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Phosphate Inorganic	mmol/l	1.36	1.16	1.56	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.22	3.60	4.84	0.31	0.62	
	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	3.92	3.61	4.23	0.16	0.31	ISE method - indirect
Protein Total	g/l	56.7	45.3	68.1	5.70	11.40	Biuret reaction end point
	g/dl	5.67	4.53	6.81	0.57	1.14	
Sodium	mmol/l	138	131	145	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.09	0.92	1.27	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	96.5	81.0	112	7.75	15.50	
	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.6	113	7.90	15.80	
	mmol/l	1.06	0.89	1.23	0.08	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	93.8	79.0	109	7.40	14.80	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	6.91	5.87	7.95	0.52	1.04	Urease kinetic
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.91	5.87	7.95	0.52	1.04	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.1	35.8	48.4	3.15	6.30	Bromocresol Green
	g/dl	4.21	3.58	4.84	0.32	0.63	
	g/l	42.2	35.9	48.5	3.15	6.30	Bromocresol Purple
	g/dl	4.22	3.59	4.85	0.32	0.63	
Alkaline Phosphatase	U/l	184	156	212	14.00	28.00	Roche Integra AMP buffer 37°C
	U/l	143	122	164	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	118	100	136	9.00	18.00	Roche Integra AMP buffer 25°C
	U/l	180	153	207	13.50	27.00	AMP optimised to IFCC 37°C
	U/l	140	119	161	10.50	21.00	AMP optimised to IFCC 30°C
	U/l	115	98	132	8.50	17.00	AMP optimised to IFCC 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	64	55	73	4.50	9.00	Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche Integra 2-chloro-pNPG7 37°C
	U/l	86	73	99	6.50	13.00	Other Roche 2-chloro-pNPG7 37°C
	U/l	87	74	100	6.50	13.00	Roche liquid stable pNPG7 37°C
	U/l	86	73	99	6.50	13.00	BM/Roche Colorimetric pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	12.7	10.0	15.4	1.35	2.70	Enzymatic
Bilirubin Direct	µmol/l	21.8	17.2	26.4	2.30	4.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.28	1.01	1.55	0.14	0.27	
	µmol/l	21.7	17.1	26.3	2.30	4.60	Diazo with Sulphanilic Acid
	mg/dl	1.27	1.00	1.54	0.14	0.27	
	µmol/l	21.4	16.9	25.9	2.25	4.50	Roche DPD JG standardised
	mg/dl	1.25	0.989	1.51	0.13	0.26	
	µmol/l	20.2	16.0	24.4	2.10	4.20	Roche DPD Doumas standardised
	mg/dl	1.18	0.936	1.42	0.12	0.24	
Bilirubin Total	µmol/l	28.5	22.5	34.5	3.00	6.00	Diazo with Dichloroaniline (DCA)
	mg/dl	1.67	1.32	2.02	0.18	0.35	
	µmol/l	26.6	21.0	32.2	2.80	5.60	Diazo with Sulphanilic Acid
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	26.6	21.0	32.2	2.80	5.60	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.56	1.23	1.89	0.17	0.33	
	µmol/l	26.4	20.9	31.9	2.75	5.50	Diazonium ion
	mg/dl	1.54	1.22	1.86	0.16	0.32	
Calcium	mmol/l	2.18	1.96	2.40	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.18	1.96	2.40	0.11	0.22	Arsenazo III
	mg/dl	8.74	7.86	9.62	0.44	0.88	
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Cholesterol	mmol/l	4.01	3.49	4.53	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	155	135	175	10.00	20.00	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	156	135	177	10.50	21.00	
Chloride	mmol/l	91.3	84.0	98.6	3.65	7.30	ISE indirect
Cholinesterase	U/l	5240	4192	6288	524.00	1048.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	200	164	236	18.00	36.00	CK-NAC substrate start (DGKC) 37°C
	U/l	125	103	147	11.00	22.00	CK-NAC substrate start (DGKC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC substrate start (DGKC) 25°C
	U/l	203	166	240	18.50	37.00	CK-NAC (IFCC) 37°C
	U/l	127	104	150	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	86	71	101	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	130	104	156	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Roche Creatinine Plus
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	104	154	12.50	25.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	µmol/l	133	107	159	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.50	1.21	1.79	0.15	0.29	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	51	43	59	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	40	34	46	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.11	5.19	7.03	0.46	0.92	Hexokinase
	mg/dl	110	93.5	127	8.25	16.50	
	mmol/l	6.09	5.18	7.00	0.46	0.91	Glucose oxidase
	mg/dl	110	93.3	127	8.35	16.70	
HDL - Cholesterol	mmol/l	1.58	1.34	1.82	0.12	0.24	Direct HDL PPD
	mg/dl	61.0	51.7	70.3	4.65	9.30	
	mmol/l	1.47	1.25	1.69	0.11	0.22	Direct HDL PEGME
	mg/dl	56.7	48.3	65.1	4.20	8.40	
	mmol/l	1.49	1.26	1.72	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	57.5	48.6	66.4	4.45	8.90	
Iron	µmol/l	18.8	15.5	22.1	1.65	3.30	Colorimetric with ppt.
	µg/dl	105	86.6	123	9.20	18.40	
	µmol/l	18.8	15.4	22.2	1.70	3.40	Colorimetric without ppt.
	µg/dl	105	86.1	124	9.45	18.90	
Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.7	16.7	1.25	2.50	
LD (LDH)	U/l	214	182	246	16.00	32.00	L->P 37°C
	U/l	155	131	179	12.00	24.00	L->P 30°C
	U/l	108	92	124	8.00	16.00	L->P 25°C
	U/l	213	181	245	16.00	32.00	L->P IFCC 37°C
	U/l	154	131	177	11.50	23.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	36	29	43	3.50	7.00	Roche Colorimetric 37°C
	U/l	36	29	43	3.50	7.00	Roche Turbidimetric with colipase 37°C

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RANDOX

Roche Cobas C311®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

Analyte	unit	Target	Range low	Range high	1SD	2SD	methods
Magnesium	mmol/l	0.89	0.79	1.00	0.05	0.11	Atomic absorption
	mg/dl	2.17	1.91	2.43	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Chlorphosphonazo III
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Osmolality	mOsm/kg	290	232	348	29.00	58.00	Calculated
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate enzymatic
	mg/dl	4.19	3.57	4.81	0.31	0.62	
	mmol/l	1.34	1.14	1.54	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.15	3.53	4.77	0.31	0.62	
Potassium	mmol/l	4.01	3.69	4.33	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.1	45.7	68.5	5.70	11.40	Biuret reaction end point
	g/dl	5.71	4.57	6.85	0.57	1.14	
	g/l	56.6	45.2	68.0	5.70	11.40	Biuret reaction kinetic
	g/dl	5.66	4.52	6.80	0.57	1.14	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
TIBC	µmol/l	40.3	31.8	48.8	4.25	8.50	FE+UIBC(saturation with iron)
	µg/dl	225	178	272	23.50	47.00	
	µmol/l	40.3	31.8	48.8	4.25	8.50	Direct Colorimetric
	µg/dl	225	178	272	23.50	47.00	
Triglycerides	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	98.2	82.5	114	7.85	15.70	
	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	99.1	83.1	115	8.00	16.00	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.09	0.92	1.26	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	96.5	81.3	112	7.60	15.20	
	mmol/l	1.11	0.94	1.29	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	98.2	82.7	114	7.75	15.50	
	mmol/l	1.11	0.93	1.29	0.09	0.18	Lipase/Glycerol Dehydrogenase
	mg/dl	98.2	82.3	114	7.95	15.90	
UIBC	µmol/l	21.5	17.6	25.4	1.95	3.90	Direct Colorimetric
	µg/dl	120	98.4	142	10.80	21.60	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.38	0.02	0.04	Uricase catalase 340nm
	mg/dl	5.71	4.97	6.45	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.73	4.99	6.47	0.37	0.74	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.76	5.01	6.51	0.38	0.75	
	mmol/l	0.34	0.30	0.39	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.76	5.01	6.51	0.38	0.75	
Urea	mmol/l	7.29	6.20	8.38	0.55	1.09	Urease end point
	mg/dl	43.8	37.3	50.3	3.25	6.50	
	mmol/l	7.33	6.23	8.43	0.55	1.10	Urease kinetic
	mg/dl	44.1	37.4	50.8	3.35	6.70	
	mmol/l	7.33	6.23	8.43	0.55	1.10	BUN
	mg/dl	20.6	17.5	23.7	1.55	3.10	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Green
	g/dl	4.20	3.57	4.83	0.32	0.63	
	g/l	40.9	34.8	47.0	3.05	6.10	Bromocresol Purple
	g/dl	4.09	3.48	4.70	0.31	0.61	
	g/l	40.7	34.6	46.8	3.05	6.10	Turbidimetric Assays
	g/dl	4.07	3.46	4.68	0.31	0.61	
Alkaline Phosphatase	U/l	182	155	209	13.50	27.00	Roche Integra AMP buffer 37°C
	U/l	142	121	163	10.50	21.00	Roche Integra AMP buffer 30°C
	U/l	116	99	133	8.50	17.00	Roche Integra AMP buffer 25°C
	U/l	184	157	211	13.50	27.00	Colorimetric 37°C
	U/l	143	122	164	10.50	21.00	Colorimetric 30°C
	U/l	118	100	136	9.00	18.00	Colorimetric 25°C
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
Amylase Pancreatic	U/l	65	55	75	5.00	10.00	Immunoinhibition EPS substrate 37°C
	U/l	65	55	75	5.00	10.00	Roche EPS Liquid 37°C
Amylase Total	U/l	86	73	99	6.50	13.00	Roche liquid stable pNPG7 37°C
AST (GOT)	U/l	35	28	42	3.50	7.00	Tris buffer without P5P 37°C
	U/l	24	19	29	2.50	5.00	Tris buffer without P5P 30°C
	U/l	17	13	21	2.00	4.00	Tris buffer without P5P 25°C

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Bicarbonate	mmol/l	13.9	11.0	16.8	1.45	2.90	Enzymatic
Bilirubin Direct	µmol/l	21.6	17.1	26.1	2.25	4.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.26	1.00	1.52	0.13	0.26	
	µmol/l	21.7	17.1	26.3	2.30	4.60	Roche DPD JG standardised
	mg/dl	1.27	1.00	1.54	0.14	0.27	
	µmol/l	18.5	14.7	22.3	1.90	3.80	Roche DPD Doumas standardised
	mg/dl	1.08	0.860	1.30	0.11	0.22	
Bilirubin Total	µmol/l	26.1	20.6	31.6	2.75	5.50	Diazo with Sulphanilic Acid
	mg/dl	1.53	1.21	1.85	0.16	0.32	
	µmol/l	25.9	20.4	31.4	2.75	5.50	Dichlorophenyl Diazonium (DPD)
	mg/dl	1.52	1.19	1.85	0.17	0.33	
	µmol/l	26.0	20.6	31.4	2.70	5.40	Diazonium ion
	mg/dl	1.52	1.21	1.83	0.16	0.31	
Calcium	mmol/l	2.15	1.94	2.36	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.62	7.78	9.46	0.42	0.84	
	mmol/l	2.17	1.95	2.39	0.11	0.22	NM-BAPTA
	mg/dl	8.70	7.82	9.58	0.44	0.88	
Cholesterol	mmol/l	4.03	3.51	4.55	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	135	177	10.50	21.00	
	mmol/l	4.04	3.52	4.56	0.26	0.52	Cholesterol Oxidase - IDMS
	mg/dl	156	136	176	10.00	20.00	
Chloride	mmol/l	92.5	85.1	99.9	3.70	7.40	ISE indirect
Cholinesterase	U/l	5397	4318	6476	539.50	1079.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	194	159	229	17.50	35.00	CK-NAC substrate start (DGKC) 37°C
	U/l	121	100	142	10.50	21.00	CK-NAC substrate start (DGKC) 30°C
	U/l	82	68	96	7.00	14.00	CK-NAC substrate start (DGKC) 25°C

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
CK Total	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	126	103	149	11.50	23.00	CK-NAC (IFCC) 30°C
	U/l	85	70	100	7.50	15.00	CK-NAC (IFCC) 25°C
Creatinine	µmol/l	134	107	161	13.50	27.00	Roche Creatinine Plus
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	IDMS traceable
	mg/dl	1.44	1.15	1.73	0.15	0.29	
gamma-GT	U/l	47	40	54	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	37	32	42	2.50	5.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 30°C
	U/l	29	25	33	2.00	4.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 25°C
	U/l	50	43	57	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	34	44	2.50	5.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	31	27	35	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.08	5.17	6.99	0.46	0.91	Hexokinase
	mg/dl	110	93.2	127	8.40	16.80	
HDL - Cholesterol	mmol/l	1.51	1.28	1.74	0.12	0.23	Direct HDL Roche 4th Generation
	mg/dl	58.3	49.4	67.2	4.45	8.90	
Iron	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
Lactate	mmol/l	1.58	1.30	1.86	0.14	0.28	Colorimetric Lactate Oxidase
	mg/dl	14.2	11.7	16.7	1.25	2.50	

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Roche Cobas c701 / c702 / c711

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
LD (LDH)	U/l	214	182	246	16.00	32.00	L->P IFCC 37°C
	U/l	155	131	179	12.00	24.00	L->P IFCC 30°C
	U/l	108	92	124	8.00	16.00	L->P IFCC 25°C
Lipase	U/l	38	30	46	4.00	8.00	Roche Colorimetric 37°C
Lithium	mmol/l	1.12	0.99	1.26	0.07	0.14	Spectrophotometric
	mg/dl	0.778	0.684	0.872	0.05	0.09	
Magnesium	mmol/l	0.93	0.82	1.04	0.06	0.11	Xylidyl Blue
	mg/dl	2.25	1.98	2.52	0.14	0.27	
	mmol/l	0.92	0.81	1.03	0.06	0.11	Chlorphosphonazo III
	mg/dl	2.24	1.97	2.51	0.14	0.27	
Osmolality	mOsm/kg	292	233	351	29.50	59.00	Calculated
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	
Potassium	mmol/l	4.02	3.70	4.34	0.16	0.32	ISE method - indirect
Protein Total	g/l	57.0	45.6	68.4	5.70	11.40	Biuret reaction end point
	g/dl	5.70	4.56	6.84	0.57	1.14	
	g/l	57.5	46.0	69.0	5.75	11.50	Biuret reaction kinetic
	g/dl	5.75	4.60	6.90	0.58	1.15	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	39.9	31.5	48.3	4.20	8.40	FE+UIBC(saturation with iron)
	µg/dl	223	176	270	23.50	47.00	
Triglycerides	mmol/l	1.10	0.93	1.27	0.09	0.17	Lipase/GPO-PAP no correction
	mg/dl	97.4	82.0	113	7.70	15.40	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/GPO-PAP 0.11mmol/l correction
	mg/dl	96.5	81.3	112	7.60	15.20	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.10	0.92	1.28	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	97.4	81.5	113	7.95	15.90	
	mmol/l	1.12	0.94	1.30	0.09	0.18	L/G kinase EP. 0.11 mmol/l correction
	mg/dl	99.1	82.9	115	8.10	16.20	
	mmol/l	1.09	0.92	1.26	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	96.5	81.1	112	7.70	15.40	
UIBC	µmol/l	22.3	18.3	26.3	2.00	4.00	Direct Colorimetric
	µg/dl	125	102	148	11.50	23.00	
Uric Acid (Urate)	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.66	4.92	6.40	0.37	0.74	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.64	4.91	6.37	0.37	0.73	
	mmol/l	0.34	0.29	0.38	0.02	0.04	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.64	4.91	6.37	0.37	0.73	
Urea	mmol/l	7.21	6.13	8.29	0.54	1.08	Urease kinetic
	mg/dl	43.3	36.8	49.8	3.25	6.50	
	mmol/l	7.21	6.13	8.29	0.54	1.08	BUN
	mg/dl	20.2	17.2	23.2	1.50	3.00	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.2	35.1	47.3	3.05	6.10	Bromocresol Green
	g/dl	4.12	3.51	4.73	0.31	0.61	
Alkaline Phosphatase	U/l	308	262	354	23.00	46.00	Diethanolamine buffer DEA 37°C
	U/l	212	180	244	16.00	32.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	43	34	52	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	74	63	85	5.50	11.00	Randox Liquid Ethylidene pNPG7 37°C
Amylase Total	U/l	97	82	112	7.50	15.00	Randox Liquid Ethylidene pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	25.8	20.6	31.0	2.60	5.20	5th Generation Colorimetric
Bicarbonate	mmol/l	15.2	12.1	18.3	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	18.4	14.5	22.3	1.95	3.90	Diazo with Sulphanilic Acid
	mg/dl	1.08	0.848	1.31	0.12	0.23	
	µmol/l	18.0	14.2	21.8	1.90	3.80	Oxidation to Biliverdin/Vanadate
	mg/dl	1.05	0.831	1.27	0.11	0.22	
Bilirubin Total	µmol/l	30.9	24.4	37.4	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.81	1.43	2.19	0.19	0.38	
	µmol/l	29.1	23.0	35.2	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Calcium	mmol/l	2.25	2.02	2.48	0.12	0.23	Arsenazo III
	mg/dl	9.02	8.10	9.94	0.46	0.92	
Cholesterol	mmol/l	4.30	3.74	4.86	0.28	0.56	Cholesterol Oxidase - Abell Kendall
	mg/dl	166	144	188	11.00	22.00	

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Chloride	mmol/l	91.2	83.9	98.5	3.65	7.30	ISE direct
CK Total	U/l	248	203	293	22.50	45.00	CK-NAC substrate start (DGKC) 37°C
	U/l	246	202	290	22.00	44.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	132	106	158	13.00	26.00	Enzymatic UV method
	mg/dl	1.49	1.20	1.78	0.15	0.29	
gamma-GT	U/l	57	48	66	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	5.82	4.95	6.69	0.44	0.87	Hexokinase
	mg/dl	105	89.2	121	7.90	15.80	
	mmol/l	6.38	5.42	7.34	0.48	0.96	Glucose oxidase
	mg/dl	115	97.7	132	8.65	17.30	
Iron	µmol/l	19.8	16.2	23.4	1.80	3.60	Colorimetric without ppt.
	µg/dl	111	90.6	131	10.20	20.40	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	440	374	506	33.00	66.00	P->L German methods 37°C
	U/l	201	170	232	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	47	38	56	4.50	9.00	Randox Colorimetric 37°C
Magnesium	mmol/l	0.91	0.80	1.02	0.06	0.11	Xylidyl Blue
	mg/dl	2.22	1.95	2.49	0.14	0.27	
Phosphate Inorganic	mmol/l	1.35	1.15	1.55	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.19	3.57	4.81	0.31	0.62	
Potassium	mmol/l	4.18	3.85	4.51	0.17	0.33	Enzymatic

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RANDOX

RX SERIES®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Potassium	mmol/l	3.93	3.62	4.24	0.16	0.31	ISE method - direct
Protein Total	g/l	58.6	46.8	70.4	5.90	11.80	Biuret reaction end point
	g/dl	5.86	4.68	7.04	0.59	1.18	
Sodium	mmol/l	142	135	149	3.50	7.00	Enzymatic
	mmol/l	139	132	146	3.50	7.00	ISE method - direct
TIBC	µmol/l	48.9	38.6	59.2	5.15	10.30	Direct Colorimetric
	µg/dl	273	216	330	28.50	57.00	
Triglycerides	mmol/l	1.12	0.94	1.30	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	99.1	83.3	115	7.90	15.80	
Uric Acid (Urate)	mmol/l	0.37	0.32	0.41	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.15	5.34	6.96	0.41	0.81	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.93	5.16	6.70	0.39	0.77	
Urea	mmol/l	7.43	6.32	8.54	0.56	1.11	Urease kinetic
	mg/dl	44.7	38.0	51.4	3.35	6.70	
	mmol/l	7.43	6.32	8.54	0.56	1.11	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.3	34.3	46.3	3.00	6.00	Bromocresol Green
	g/dl	4.03	3.43	4.63	0.30	0.60	
Alkaline Phosphatase	U/l	183	156	210	13.50	27.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
Amylase Pancreatic	U/l	69	59	79	5.00	10.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	89	75	103	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	41	33	49	4.00	8.00	Tris buffer without P5P 37°C
Bile Acids	µmol/l	25.5	20.4	30.6	2.55	5.10	Enzymatic Colorimetric
Bicarbonate	mmol/l	15.7	12.5	18.9	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	19.2	15.1	23.3	2.05	4.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.12	0.883	1.36	0.12	0.24	
Bilirubin Total	µmol/l	30.6	24.1	37.1	3.25	6.50	Diazo with Sulphanilic Acid
	mg/dl	1.79	1.41	2.17	0.19	0.38	
	µmol/l	30.9	24.4	37.4	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.81	1.43	2.19	0.19	0.38	
Calcium	mmol/l	2.20	1.98	2.42	0.11	0.22	Arsenazo III
	mg/dl	8.82	7.94	9.70	0.44	0.88	
Cholesterol	mmol/l	4.08	3.55	4.61	0.27	0.53	Cholesterol Oxidase - Abell Kendall
	mg/dl	157	137	177	10.00	20.00	
Chloride	mmol/l	95.1	87.5	103	3.80	7.60	ISE indirect
CK Total	U/l	216	177	255	19.50	39.00	CK-NAC (IFCC) 37°C

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
	µmol/l	127	101	153	13.00	26.00	Enzymatic UV method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	127	101	153	13.00	26.00	Creatinine PAP method
	mg/dl	1.44	1.14	1.74	0.15	0.30	
	µmol/l	130	104	156	13.00	26.00	Jaffe rate blanked
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
	µmol/l	135	108	162	13.50	27.00	Jaffe rate blanked compensated (-18 µmol/l)
	mg/dl	1.53	1.22	1.84	0.16	0.31	
gamma-GT	U/l	46	39	53	3.50	7.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	46	39	53	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
Glucose	mmol/l	6.09	5.18	7.00	0.46	0.91	Hexokinase
	mg/dl	110	93.3	127	8.35	16.70	
	mmol/l	6.06	5.15	6.97	0.46	0.91	Glucose oxidase
	mg/dl	109	92.8	125	8.10	16.20	
HDL - Cholesterol	mmol/l	1.18	1.01	1.35	0.09	0.17	Direct HDL Immunoseparation
	mg/dl	45.5	39.0	52.0	3.25	6.50	
	mmol/l	1.40	1.19	1.61	0.11	0.21	Direct HDL PEGME
	mg/dl	54.0	45.9	62.1	4.05	8.10	
	mmol/l	1.22	1.04	1.40	0.09	0.18	Direct Clearance Method
	mg/dl	47.1	40.1	54.1	3.50	7.00	
Iron	µmol/l	18.5	15.1	21.9	1.70	3.40	Colorimetric without ppt.
	µg/dl	103	84.4	122	9.30	18.60	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Lactate	mmol/l	1.47	1.21	1.73	0.13	0.26	Colorimetric Lactate Oxidase
	mg/dl	13.2	10.9	15.5	1.15	2.30	
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P 37°C
	U/l	427	363	491	32.00	64.00	P->L German methods 37°C
	U/l	205	174	236	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	211	180	242	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	45	36	54	4.50	9.00	Other Colorimetric 37°C
Lithium	mmol/l	1.13	0.99	1.27	0.07	0.14	Spectrophotometric
	mg/dl	0.785	0.689	0.881	0.05	0.10	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Xylidyl Blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.98	3.66	4.30	0.16	0.32	ISE method - indirect
Protein Total	g/l	56.3	45.0	67.6	5.65	11.30	Biuret reaction end point
	g/dl	5.63	4.50	6.76	0.57	1.13	
	g/l	57.7	46.2	69.2	5.75	11.50	Biuret reaction kinetic
	g/dl	5.77	4.62	6.92	0.58	1.15	
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
TIBC	µmol/l	46.8	36.9	56.7	4.95	9.90	FE+UIBC(saturation with iron)
	µg/dl	262	206	318	28.00	56.00	
	µmol/l	47.9	37.8	58.0	5.05	10.10	Direct Colorimetric
	µg/dl	268	211	325	28.50	57.00	
Triglycerides	mmol/l	1.14	0.96	1.32	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	101	85.0	117	8.00	16.00	

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SIEMENS ADVIA 1200/1650/1800/2400®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.15	0.97	1.33	0.09	0.18	L/G Kinase EP. no correction
	mg/dl	102	85.7	118	8.15	16.30	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	6.00	5.22	6.78	0.39	0.78	
	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.96	5.19	6.73	0.39	0.77	
Urea	mmol/l	7.89	6.71	9.07	0.59	1.18	Urease end point
	mg/dl	47.4	40.3	54.5	3.55	7.10	
	mmol/l	7.67	6.52	8.82	0.58	1.15	Urease kinetic
	mg/dl	46.1	39.2	53.0	3.45	6.90	
	mmol/l	7.67	6.52	8.82	0.58	1.15	BUN
	mg/dl	21.5	18.3	24.7	1.60	3.20	

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Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.2	34.1	46.3	3.05	6.10	Bromocresol Green
	g/dl	4.02	3.41	4.63	0.31	0.61	
	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Purple
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	190	161	219	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	46	37	55	4.50	9.00	Tris buffer without P5P 37°C
	U/l	46	37	55	4.50	9.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Pancreatic	U/l	71	60	82	5.50	11.00	Immunoinhibition EPS substrate 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Siemens - blocked pNPG7 37°C
AST (GOT)	U/l	39	31	47	4.00	8.00	Tris buffer without P5P 37°C
	U/l	40	32	48	4.00	8.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.2	12.1	18.3	1.55	3.10	Enzymatic
Bilirubin Direct	µmol/l	19.3	15.2	23.4	2.05	4.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.13	0.889	1.37	0.12	0.24	
Bilirubin Total	µmol/l	32.4	25.6	39.2	3.40	6.80	Diazo with Sulphanilic Acid
	mg/dl	1.90	1.50	2.30	0.20	0.40	
	µmol/l	30.8	24.3	37.3	3.25	6.50	Oxidation to Biliverdin/Vanadate
	mg/dl	1.80	1.42	2.18	0.19	0.38	
Calcium	mmol/l	2.16	1.95	2.37	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.66	7.82	9.50	0.42	0.84	
	mmol/l	2.22	2.00	2.44	0.11	0.22	Arsenazo III
	mg/dl	8.90	8.02	9.78	0.44	0.88	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	4.05	3.53	4.57	0.26	0.52	Cholesterol Oxidase - Abell Kendall
	mg/dl	156	136	176	10.00	20.00	
	mmol/l	4.20	3.65	4.75	0.28	0.55	Dimension-Siemens reagents
	mg/dl	162	141	183	10.50	21.00	
	mmol/l	4.07	3.54	4.60	0.27	0.53	Cholesterol Oxidase - IDMS
	mg/dl	157	137	177	10.00	20.00	
Chloride	mmol/l	97.0	89.2	105	3.90	7.80	ISE indirect
Cholinesterase	U/l	6753	5402	8104	675.50	1351.00	Colorimetric Butyrylthiocholine 37°C
CK Total	U/l	207	169	245	19.00	38.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	131	105	157	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	128	103	153	12.50	25.00	Enzymatic UV method
	mg/dl	1.45	1.16	1.74	0.15	0.29	
	µmol/l	127	102	152	12.50	25.00	Creatinine PAP method
	mg/dl	1.44	1.15	1.73	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	Jaffe rate blanked
	mg/dl	1.48	1.19	1.77	0.15	0.29	
	µmol/l	129	103	155	13.00	26.00	Jaffe rate blanked comp. (-26 µmol/l)
	mg/dl	1.46	1.16	1.76	0.15	0.30	
Free T4	pmol/l	21.3	16.0	26.6	2.65	5.30	Siemens Atellica IM
	ng/dl	1.66	1.25	2.07	0.21	0.41	
	pg/ml	16.6	12.5	20.7	2.05	4.10	Siemens Atellica IM
gamma-GT	U/l	48	40	56	4.00	8.00	Gamma glutamyl.-3-carboxy-4-nitroanilide 37°C
	U/l	47	40	54	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C

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Siemens Atellica Solution

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.05	5.14	6.96	0.46	0.91	Hexokinase
	mg/dl	109	92.6	125	8.20	16.40	
	mmol/l	6.24	5.30	7.18	0.47	0.94	Glucose oxidase
	mg/dl	112	95.5	129	8.25	16.50	
HDL - Cholesterol	mmol/l	1.28	1.09	1.47	0.10	0.19	Direct HDL PPD
	mg/dl	49.4	42.1	56.7	3.65	7.30	
	mmol/l	1.18	1.01	1.35	0.09	0.17	Direct HDL Immunoseparation
	mg/dl	45.5	39.0	52.0	3.25	6.50	
	mmol/l	1.25	1.06	1.44	0.10	0.19	Direct Clearance Method
	mg/dl	48.3	40.9	55.7	3.70	7.40	
Iron	µmol/l	18.7	15.4	22.0	1.65	3.30	Colorimetric with ppt.
	µg/dl	105	86.1	124	9.45	18.90	
	µmol/l	18.3	15.0	21.6	1.65	3.30	Colorimetric without ppt.
	µg/dl	102	83.9	120	9.05	18.10	
Lactate	mmol/l	1.51	1.24	1.78	0.14	0.27	Colorimetric Lactate Oxidase
	mg/dl	13.6	11.2	16.0	1.20	2.40	
LD (LDH)	U/l	209	178	240	15.50	31.00	L->P 37°C
	U/l	207	176	238	15.50	31.00	L->P IFCC 37°C
Lipase	U/l	42	34	50	4.00	8.00	Other Colorimetric 37°C
Lithium	mmol/l	1.11	0.98	1.24	0.07	0.13	Spectrophotometric
	mg/dl	0.771	0.678	0.864	0.05	0.09	
Magnesium	mmol/l	0.88	0.78	0.99	0.05	0.11	Xylidyl Blue
	mg/dl	2.14	1.89	2.39	0.13	0.25	
	mmol/l	0.88	0.78	0.99	0.05	0.11	Methylthymol blue
	mg/dl	2.15	1.89	2.41	0.13	0.26	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Osmolality	mOsm/kg	289	232	346	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.28	3.63	4.93	0.33	0.65	
Potassium	mmol/l	3.82	3.51	4.13	0.16	0.31	ISE method - indirect
Protein Total	g/l	56.6	45.3	67.9	5.65	11.30	Biuret reaction end point
	g/dl	5.66	4.53	6.79	0.57	1.13	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.15	0.92	1.38	0.12	0.23	Siemens Atellica IM
TIBC	µmol/l	47.5	37.5	57.5	5.00	10.00	Direct Colorimetric
	µg/dl	266	210	322	28.00	56.00	
Triglycerides	mmol/l	1.17	0.98	1.36	0.10	0.19	Lipase/GPO-PAP no correction
	mg/dl	104	86.7	121	8.65	17.30	
	mmol/l	1.17	0.98	1.36	0.10	0.19	L/G Kinase EP. no correction
	mg/dl	104	86.7	121	8.65	17.30	
Uric Acid (Urate)	mmol/l	0.36	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.96	5.19	6.73	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.93	5.16	6.70	0.39	0.77	
	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase Peroxidase with ascorbate oxidase @ 546nm
	mg/dl	5.90	5.12	6.68	0.39	0.78	
Urea	mmol/l	7.79	6.62	8.96	0.59	1.17	Urease end point
	mg/dl	46.8	39.8	53.8	3.50	7.00	
	mmol/l	7.68	6.53	8.83	0.58	1.15	Urease kinetic
	mg/dl	46.2	39.2	53.2	3.50	7.00	
	mmol/l	7.68	6.53	8.83	0.58	1.15	BUN
	mg/dl	21.6	18.4	24.8	1.60	3.20	

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RANDOX

SIEMENS DIMENSION EXL®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	43.0	36.5	49.5	3.25	6.50	Bromocresol Green
	g/dl	4.30	3.65	4.95	0.33	0.65	
	g/l	42.0	35.7	48.3	3.15	6.30	Bromocresol Purple
	g/dl	4.20	3.57	4.83	0.32	0.63	
Alkaline Phosphatase	U/l	187	159	215	14.00	28.00	Siemens Dimension AMP buffer 37°C
	U/l	188	160	216	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	92	78	106	7.00	14.00	Siemens - maltopenta/hexaoside 37°C
	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	59	47	71	6.00	12.00	Tris buffer with P5P 37°C
	U/l	60	48	72	6.00	12.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.8	12.5	19.1	1.65	3.30	Enzymatic
Bilirubin Direct	µmol/l	15.4	12.1	18.7	1.65	3.30	Diazo with Sulphanilic Acid
	mg/dl	0.901	0.708	1.09	0.10	0.19	
	µmol/l	14.9	11.7	18.1	1.60	3.20	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.872	0.684	1.06	0.09	0.19	
Bilirubin Total	µmol/l	28.2	22.3	34.1	2.95	5.90	Diazo with Sulphanilic Acid
	mg/dl	1.65	1.30	2.00	0.18	0.35	
	µmol/l	29.1	23.0	35.2	3.05	6.10	Oxidation to Biliverdin/Vanadate
	mg/dl	1.70	1.35	2.05	0.18	0.35	

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Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Calcium	mmol/l	2.08	1.87	2.29	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.34	7.49	9.19	0.43	0.85	
Cholesterol	mmol/l	3.81	3.31	4.31	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	147	128	166	9.50	19.00	
	mmol/l	3.85	3.35	4.35	0.25	0.50	Dimension-Siemens reagents
	mg/dl	149	129	169	10.00	20.00	
	mmol/l	3.82	3.32	4.32	0.25	0.50	Cholesterol Oxidase - IDMS
	mg/dl	147	128	166	9.50	19.00	
Chloride	mmol/l	94.4	86.8	102	3.80	7.60	ISE indirect
Cholinesterase	U/l	9564	7651	11477	956.50	1913.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	199	163	235	18.00	36.00	CK-NAC (IFCC) 37°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate with deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	135	108	162	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.53	1.22	1.84	0.16	0.31	
	µmol/l	134	107	161	13.50	27.00	Enzymatic UV method
	mg/dl	1.51	1.21	1.81	0.15	0.30	
	µmol/l	129	104	154	12.50	25.00	Creatinine PAP method
	mg/dl	1.46	1.18	1.74	0.14	0.28	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	135	108	162	13.50	27.00	IDMS traceable
	mg/dl	1.53	1.22	1.84	0.16	0.31	
Free T4	pmol/l	21.4	16.0	26.8	2.70	5.40	Siemens Dimension ExI LOCI
	ng/dl	1.67	1.25	2.09	0.21	0.42	
	pg/ml	16.7	12.5	20.9	2.10	4.20	Siemens Dimension ExI LOCI

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
gamma-GT	U/l	55	47	63	4.00	8.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	63	53	73	5.00	10.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.17	5.24	7.10	0.47	0.93	Hexokinase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.19	5.26	7.12	0.47	0.93	Oxygen electrode
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.43	1.22	1.64	0.11	0.21	Direct HDL PPD
	mg/dl	55.2	47.1	63.3	4.05	8.10	
	mmol/l	1.43	1.21	1.65	0.11	0.22	Direct HDL PEGME
	mg/dl	55.2	46.7	63.7	4.25	8.50	
Iron	µmol/l	17.5	14.4	20.6	1.55	3.10	Colorimetric with ppt.
	µg/dl	97.8	80.5	115	8.65	17.30	
	µmol/l	17.6	14.4	20.8	1.60	3.20	Colorimetric without ppt.
	µg/dl	98.4	80.5	116	8.95	17.90	
Lactate	mmol/l	1.54	1.27	1.81	0.14	0.27	UV LDH
	mg/dl	13.9	11.4	16.4	1.25	2.50	
LD (LDH)	U/l	200	170	230	15.00	30.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	45	36	54	4.50	9.00	Other Colorimetric 37°C
	U/l	145	116	174	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Magnesium	mmol/l	0.94	0.83	1.05	0.06	0.11	Xylidyl Blue
	mg/dl	2.28	2.00	2.56	0.14	0.28	
	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.21	1.94	2.48	0.14	0.27	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Osmolality	mOsm/kg	284	227	341	28.50	57.00	Calculated
Phosphate Inorganic	mmol/l	1.38	1.17	1.59	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.28	3.63	4.93	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - indirect
Protein Total	g/l	59.2	47.3	71.1	5.95	11.90	Biuret reaction end point
	g/dl	5.92	4.73	7.11	0.60	1.19	
PSA Total	ng/ml =	11.0	8.25	13.8	1.38	2.75	Siemens Dimension
Sodium	mmol/l	141	134	148	3.50	7.00	ISE method - indirect
Thyroid Stimulating Hormone	µU/ml =	1.10	0.88	1.32	0.11	0.22	
TIBC	µmol/l	38.4	30.3	46.5	4.05	8.10	Removal of excess free iron
	µg/dl	215	169	261	23.00	46.00	
	µmol/l	35.7	28.2	43.2	3.75	7.50	FE+UIBC(saturation with iron)
	µg/dl	200	158	242	21.00	42.00	
	µmol/l	36.3	28.7	43.9	3.80	7.60	Direct Colorimetric
	µg/dl	203	160	246	21.50	43.00	
Triglycerides	mmol/l	1.04	0.88	1.20	0.08	0.16	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.6	106	7.20	14.40	
	mmol/l	1.05	0.88	1.22	0.09	0.17	L/G Kinase EP. no correction
	mg/dl	92.9	77.7	108	7.60	15.20	
	mmol/l	1.07	0.90	1.24	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	94.7	79.4	110	7.65	15.30	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.90	5.12	6.68	0.39	0.78	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.95	5.17	6.73	0.39	0.78	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.83	5.07	6.59	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.83	5.07	6.59	0.38	0.76	
Urea	mmol/l	7.55	6.42	8.68	0.57	1.13	Urease end point
	mg/dl	45.4	38.6	52.2	3.40	6.80	
	mmol/l	7.46	6.34	8.58	0.56	1.12	Urease kinetic
	mg/dl	44.8	38.1	51.5	3.35	6.70	
	mmol/l	7.46	6.34	8.58	0.56	1.12	BUN
	mg/dl	20.9	17.8	24.0	1.55	3.10	

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SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	41.7	35.5	47.9	3.10	6.20	Bromocresol Green
	g/dl	4.17	3.55	4.79	0.31	0.62	
	g/l	41.7	35.5	47.9	3.10	6.20	Bromocresol Purple
	g/dl	4.17	3.55	4.79	0.31	0.62	
Alkaline Phosphatase	U/l	183	156	210	13.50	27.00	Siemens Dimension AMP buffer 37°C
	U/l	185	157	213	14.00	28.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	50	40	60	5.00	10.00	Tris buffer with P5P 37°C
	U/l	51	41	61	5.00	10.00	Siemens Dade Standard Non IFCC Correlated 37°C
Amylase Total	U/l	94	80	108	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	60	48	72	6.00	12.00	Tris buffer with P5P 37°C
	U/l	59	47	71	6.00	12.00	Siemens Dade Standard Non IFCC Correlated 37°C
Bicarbonate	mmol/l	15.3	12.1	18.5	1.60	3.20	Enzymatic
Bilirubin Direct	µmol/l	16.1	12.7	19.5	1.70	3.40	Diazo with Sulphanilic Acid
	mg/dl	0.942	0.743	1.14	0.10	0.20	
	µmol/l	15.2	12.0	18.4	1.60	3.20	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.889	0.702	1.08	0.09	0.19	
Bilirubin Total	µmol/l	28.6	22.6	34.6	3.00	6.00	Diazo with Sulphanilic Acid
	mg/dl	1.67	1.32	2.02	0.18	0.35	
Calcium	mmol/l	2.09	1.88	2.30	0.11	0.21	Cresolphthalein complexone
	mg/dl	8.38	7.54	9.22	0.42	0.84	
	mmol/l	2.15	1.94	2.36	0.11	0.21	Arsenazo III
	mg/dl	8.62	7.78	9.46	0.42	0.84	

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ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Cholesterol	mmol/l	3.90	3.40	4.40	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	151	131	171	10.00	20.00	
	mmol/l	3.84	3.34	4.34	0.25	0.50	Dimension-Siemens reagents
	mg/dl	148	129	167	9.50	19.00	
Chloride	mmol/l	94.4	86.8	102	3.80	7.60	ISE indirect
Cholinesterase	U/l	9541	7633	11449	954.00	1908.00	Colorimetric - Butyrythiochol. Dimension 37°C
CK Total	U/l	201	165	237	18.00	36.00	CK-NAC (IFCC) 37°C
	U/l	201	165	237	18.00	36.00	Dithioerythritol (DTE) IFCC correlated 37°C
Creatinine	µmol/l	136	109	163	13.50	27.00	Alkaline picrate no deproteinization
	mg/dl	1.54	1.23	1.85	0.16	0.31	
	µmol/l	130	104	156	13.00	26.00	Enzymatic UV method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	130	104	156	13.00	26.00	Creatinine PAP method
	mg/dl	1.47	1.18	1.76	0.15	0.29	
	µmol/l	132	106	158	13.00	26.00	Jaffe rate blanked
	mg/dl	1.49	1.20	1.78	0.15	0.29	
	µmol/l	131	105	157	13.00	26.00	IDMS traceable
	mg/dl	1.48	1.19	1.77	0.15	0.29	
gamma-GT	U/l	56	47	65	4.50	9.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	62	53	71	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.16	5.24	7.08	0.46	0.92	Glucose dehydrogenase
	mg/dl	111	94.4	128	8.30	16.60	
	mmol/l	6.20	5.27	7.13	0.47	0.93	Hexokinase
	mg/dl	112	95.0	129	8.50	17.00	

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

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			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Glucose	mmol/l	6.02	5.12	6.92	0.45	0.90	Glucose oxidase
	mg/dl	108	92.3	124	7.85	15.70	
HDL - Cholesterol	mmol/l	1.44	1.22	1.66	0.11	0.22	Direct HDL PPD
	mg/dl	55.6	47.1	64.1	4.25	8.50	
	mmol/l	1.42	1.21	1.63	0.11	0.21	Direct HDL PEGME
	mg/dl	54.8	46.7	62.9	4.05	8.10	
Iron	µmol/l	17.5	14.4	20.6	1.55	3.10	Colorimetric with ppt.
	µg/dl	97.8	80.5	115	8.65	17.30	
	µmol/l	17.8	14.6	21.0	1.60	3.20	Colorimetric without ppt.
	µg/dl	99.5	81.6	117	8.95	17.90	
Lactate	mmol/l	1.61	1.32	1.90	0.15	0.29	UV LDH
	mg/dl	14.5	11.9	17.1	1.30	2.60	
LD (LDH)	U/l	201	171	231	15.00	30.00	L->P 37°C
	U/l	203	172	234	15.50	31.00	Siemens Dimension L-P Non IFCC 37°C
	U/l	202	172	232	15.00	30.00	L->P IFCC 37°C
Lipase	U/l	146	117	175	14.50	29.00	Colorimetric Siemens Dimension (LIPL Kit) 37°C
Lithium	mmol/l	1.16	1.02	1.30	0.07	0.14	Spectrophotometric
	mg/dl	0.806	0.708	0.904	0.05	0.10	
Magnesium	mmol/l	0.91	0.80	1.02	0.05	0.11	Methylthymol blue
	mg/dl	2.20	1.94	2.46	0.13	0.26	
Phosphate Inorganic	mmol/l	1.40	1.19	1.61	0.11	0.21	Phosphomolybdate enzymatic
	mg/dl	4.34	3.69	4.99	0.33	0.65	
	mmol/l	1.39	1.18	1.60	0.11	0.21	Phosphomolybdate UV
	mg/dl	4.31	3.66	4.96	0.33	0.65	
Potassium	mmol/l	3.91	3.60	4.22	0.16	0.31	ISE method - indirect

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Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Protein Total	g/l	59.3	47.4	71.2	5.95	11.90	Biuret reaction end point
	g/dl	5.93	4.74	7.12	0.60	1.19	
Sodium	mmol/l	140	133	147	3.50	7.00	ISE method - indirect
TIBC	µmol/l	37.9	30.0	45.8	3.95	7.90	Removal of excess free iron
	µg/dl	212	168	256	22.00	44.00	
	µmol/l	37.4	29.6	45.2	3.90	7.80	FE+UIBC(saturation with iron)
	µg/dl	209	165	253	22.00	44.00	
	µmol/l	37.6	29.7	45.5	3.95	7.90	Direct Colorimetric
	µg/dl	210	166	254	22.00	44.00	
Triglycerides	mmol/l	1.04	0.87	1.21	0.08	0.17	Lipase/GPO-PAP no correction
	mg/dl	92.0	77.1	107	7.45	14.90	
	mmol/l	1.02	0.86	1.18	0.08	0.16	L/G Kinase EP. no correction
	mg/dl	90.3	75.8	105	7.25	14.50	
	mmol/l	1.05	0.88	1.22	0.09	0.17	Lipase/Glycerol Dehydrogenase
	mg/dl	92.9	77.8	108	7.55	15.10	
Uric Acid (Urate)	mmol/l	0.35	0.31	0.40	0.02	0.05	Uricase catalase 340nm
	mg/dl	5.88	5.12	6.64	0.38	0.76	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase with ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.86	5.11	6.61	0.38	0.75	
	mmol/l	0.35	0.30	0.39	0.02	0.05	Spectrophotometric at 280-290
	mg/dl	5.85	5.09	6.61	0.38	0.76	
Urea	mmol/l	7.61	6.47	8.75	0.57	1.14	Urease end point
	mg/dl	45.7	38.9	52.5	3.40	6.80	

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RANDOX

SIEMENS DIMENSION RxL/Max/Xpand®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Urea	mmol/l	7.49	6.37	8.61	0.56	1.12	Urease kinetic
	mg/dl	45.0	38.3	51.7	3.35	6.70	
	mmol/l	7.49	6.37	8.61	0.56	1.12	BUN
	mg/dl	21.0	17.9	24.1	1.55	3.10	

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RANDOX

SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.6	34.5	46.7	3.05	6.10	Bromocresol Purple
	g/dl	4.06	3.45	4.67	0.31	0.61	
Alkaline Phosphatase	U/l	189	160	218	14.50	29.00	AMP optimised to IFCC 37°C
ALT (GPT)	U/l	48	39	57	4.50	9.00	Tris buffer with P5P 37°C
Amylase Total	U/l	93	79	107	7.00	14.00	Siemens 2-chloro-pNPG3 37°C
AST (GOT)	U/l	60	48	72	6.00	12.00	Tris buffer with P5P 37°C
Bilirubin Direct	µmol/l	15.2	12.0	18.4	1.60	3.20	Diazo/Sulphanilic Siemens Dimension
	mg/dl	0.889	0.702	1.08	0.09	0.19	
Bilirubin Total	µmol/l	29.1	23.0	35.2	3.05	6.10	Diazo with Sulphanilic Acid
	mg/dl	1.70	1.35	2.05	0.18	0.35	
Calcium	mmol/l	2.13	1.91	2.35	0.11	0.22	Cresolphthalein complexone
	mg/dl	8.54	7.66	9.42	0.44	0.88	
Cholesterol	mmol/l	3.86	3.36	4.36	0.25	0.50	Cholesterol Oxidase - Abell Kendall
	mg/dl	149	130	168	9.50	19.00	
Chloride	mmol/l	97.3	89.5	105	3.90	7.80	ISE indirect
CK Total	U/l	210	172	248	19.00	38.00	CK-NAC (IFCC) 37°C
gamma-GT	U/l	61	52	70	4.50	9.00	Siemens Dimension (non IFCC) 37°C
Glucose	mmol/l	6.01	5.11	6.91	0.45	0.90	Hexokinase
	mg/dl	108	92.1	124	7.95	15.90	
HDL - Cholesterol	mmol/l	1.36	1.16	1.56	0.10	0.20	Direct HDL PEGME
	mg/dl	52.5	44.8	60.2	3.85	7.70	

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RANDOX

SIEMENS DIMENSION Vista®

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Iron	µmol/l	17.9	14.7	21.1	1.60	3.20	Colorimetric without ppt.
	µg/dl	100	82.2	118	8.90	17.80	
LD (LDH)	U/l	206	175	237	15.50	31.00	L->P IFCC 37°C
Magnesium	mmol/l	0.99	0.87	1.11	0.06	0.12	Methylthymol blue
	mg/dl	2.40	2.11	2.69	0.15	0.29	
Phosphate Inorganic	mmol/l	1.32	1.12	1.52	0.10	0.20	Phosphomolybdate UV
	mg/dl	4.09	3.47	4.71	0.31	0.62	
Potassium	mmol/l	3.89	3.58	4.20	0.16	0.31	ISE method - indirect
Protein Total	g/l	60.4	48.3	72.5	6.05	12.10	Biuret reaction end point
	g/dl	6.04	4.83	7.25	0.61	1.21	
Sodium	mmol/l	139	132	146	3.50	7.00	ISE method - indirect
Triglycerides	mmol/l	1.16	0.97	1.35	0.09	0.19	Lipase/GPO-PAP no correction
	mg/dl	103	85.9	120	8.55	17.10	
Uric Acid (Urate)	mmol/l	0.34	0.30	0.39	0.02	0.04	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.75	5.01	6.49	0.37	0.74	
Urea	mmol/l	7.36	6.26	8.46	0.55	1.10	Urease kinetic
	mg/dl	44.2	37.6	50.8	3.30	6.60	
	mmol/l	7.36	6.26	8.46	0.55	1.10	BUN
	mg/dl	20.7	17.6	23.8	1.55	3.10	

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RANDOX

URIT 8000 Series

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Albumin	g/l	40.4	34.4	46.4	3.00	6.00	Bromocresol Green
	g/dl	4.04	3.44	4.64	0.30	0.60	
ALT (GPT)	U/l	40	32	48	4.00	8.00	Tris buffer without P5P 37°C
	U/l	30	24	36	3.00	6.00	Tris buffer without P5P 30°C
	U/l	23	18	28	2.50	5.00	Tris buffer without P5P 25°C
AST (GOT)	U/l	37	30	44	3.50	7.00	Tris buffer without P5P 37°C
	U/l	25	20	30	2.50	5.00	Tris buffer without P5P 30°C
	U/l	18	14	22	2.00	4.00	Tris buffer without P5P 25°C
Cholesterol	mmol/l	3.96	3.45	4.47	0.26	0.51	Cholesterol Oxidase - Abell Kendall
	mg/dl	153	133	173	10.00	20.00	
Creatinine	µmol/l	128	102	154	13.00	26.00	Alkaline picrate no deproteinization
	mg/dl	1.45	1.15	1.75	0.15	0.30	
gamma-GT	U/l	49	42	56	3.50	7.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 37°C
	U/l	39	33	45	3.00	6.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 30°C
	U/l	30	26	34	2.00	4.00	Gamma Glutamyl-3-Carboxy-4-nitroanilide (IFCC) 25°C
Glucose	mmol/l	6.19	5.26	7.12	0.47	0.93	Glucose oxidase
	mg/dl	112	94.8	129	8.60	17.20	
HDL - Cholesterol	mmol/l	1.51	1.28	1.74	0.12	0.23	Direct Clearance Method
	mg/dl	58.3	49.4	67.2	4.45	8.90	
Protein Total	g/l	58.6	46.9	70.3	5.85	11.70	Biuret reaction end point
	g/dl	5.86	4.69	7.03	0.59	1.17	

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URIT 8000 Series

ASSAYED HUMAN SERA LEVEL 2

Lot. No. 1549UN Cat. No. HN1530 / HS2611

Size 20 x 5ml / 5 x 5ml Expiry 2025-03-28

			Range				
Analyte	**unit**	**Target**	**low**	**high**	**1SD**	**2SD**	**methods**
Triglycerides	mmol/l	1.13	0.95	1.31	0.09	0.18	Lipase/GPO-PAP no correction
	mg/dl	100	84.1	116	7.95	15.90	
Uric Acid (Urate)	mmol/l	0.35	0.30	0.39	0.02	0.05	Uricase peroxidase no ascorbate oxidase
	mg/dl	5.85	5.09	6.61	0.38	0.76	
Urea	mmol/l	6.90	5.87	7.93	0.52	1.03	Urease kinetic
	mg/dl	41.5	35.3	47.7	3.10	6.20	
	mmol/l	6.90	5.87	7.93	0.52	1.03	BUN
	mg/dl	19.4	16.5	22.3	1.45	2.90	

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Compania	Tipul dispozitivului	Denumirea comercială	Producător	Fișier	Data programării	Statut
Medist Grup S.R.L.	Assayed Chemistry Premium Plus Level 2, 3	HUM ASY Control 2, 3	Randox LAboratories Ltd	File	03.01.2024 13:00	În lucru