Anexa 17 la Formularul Specificații tehnice

Lot nr. 17.1 Analizator biochimic automat 150 teste (150210)

Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificatia tehnica ofertata, model **Selecta ProM** (nr. catalog 6003-407)
Cod 150210 **Descriere** Analizator automat destinat analizelor biochimice cu sistem de reactivi. **Sistem analitic** automat cu calculator integrat sau exterior (procesor, monitor, tastatura + mouse). **Parametrul Specificația** **Sistem analitic** automat cu calculator integrat sau exterior (procesor, monitor, tastatura + mouse). **Tip de lucru** continuu **Tip sistem** randoom acces **Capacitatea (teste/oră)** ≥ 150 (teste fotometrice, fără modulul ISE) **Posibilitatea efectuării analizelor urgente** Obligatoriu **Tipul dispozitivului** staționar **Tip probă:** Ser și plasmă urină sânge integru / hemolizat CSF (lichid cefalo-rahidian) **Tip diluare** automat **Sistem de spălare total automat** Obligatoriu **Program de control al calității** Obligatoriu **Compartiment reactivi** cu răcire **Rotor cu cuve pentru reacție:** cu încălzire la 37°C tip reutilizabil, (indicați ciclurile posibile de reutilizare) **Sistem fotometric:** cu sursă de lumina LED/Halogen cu minim 12 lungimi de undă în intervalul 340-800 nm **Regimuri de măsurare:** Cinetic Mono și bi-cromatic Imunoturbidimetrc (Turbidity) **Controlul cantității de reagent rămas** obligatoriu **Semnalizare lipsă reagent și probă** Obligatoriu	**Descriere** Analizator automat destinat analizelor biochimice cu sistem de reactivi. **Sistem analitic** automat cu calculator integrat (procesor, monitor, tastatura + mouse). **Parametrul Specificația** **Sistem analitic** automat cu calculator integrat (procesor, monitor, tastatura + mouse) – *pag. 2 Selectra ProM brochure* **Tip de lucru** continuu – da. **Tip sistem** randoom acces – *da, pag. A-2, User Manual Selectra ProM, Technical specifications;* **Capacitatea (teste/oră) 180 teste fotometrice**, fără modulul ISE - *pag. 2 Selectra ProM brochure*. **Posibilitatea efectuării analizelor urgente** – da, STAT, *pag. 2 Selectra ProM brochure* **Tipul dispozitivului** benchtop, *pag. 2 Selectra ProM brochure* **Tip probă:** Ser și plasmă – *da, pag. 6-8, User Manual Selectra ProM* urină - *da, pag. 6-8, User Manual Selectra ProM* sânge integru / hemolizat - *Singele integru este utilizat pentru aprecierea HBA1C (hemoglobina glicata). Conform insertului din set, cantitatea de 20mcl de single se dizolva cu 1000mcl de R3 (reagent pentru hemolizare).* CSF (lichid cefalo-rahidian) - *da, pag. 6-8, User Manual Selectra ProM* **Tip diluare** automat - da, *pag. 2 Selectra ProM brochure* **Sistem de spălare total automat – da,** *ProM User Manual, pag. A-3.* **Program de control al calității** – *da, pag. 4-22, cap. 4.2.8 Quality Control Screen.* **Compartiment reactivi** cu răcire – da, *Cooled to 10°C+/-4°C at normal laboratory conditions, pag. 2 Selectra ProM brochure*. **Rotor cu cuve pentru reacție:** cu încălzire la 37°C – *da, Measuring temperature 37˚C, controlled by Peltier elements, pag. 2 Selectra ProM brochure*. tip reutilizabil >10,000 tests per rotor, *pag. 2 Selectra ProM brochure*. **Sistem fotometric:** cu sursă de lumina LED/Halogen

Sistemul de dozare: Utilizarea a minim 2 metode: mono și bireagent Volumul reagentului programabil cu pasul 1 µl Cu senzor de obstacol **Detectia automata a cheagurilor de sange** Obligatoriu **Conectare la LIS** Bi-direcțional **Indicatori de avertizare** obligatoriu **Limba de comunicare** rom/eng **Toate softurile necesare instalate pentru buna funcționare a echipamentului** obligatoriu **Alimentarea** 220 V, 50 Hz **Să fie incluse toate accesoriile, consumabile necesare (vase pentru deșeuri, tuburi pentru reagenți, tuburi pentru spălare) pentru efectuarea analizelor și buna funcționare a echipamentului** ≥ 50 analize (pentru testare/insturire). **Să fie inclus toți reagenții necesari pentru efectuarea analizelor și buna funcționare a echipamentului** ≥ 50 analize (pentru testare/insturire).	cu 12 lungimi de undă în intervalul 340-800 nm, *pag. 2 Selectra ProM brochure*. **Regimuri de măsurare:** Cinetic – da, Kinetic measurement with linearity check - *pag. 2 Selectra ProM brochure*. Mono și bi-cromatic – da, *pag. 2 Selectra ProM brochure*. Imunoturbidimetric (Turbidity) – da, Regimul immunoturbidimetric se refera la testele CRP, RF, ASLO, HbA1c. In instructiunea de lucru a reagentului CRP este marcata metoda imunoturbidimetrica. Suplimentar anexam impreuna cu oferta Reagent-Catalogue, unde sunt marcate investigatiile care se fac in regim Imunoturbidimetric. **Controlul cantității de reagent rămas** – da, *ProM User Manual, pag. 4-20; 5-8.* **Semnalizare lipsă reagent și probă** - da, *ProM User Manual, pag. 5-34.* **Sistemul de dozare:** Utilizarea a minim 2 metode: mono și bireagent – *da, ProM User Manual, pag. A-2;* Volumul reagentului programabil cu pasul 1 µl - **da,** *ProM User Manual, pag. A-3* Cu senzor de obstacol – da, *pag. 2 Selectra ProM brochure.* **Detectia automata a cheagurilor de sange** – da. **Conectare la LIS** Bi-direcțional – *da, pag. 2 Selectra ProM brochure*. **Indicatori de avertizare** – *da, pag. 5-29, ProM User Manual.* **Limba de comunicare** eng **Toate softurile necesare pentru buna funcționare a echipamentului** sunt instalate **Alimentarea** 100 - 240 Vac; Frequency: 50 / 60 Hz; Power (max): 400 VA - *pag. 2 Selectra ProM brochure*. **Sunt incluse toate accesoriile, consumabile necesare (vase pentru deșeuri, tuburi pentru reagenți, tuburi pentru spălare) pentru efectuarea analizelor și buna funcționare a echipamentului** ≥ 50 analize (pentru testare/insturire). **Sunt inclusi toți reagenții necesari pentru efectuarea analizelor și buna funcționare a echipamentului** ≥ 50 analize (pentru testare/insturire). **Investigații pentru 2026** Glucoza – 13282 investigatii Ureea – 10160 investigatii Creatinina – 10160 investigatii ALAT – 13774 investigatii ASAT - 13774 investigatii

	Bilirubina totala – 12429 investigatii Bilirubina directa – 12429 investigatii Ck-MB – 3152 investigatii Amylaza – 4421 investigatii.
Note Oferta de preț trebuie să includă reactivii necesari pentru testele indicate, soluțiile QC și calibrare Cantitatea soluțiilor propuse trebuie să asigure efectuarea procedurilor de control al calității și calibrare, ori de câte ori este necesar.	**Note** Oferta de preț include reactivii necesari pentru testele indicate, soluțiile QC și calibrare. Cantitatea soluțiilor propuse va asigura efectuarea procedurilor de control al calității și calibrare, ori de câte ori este necesar.
Furnizorul va asigura: Transmiterea către spital documentația completă privind conectarea analizatorului la sistemul informatic (H3 SIA AMS/AMP) și să asigure suportul tehnic necesar echipei desemnate de spital sau firmei de software care realizează efectiv conectarea. Instruirea personalului. Mentenanța preventivă și corectivă gratuită pe toată durata contractului atât pentru analizator cât și pentru dispozitivele auxiliare livrate (ex. Calculator, UPS, sistem filtrare). Seturile de mentenanță și piesele de schimb gratuite pe toată durata contractului atât pentru analizator cât și pentru dispozitivele auxiliare livrate (ex. Calculator, UPS, sistem filtrare apă). Toate consumabilele necesare gratuite pe toată durata contractului atât pentru analizator cât și pentru dispozitivele auxiliare livrate (ex. Calculator, UPS, sistem filtrare apă), dacă acestea nu au fost incluse în oferta inițială. Timpul de intervenție în caz de defect: maxim 24 ore de la solicitarea telefonică. Preț pentru reactivi nemodificat pentru toată perioada contractului. Perioada de valabilitate pentru reagenții livrați: La momentul livrării: Minim 6 luni, dar nu mai puțin de 80% din termenul total de valabilitate. Să se indice timpul de stabilitate a reactivilor după deschidere. Termenele mai mari vor fi considerate un avantaj.	**“GBG-MLD” SRL va asigura:** Transmiterea către spital documentația completă privind conectarea analizatorului la sistemul informatic (H3 SIA AMS/AMP) și să asigure suportul tehnic necesar echipei desemnate de spital sau firmei de software care realizează efectiv conectarea. Instruirea personalului. Mentenanța preventivă și corectivă gratuită pe toată durata contractului atât pentru analizator cât și pentru dispozitivele auxiliare livrate (ex. Calculator, UPS, sistem filtrare). Seturile de mentenanță și piesele de schimb gratuite pe toată durata contractului atât pentru analizator cât și pentru dispozitivele auxiliare livrate (ex. Calculator, UPS, sistem filtrare apă). Toate consumabilele necesare gratuite pe toată durata contractului atât pentru analizator cât și pentru dispozitivele auxiliare livrate (ex. Calculator, UPS, sistem filtrare apă), dacă acestea nu au fost incluse în oferta inițială. Timpul de intervenție în caz de defect: maxim 24 ore de la solicitarea telefonică. Preț pentru reactivi nemodificat pentru toată perioada contractului. Perioada de valabilitate pentru reagenții livrați: La momentul livrării: Minim 6 luni, dar nu mai puțin de 80% din termenul total de valabilitate. Să se indice timpul de stabilitate a reactivilor după deschidere. Termenele mai mari vor fi considerate un avantaj. Timpul de stabilitate a reactivilor după deschidere – conform instructiunilor atasate.
Operatorul Economic va include în prețul dispozitivului medical și prețurile pentru fiecare test considerând: Efectuarea controlului calității pentru fiecare test în fiecare zi lucrătoare. Efectuarea calibrării ori de cate ori va fi necesar (în baza rezultatului controlului calității). Toate piesele si kiturile de mentenanță necesare bunei funcționării pe întreaga perioada contractului.	**“GBG-MLD” SRL a inclus în prețul dispozitivului medical și prețurile pentru fiecare test considerând:** Efectuarea controlului calității pentru fiecare test în fiecare zi lucrătoare. Efectuarea calibrării ori de cate ori va fi necesar (în baza rezultatului controlului calității). Toate piesele si kiturile de mentenanță necesare bunei funcționării pe întreaga perioada contractului.

Sistemul de filtrare (stație purificare apa) și toate filtrele necesare pentru funcționarea stației de purificare al apei pe toată perioada contractului. UPS (Sursa neîntreruptibilă de alimentare) și costurile acumulatoarelor necesare pe toata perioada contractului. Calculator (PC), monitor, tastatura, mouse cu garanție deplină și înlocuire în caz de defectare. Toate consumabilele, inclusiv: soluții de spălare, soluții de buffer, electrozi/modul ISE, cuve/rotor pentru reacție, lămpi și tot spectrul de consumabile necesare bunei funcționări pentru efectuarea tuturor testelor solicitate de IMSP. Toate serviciile de mentenanță preventivă și corectivă necesare bunei funcționări pe perioada contractului. Respectiv, se vor lua în calculul toate cheltuielile care ar putea apărea în întreaga perioada contractului.	Sistemul de filtrare (stație purificare apa) și toate filtrele necesare pentru funcționarea stației de purificare al apei pe toată perioada contractului. UPS, model Antares Pro Tower și costurile acumulatoarelor necesare pe toata perioada contractului. Calculator (PC), monitor, tastatura, mouse cu garanție deplină și înlocuire în caz de defectare. Toate consumabilele, inclusiv: soluții de spălare, soluții de buffer, electrozi/modul ISE, cuve/rotor pentru reacție, lămpi și tot spectrul de consumabile necesare bunei funcționări pentru efectuarea tuturor testelor solicitate de IMSP. Toate serviciile de mentenanță preventivă și corectivă necesare bunei funcționări pe perioada contractului. Respectiv, s-au luat în calculul toate costurile aferente functionarii analizatorului care ar putea apărea în întreaga perioada contractului.

5.6.3 Test-related error messages

Note

All possible test-related error messages are listed below, with their probable causes and remedies. If you are in doubt about the actions to take, contact your superior.

INSUFFICIENT REAGENT

- The reagent bottle is empty or missing.
  Fill the reagent bottle.

INSUFFICIENT SAMPLE

- The sample tube is empty or missing.
  Prepare and position a new sample.

REAGENT NOT TAKEN FOR ..

- The fill level of the reagent is too high.
  Remove some reagent. The level should be below the neck of the bottle.
- Foam is formed in the bottle. If foam is present, then remove it carefully using a disposable pipette.
  Remove reagent and refill the bottle.

Test sending stopped

- The reagent needle could not be cleaned. Pipetting was stopped.
  Make sure acid solution (HCL solution) is installed on the rotor. Check the fill level.

LAMP OVERRANGE ERROR

- A counter overrange is detected.
  Look up ***E13 LAMP FAILURE*** in the hardware-related error messages. See par. 7.2.2.

LAMP UNDERRANGE ERROR

- A counter underrange is detected.
  Look up ***E13 LAMP FAILURE*** in the hardware-related error messages. See par. 7.2.2.

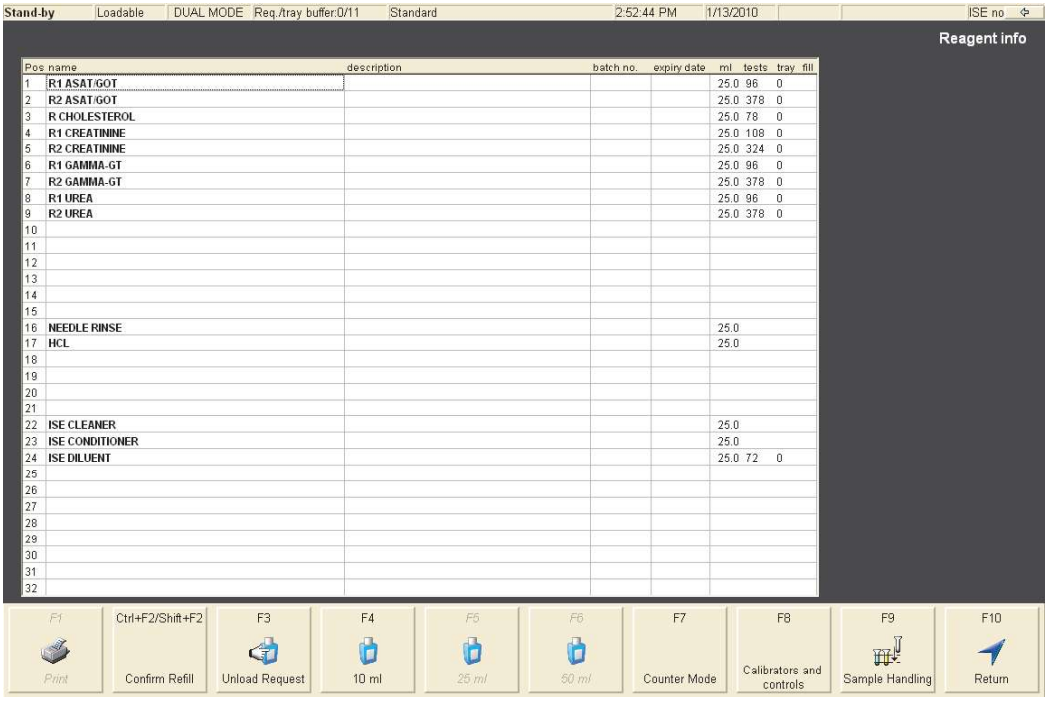
LAMP REFERENCE OVERRANGE ERROR

- A counter overrange is detected for the reference detector.
  Look up ***E13 LAMP FAILURE*** in the hardware-related error messages. See par. 7.2.2.

LAMP REFERENCE UNDERRANGE ERROR

- A counter underrange is detected for the reference detector.
  Look up ***E13 LAMP FAILURE*** in the hardware-related error messages. See par. 7.2.2.

4.2.7 *Reagent Info* screen



This screen shows the loaded reagents with their batch numbers, expiry dates and estimated remaining volumes. See par. 5.2.2 for detailed procedures.

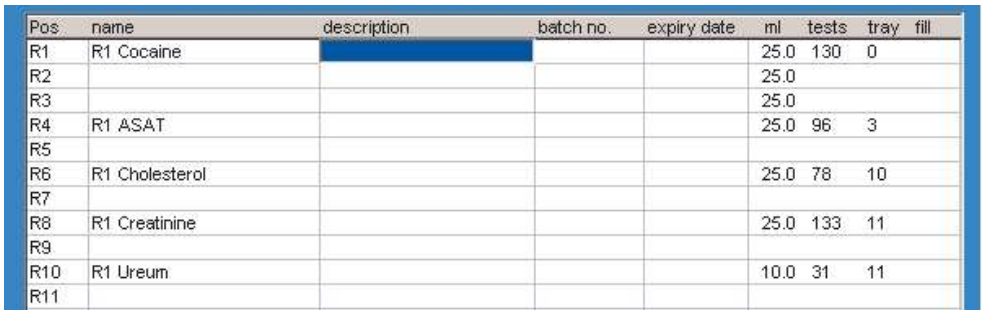
Note
In counter mode, the four columns to the right are replaced with one column showing the total number of tests performed since the last time the counters were reset.

Function keys

Keys	Description	See also:
F1	Print the list with reagent information.	
Ctrl + F2	Confirm that the selected reagent is filled.	
Shift + F2	Confirm that all reagents are filled.	
Alt + F3	Set all values in the ***total test count*** column to zero.	
F3	Pause measurements for loading or unloading of samples. Wait until the state of the analyzer is ***Loadable***. Do not open the cover before the ***Loadable*** state has been reached.	
F4	Set the bottle size of the selected reagent to 10 ml.	
F5	Set the bottle size of the selected reagent to 25 ml.	
F6	Set the bottle size of the selected reagent to 50 ml. *	par. 6.3.1
F7	Switch between ***Counter Mode*** and ***Normal Mode***.	
F8	Open the ***Request samples*** screen.	par. 4.2.3
F9	Open the ***Sample Handling*** screen.	par. 4.2.4

5.2.2 Checking and refilling reagents

1. Open the ***Reagent Loadlist*** screen. This screen is listed in the menu tree. The screen shows all reagents that are currently placed on the analyzer. See par. 4.2.7 for details.



Pos	name	description	batch no.	expiry date	ml	tests	tray	fill
R1	R1 Cocaine				25.0	130	0	
R2					25.0			
R3					25.0			
R4	R1 ASAT				25.0	96	3	
R5								
R6	R1 Cholesterol				25.0	78	10	
R7								
R8	R1 Creatinine				25.0	133	11	
R9								
R10	R1 Ureum				10.0	31	11	
R11								

2. Check the expiry date for each reagent. Program if not present. If the expiry date for a reagent is in the past, perform the following procedure:
   2.1. Discard the reagent. Place a fresh bottle with new reagent in the same position.
   2.2. Change the expiry date for the replaced reagent. Click in the expiry date field. Enter the new expiry date. The expiry date is available on the package insert of the reagent.

Note
By scanning the barcode on the reagent bottle that will be placed, the expiry date and batch number of the fresh reagent will be automatically updated.

3. Check the available reagent volumes. Reagents that are running low have a yellow or red dot in the ***fill*** column to the far right. The ***tray*** column shows how many tests can be performed with the remaining reagent volume.
4. Refill reagents as required:
   4.1. Select the reagent you want to refill. Click on the row in the table. The selected row is marked by a dark blue background.
   4.2. Refill the reagent to the bottle volume.
   4.3. Click ***Ctrl+F2 Confirm Refill***. The volume is changed to the bottle volume. The number of tests that can be performed is calculated and shown in the ***tray*** column.
   4.4. Perform a reagent blank.
5. (Option) Refill all reagents:
   5.1. Refill all reagents to the bottle volume.
   5.2. Click ***Shift+F2 Confirm Refill All***. The volume for all reagents is changed to the bottle volume. The number of tests that can be performed is calculated and shown in the ***tray*** column.

Note
The analyzer assumes that reagents are filled to the bottle volume. The available volume of reagent is not measured but calculated.

ATTENTION
Do not overfill the reagent bottles. If there is too much reagent in the bottle, the analyzer cannot correctly determine the volume that is aspirated. Pipetting of the reagent will stop. An error message will be shown.

   5.3. Perform a reagent blank.

A.1 Performance and technical data

A.1.1 Selectra ProM

Performance

Maximum throughput	Mono mode: 180 tests/hour Dual mode: 133 tests/hour
Accuracy	See par. A.1.6
Precision	See par. A.1.6
Programmable tests	120 per reagent disk configuration unlimited number of reagent disk configurations possible
Load test capacity	32 per reagent rotor
Quality control	3 per parameter, 120 controls programmable per rotor configuration
Sample processing	Random access

Sample system

Positions on outer rings	50 positions for barcoded tubes *
Positions on inner ring	12 positions for tubes without barcodes * 1 blank position 1 wash position
Sample tubes	Diameter: 13 mm Height: 75 mm Pediatric tubes: see par. 5.3.1.
Needle	Level detector and integrated stirrer
Pipetting capacity	2-30 µl (increments of 0.1 µl)
Syringe	100 µl

* All positions can be used for patient samples (normal, ASAP and STAT), controls and calibrators. Normally, controls and calibrators are placed on the inner ring and patient samples are loaded on the two outer rings (readable by the internal barcode reader).

Reagent system

Reagent disk	32 positions: 8 × 10 ml, 24 × 25 ml 10 x 25 ml positions can be used for 5 x 50 ml bottles
Volumes per test	Reagent 1: 110 – 399 µl Reagent 2: 10 – 289 µl Reagent 3: 10 – 289 µl
Refrigeration	8 - 12 °C (Absolute up to 25 °C ambient temperature)

Needle	Pre-heated, with level detector and integrated stirrer
Pipetting capacity	400 µl (increments of 1 µl)
Syringe	1000 µl

Measurement station

Cuvette rotor	Multi-use disposable rotor with 48 positions
Path length	6.8 mm
Volume range	220 µl to 400 µl (total volume of sample and reagents)
Wash station	Fully automatic with overflow-level detector
Cuvette rinsing	4 × 500 µl system solution
Light source	Quartz-iodine lamp 12V 20W
Wavelengths (2 options)	Option 1: 340, 405, 505, 546, 578, 620, 660 and 700 nm Option 2: customized
Wavelength uncertainty	± 2 nm
Spectral half-width value	10 ± 2 nm
Measuring range	0 to 3.0 Abs.
Temperature	37 °C ± 0.2 °C
Cycle time	20 sec. (mono mode) 27 sec. (dual mode)

Approvals

CE

CB

IEC 61326-2-6	The analyzer complies with the emission and immunity requirements described in the IEC 61326-2-6.
CISPR 11 Class A	This equipment has been designed and tested to CISPR 11 Class A. In a domestic environment it may cause radio interference, in which case, you may need to take measures to mitigate the interference.

Note
The approvals listed here refer only to the instrument and operator console, not to additional devices. For the approvals for these devices, see the corresponding manuals.

Needle	Pre-heated, with level detector and integrated stirrer
Pipetting capacity	400 µl (increments of 1 µl)
Syringe	1000 µl

Measurement station

Cuvette rotor	Multi-use disposable rotor with 48 positions
Path length	6.8 mm
Volume range	220 µl to 400 µl (total volume of sample and reagents)
Wash station	Fully automatic with overflow-level detector
Cuvette rinsing	4 × 500 µl system solution
Light source	Quartz-iodine lamp 12V 20W
Wavelengths (2 options)	Option 1: 340, 405, 505, 546, 578, 620, 660 and 700 nm Option 2: customized
Wavelength uncertainty	± 2 nm
Spectral half-width value	10 ± 2 nm
Measuring range	0 to 3.0 Abs.
Temperature	37 °C ± 0.2 °C
Cycle time	20 sec. (mono mode) 27 sec. (dual mode)

Approvals

CE

CB

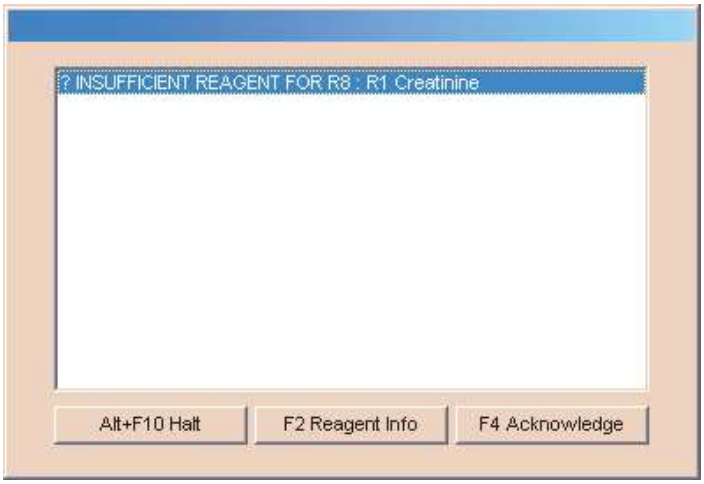
IEC 61326-2-6	The analyzer complies with the emission and immunity requirements described in the IEC 61326-2-6.
CISPR 11 Class A	This equipment has been designed and tested to CISPR 11 Class A. In a domestic environment it may cause radio interference, in which case, you may need to take measures to mitigate the interference.

Note
The approvals listed here refer only to the instrument and operator console, not to additional devices. For the approvals for these devices, see the corresponding manuals.

5.6 Troubleshooting

5.6.1 Handling error messages

If the analyzer detects an error or malfunction, a dialog window is shown on the screen. The window contains buttons that lead to further actions.



Some messages are accompanied by an acoustic signal. Press the spacebar to stop the signal. The sound and duration of the signal are defined in the system parameters. See par. 6.5.1.

Function keys in the message windows

Note
The error messages are accompanied by different buttons, depending on the error condition. The list below shows all possible buttons and the actions associated with them.

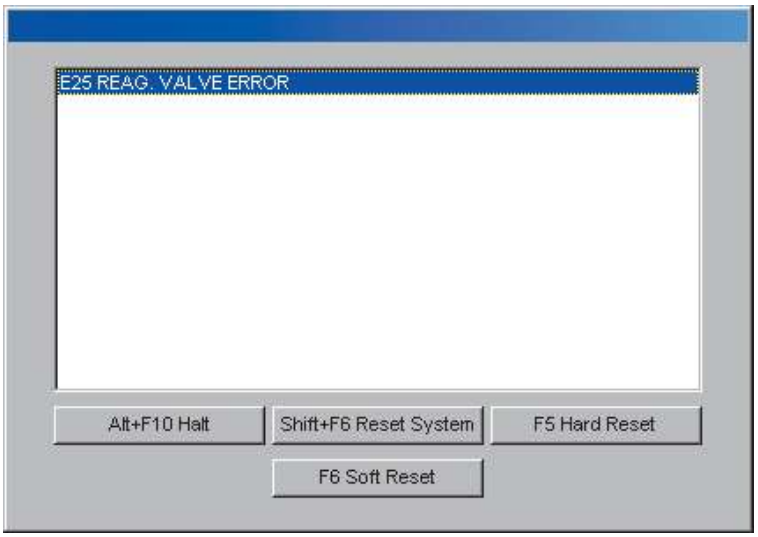
Command	Description
F1 Check Again	Repeat the procedure that led to the error message. This can be used if the importance of the message is unclear.
F2 Reagent Info	Open the ***Reagent Loadlist*** screen. That screen shows which reagents need to be filled. See par. 5.2.2.
F4 Acknowledge	Acknowledge the message and close the window. No further action is taken.
F4 Abort	Abort the action that caused the error message. This option is only shown when aborting the action is possible.
F5 Request calibration	Enter a new request for the required calibration. The calibrator request is added to the worklist and selected. Press ***Enter*** to assign a rotor position.
F5 Hard Reset	Reset a subsystem of the analyzer. If the error condition is cleared by this, the analyzer continues.
F6 Soft Reset	Reset a component of the analyzer. If the error condition is cleared by this, the analyzer continues.
F5 Measure	Measure all pending tests.
F6 Reject	Rejects all pending tests.

Command	Description
Shift+F6 Continue	Continue the measurements. This button is available when a warning is shown that not all tests can be performed with the remaining reagent volume.
Shift+F6 Reset System	Reset the analyzer. Only use this option if the message cannot be cleared by using the other keys.
Shift+F7 Remain Inactive	Close the error window without further action. The analyzer status remains inactive.
Alt+F10 Halt	Halt the analyzer program immediately (emergency stop).

Test-related error messages

Messages that relate to reagents, samples, calibrations, test parameters and other software items are often fairly easy to solve. A full list of possible test-related error messages is given in par. 5.6.3.

Hardware-related error messages



A.1 Performance and technical data

A.1.1 Selectra ProM

Performance

Maximum throughput	Mono mode: 180 tests/hour Dual mode: 133 tests/hour
Accuracy	See par. A.1.6
Precision	See par. A.1.6
Programmable tests	120 per reagent disk configuration unlimited number of reagent disk configurations possible
Load test capacity	32 per reagent rotor
Quality control	3 per parameter, 120 controls programmable per rotor configuration
Sample processing	Random access

Sample system

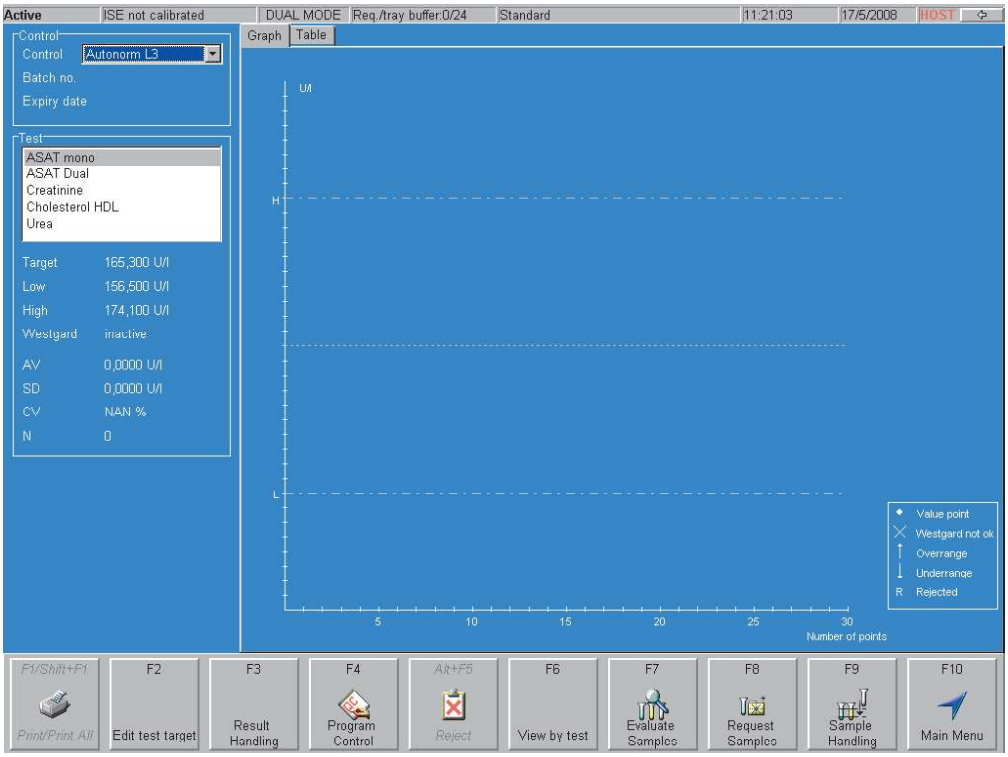
Positions on outer rings	50 positions for barcoded tubes *
Positions on inner ring	12 positions for tubes without barcodes * 1 blank position 1 wash position
Sample tubes	Diameter: 13 mm Height: 75 mm Pediatric tubes: see par. 5.3.1.
Needle	Level detector and integrated stirrer
Pipetting capacity	2-30 µl (increments of 0.1 µl)
Syringe	100 µl

* All positions can be used for patient samples (normal, ASAP and STAT), controls and calibrators. Normally, controls and calibrators are placed on the inner ring and patient samples are loaded on the two outer rings (readable by the internal barcode reader).

Reagent system

Reagent disk	32 positions: 8 × 10 ml, 24 × 25 ml 10 x 25 ml positions can be used for 5 x 50 ml bottles
Volumes per test	Reagent 1: 110 – 399 µl Reagent 2: 10 – 289 µl Reagent 3: 10 – 289 µl
Refrigeration	8 - 12 °C (Absolute up to 25 °C ambient temperature)

4.2.8 *Quality Control* screen



This screen shows the status of control measurements. The information should be checked after performing control measurements. See chapter 5.4.3.

Function keys

Keys	Description	See also:
F1	Print the measurement results of the currently selected control/test combination.	
Shift + F1	Print all measurement results of the selected test/control. *	
F2	Edit the target values for the control/test combination.	par. 6.2.4
Shift + F3	Clear all results for the control/test combination.	
Ctrl + F3	Export all results for the control/test combination.	
F4	Open the ***Program control*** screen.	par. 6.2.4
Alt + F5	Reject the currently selected measurement results.	
F6	Switch between viewing all tests for a selected control or viewing all controls for a selected test.	
F7	Return to the ***Evaluate Results*** screen.	par. 4.2.5
F8	Open the ***Request samples*** screen.	par. 4.2.3
F9	Open the ***Sample Handling*** screen.	par. 4.2.4
F10	Open the ***Main menu*** screen.	par. 4.2.2
Alt + F10	Halt the analyzer program immediately (emergency stop).	par. 5.1.4

* Depending on the choice to view results by test or by control.

Parameters

Control	Control for which test measurements are shown. The control is either selected from a list box (viewing results by control) or from the list below the test name (viewing results by test).
Name	Test for which control measurements are shown. The test is either selected from a list box (viewing results by test) or from the list below the control name (viewing results by control).
Batch No.	Batch number of the control.
Expiry date	Expiry date of the control.
Target	Target for measurement of this control/test combination.
Low	Lower limit for this measurement.
High	Upper limit for this measurement.
Westgard	Whether or not the ***Westgard*** rules were active. This option is set in the control parameters. For an explanation of these rules, see par. 3.3.3.
AV	Mean of all measured values.
SD	Standard deviation over the measured values.
CV	Coefficient of variation of the measured values in %.
N	Number of control measurements performed.

Details about the test results are given in par. 5.3.5.

Clinical Chemistry

Reagents catalogue

2025

VitalScientific

VitalScientific is an established global manufacturer and distributor with over 60 years of expertise in clinical laboratory instrumentation and reagents for In-Vitro Diagnostic (IVD) applications. We improve global healthcare by delivering high-quality, cost-efficient Clinical Chemistry benchtop solutions, benefiting healthcare providers and patients worldwide.

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VitalScientific
Diagnostics for Life

Clinical Chemistry
Reagents

VitalScientific is an established global manufacturer and distributor, with over 60 years of expertise in clinical laboratory instrumentation and reagents for In-Vitro Diagnostic (IVD) applications. VitalScientific features a full range of clinical chemistry assays, benchmarked to industry standards, and available in dedicated system packs or generic format. VitalScientific is committed to ongoing product development to expand the menu offering for all its Selectra systems.

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The Selectra Family of bench top systems provide an efficient and cost effective solution for small to mid-sized laboratories. Selectra Pro and Selectra Mach®5 systems, combined with the Selectra reagents, calibrators and controls will deliver results that the laboratory can trust.

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Ready-to-use, liquid stable, barcoded reagents to minimize errors

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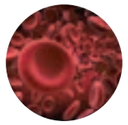
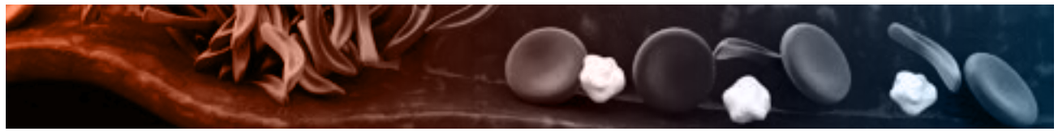
VitalScientific Calibrators and Controls are recommended be used with all VitalScientific assay reagents. Refer to each Item for recommended Calibrator and /or Control. If no specific Calibrator and/or Control is listed for a specific item, ELICAL (Calibration); and ELITROL I and ELITROL II (Controls) are recommended.

▶ Mach series
Mach5



Anaemia



IRON

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IRON-M230	FERENE	2 x 25 mL	1 x 15 mL	355

FERRITIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IFRT-0230	LATEX IMMUNO-TURBIDIMETRY Needs Calibrator IFRT-0042	2 x 20 mL	2 x 5 mL	200

TIBC

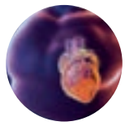
Reference	Method	Reagent 1	Reagent 2	Tests / Kit
TIBC-M130	DIRECT- CHROMAZUROL B	1 x 26 mL	1 x 9 mL	175

TRANSFERRIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
TRF2-M230	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043 and control CONT-0060	2 x 26 mL	2 x 7 mL	370

HAPTOGLOBIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IHAP-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	145



Cardiac / Lipids

CREATINE KINASE (CK NAC)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CKSL-M230	IFCC	2 x 26 mL	2 x 8 mL	370

CREATINE KINASE - MB (CK-MB)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CMSL-0230	IMMUNO-INHIBITION- IFCC Needs Control CKMB-0900	4 x 20 mL	1 x 20 mL	665

Tests/Kit: Estimate only; Variation expected.

ASPARTATE AMINOTRANSFERASE (AST/GOT)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ASSL-M490	IFCC	4 x 85 mL	4 x 26 mL	2,460

LACTATE DEHYDROGENASE (LDH)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
LLSL-M230	IFCC (LACTATE to PYRUVATE)	2 x 26 mL	2 x 8 mL	370

CHOLESTEROL

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CHSL-M690	CHOD - PAP	6 x 90 mL	-	3,125

CHOLESTEROL HDL

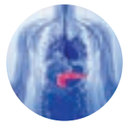
Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CHDL-M330	SELECTIVE DETERGENT Needs Calibrator HLCA-0041	3 x 22 mL	1 x 24 mL	465

CHOLESTEROL LDL

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CLDL-M330	SELECTIVE DETERGENT Needs Calibrator HLCA-0041	3 x 22 mL	1 x 24 mL	465

TRIGLYCERIDES

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
TGML-M690	GPO - PAP	6 x 90 mL	-	3,125



Pancreas / Diabetes

GLUCOSE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
GHSL-M490	HEXOKINASE	4 x 89 mL	4 x 26 mL	2,065
GPSL-M690	GLUCOSE OXIDASE - PAP	6 x 90 mL	-	3,125

HEMOGLOBIN A1c (HbA1c)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
HBAE-M130	ENZYMATIC Needs Calibrator HBAE-0043 and Control HBAC-0049	1 x 26 mL Reagent 3 2 x 53 mL	1 x 13 mL	215 -

MICROALBUMIN (URINE)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IMAL-M230	IMMUNO-TURBIDIMETRY Needs Calibrator IMAL-0043 and Controls IMAL-0046 and IMAL-0047	2 x 25 mL	1 x 12 mL	355

▶ Mach series: Mach5

AMYLASE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
AMSL-M430	CNPG3 Direct/IFCC TRACEABILITY	4 x 25 mL	-	740

LIPASE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
LPSL-0250	COLORIMETRIC, DGGR	2 x 8 mL	2 x 6 mL	180

Liver

ALBUMIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ALBU-M830	BROMOCRESOL GREEN (BCG)	8 x 25 mL	-	790

ALKALINE PHOSPHATASE (ALP)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ALPI-0230	IFCC	8 x 8 mL	4 x 4 mL	380

ALANINE AMINOTRANSFERASE (ALT/GPT)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ALSL-M490	IFCC	4 x 85 mL	4 x 26 mL	2,460

ASPARTATE AMINOTRANSFERASE (AST/GOT)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ASSL-M490	IFCC	4 x 85 mL	4 x 26 mL	2,460

BILIRUBIN DIRECT

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
BIDI-M430	DIAZOTIZED SULPHANILIC ACID	4 x 26 mL	4 x 8 mL	740

BILIRUBIN TOTAL

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
BITO-M430	DIAZO REACTION/SURFACTANT ACCELERATOR	4 x 26 mL	4 x 8 mL	740

GAMMA-GLUTAMYLTRANSFERASE (GAMMA-GT)

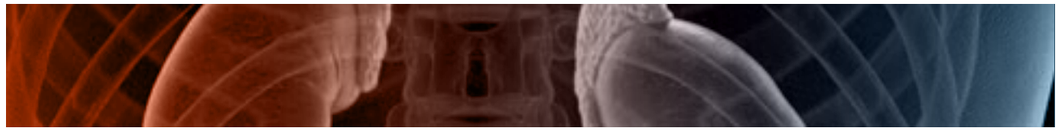
Reference	Method	Reagent 1	Reagent 2	Tests / Kit
GISL-M230	IFCC-GLUPA-C	2 x 26 mL	2 x 8 mL	370

PROTEIN TOTAL (SERUM)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
PROB-M830	BIURET	8 x 25 mL	-	1,180

Tests/Kit: Estimate only; Variation expected.

Renal



PROTEIN TOTAL (URINE)

Reference	Method	Reagent 1	Standard	Tests / Kit
PRTU-M230	PYROGALLOL RED Standard included	2 x 26 mL	1 x 2 mL	355

UREA

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
URSL-M830	UREASE - GLDH	8 x 25 mL	8 x 8 mL	1,480

URIC ACID

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
AUML-M830	URICASE - PAP	8 x 25 mL	-	1,420

CREATININE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CRSL-M490	ENZYMATIC - PAP	4x 69 mL	4 x 26 mL	1,965

MICROALBUMIN (URINE)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IMAL-M230	IMMUNO-TURBIDIMETRY Needs Calibrator IMAL-0043 and Controls IMAL-0046 and IMAL-0047	2 x 25 mL	1 x 12 mL	355

Bone

ALKALINE PHOSPHATASE (ALP)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ALPI-0230	IFCC	8 x 8 mL	4 x 4 mL	380

CALCIUM

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CALA-M430	ARSENAZO III	4 x 25 mL	-	710

MAGNESIUM

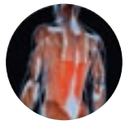
Reference	Method	Reagent 1	Reagent 2	Tests / Kit
MGXB-M430	XYLIDYL BLUE	4 x 23 mL	-	390

PHOSPHORUS

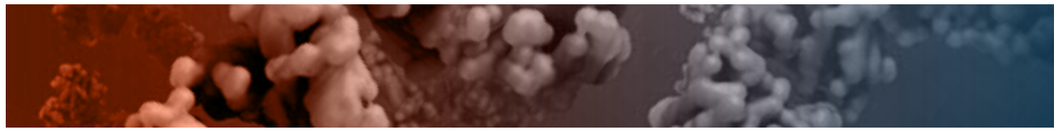
Reference	Method	Reagent 1	Reagent 2	Tests / Kit
PHOS-M430	PHOSPHOMOLYBDATE	4 x 25 mL	-	440

VITAMIN D

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
VITD-0250	LATEX-IMMUNO-TURBIDIMETRY Needs Calibrator VITD-0043 and Control VITD-0049	2 x 21 mL	2 x 5 mL	245



Infection /Inflammation



ANTI-STREPTOLYSIN O

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ASLO-0250	LATEX-IMMUNO-TURBIDIMETRY Calibrator included (1x 1 mL) Needs Controls IRCT-0046 and IRCT-0047	2 x 25 mL	1 x 6 mL	220

CRP

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ICRP-M230	IMMUNO-TURBIDIMETRY Needs Calibrator ICRP-0043 and IRCT-0046 and 0047	2 x 26 mL	1 x 9 mL	370

IGA

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IIGA-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	125

IGG

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IIGG-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	130

IGM

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IIGM-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	160

ALPHA-1-ACID GLYCOPROTEIN / OROSOMUCOID

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IORO-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	145

PREALBUMIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IPAL-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	130

RHEUMATOID FACTOR

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
RHFA-M130	IMMUNO-TURBIDIMETRY Calibrator included (1 x 2 mL) Needs Controls IRCT-0046 and IRCT-0047	1 x 26 mL	1 x 7 mL	185

Tests/Kit: Estimate only; Variation expected.

Special Chemistry

LACTATE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
LACI-0250	LACTATE OXIDASE	2 x 8 mL	1 x 5 mL	115

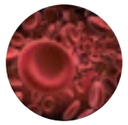
CHOLINESTERASE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CHEB-0250	DGKC/BUTYRYLTHIOCHOLINE METHOD	2 x 8 mL	1 x 5 mL	115

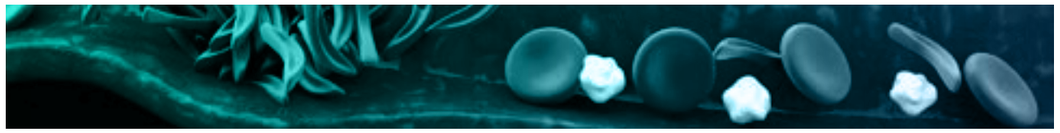
LITHIUM

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
LITH-0230	Substituted porphyrin Needs Control LITH-0048	2 x 8 mL		110

▶ PRO series
XS, S, M & XL



Anaemia



IRON

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IRON-0250	FERENE	4 x 24 mL	2 x 13 mL	340

FERRITIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IFRT-0230	LATEX IMMUNO-TURBIDIMETRY Needs Calibrator IFRT-0042	2 x 20 mL	2 x 5 mL	175

TIBC

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
TIBC-0250	DIRECT- CHROMAZUROL B	2 x 25 mL	2 x 7 mL	190

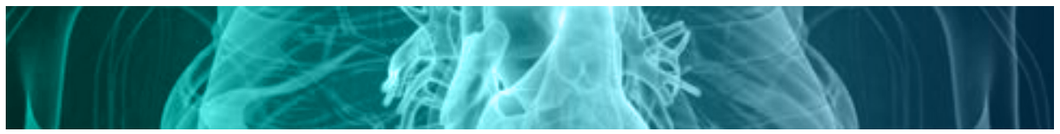
TRANSFERRIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
TRF2-M230	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 26 mL	2 x 7 mL	370

HAPTOGLOBIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IHAP-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	100

Cardiac / Lipids



CREATINE KINASE (CK NAC)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CKSL-0230	IFCC	4 x 20 mL	4 x 5 mL	260

CREATINE KINASE-MB (CK-MB)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CMSL-0230	IMMUNO-INHIBITION-IFCC	4 x 20 mL	1 x 20 mL	320

ASPARTATE AMINOTRANSFERASE (AST/GOT)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ASSL-0250	IFCC	8 x 20 mL	8 x 5 mL	525

LACTATE DEHYDROGENASE (LDH)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
LLSL-0230	IFCC (LACTATE to PYRUVATE)	4 x 20 mL	4 x 5 mL	320

CHOLESTEROL

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CHSL-0250	CHOD-PAP	12 x 20 mL	-	680

CHOLESTEROL HDL

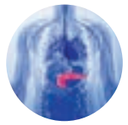
Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CHDL-0250	SELECTIVE DETERGENT Needs Calibrator HLCA-0041	4 x 21 mL	2 x 14 mL	315

CHOLESTEROL LDL

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CLDL-0250	SELECTIVE DETERGENT Needs Calibrator HLCA-0041	4 x 21 mL	2 x 14 mL	315

TRIGLYCERIDES

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
TGML-0250	GPO-PAP	12 x 20 mL	-	680



Pancreas / Diabetes

GLUCOSE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
GHSL-0250	HEXOKINASE	8 x 20 mL	8 x 5 mL	455
GPSL-0250	GLUCOSE OXIDASE-PAP	12 x 20 mL	-	680

HEMOGLOBIN A1C (HbA1c)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
HBAC-0240	LATEX- IMMUNO-TURBIDIMETRY Needs Calibrator HBAC-0043	1 x 24 mL	1 x 7.6 mL	85
		Reagent 3	Reagent 4	
		1 x 0.4 mL	4 x 25 mL	-

MICROALBUMIN (URINE)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IMAL-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IMAL-0043 and Controls IMAL-0046 and IMAL-0047	2 x 25 mL	1 x 5 mL	100

Tests/Kit: Estimate only; Variation expected.

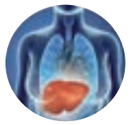
▶ PRO Series: XS, S, M & XL

AMYLASE

Reference	Method	Reagent 1		Tests / Kit
AMSL-0230	CNPG3 Direct/IFCC TRACEABILITY	6 x 20 mL	-	340

LIPASE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
LPSL-0250	COLOURIMETRIC DGGM SUBSTRATE	2 x 8 mL	2 x 6 mL	95



Liver

ALBUMIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ALBU-0250	BROMOCRESOL GREEN (BCG)	12 x 20 mL	-	575

ALKALINE PHOSPHATASE (ALP)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ALPI-0230	IFCC	8 x 8 mL	4 x 4 mL	325
PASL-0230	DGKC/SCE DEA BUFFER	4 x 20 mL	4 x 5 mL	320

ALANINE AMINOTRANSFERASE (ALT/GPT)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ALSL-0250	IFCC	8 x 20 mL	8 x 5 mL	525

ASPARTATE AMINOTRANSFERASE (AST/GOT)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ASSL-0250	IFCC	8 x 20 mL	8 x 5 mL	525

BILIRUBIN DIRECT

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
BIDI-0250	DIAZOTIZED SULPHANILIC ACID	8 x 20 mL	8 x 5 mL	525

BILIRUBIN TOTAL

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
BITO-0250	DIAZO REACTION/SURFACTANT ACCELERATOR	8 x 20 mL	8 x 5 mL	525

GAMMA-GLUTAMYLTRANSFERASE (GAMMA-GT)

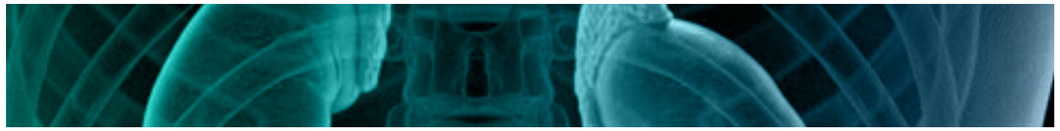
Reference	Method	Reagent 1	Reagent 2	Tests / Kit
GISL-0250	IFCC-GLUPA-C	8 x 20 mL	8 x 5 mL	575

TOTAL PROTEIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
PROB-0250	BIURET	12 x 20 mL	-	684

Tests/Kit: Estimate only; Variation expected.

Renal



UREA

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
URSL-0250	UREASE-GLDH	8 x 20 mL	8 x 5 mL	525

URIC ACID

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
AUML-0250	URICASE-PAP	12 x 20 mL	-	815

CREATININE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CRSL-0250	ENZYMATIC-PAP	8 x 21 mL	8 x 7 mL	660

MICROALBUMIN (URINE)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IMAL-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IMAL-0043 and Controls IMAL-0046 and IMAL-0047	2 x 25 mL	1 x 5 mL	100

TOTAL PROTEIN-URINE

Reference	Method	Reagent 1	Reagent 2	Standard
PRTU-0600	PYROGALLOL RED Standard included	2 x 125 mL		1 x 2 mL

Bone

ALKALINE PHOSPHATASE (ALP)

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ALPI-0230	IFCC	8 x 8 mL	4 x 4 mL	325
PASL-0230	DGKC/SCE DEA BUFFER	4 x 20 mL	4 x 5 mL	320

CALCIUM

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CALA-0250	ARSENAZO III	12 x 20 mL	-	680

MAGNESIUM

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
MGXB-0250	XYLIDYL BLUE	6 x 24 mL	-	420

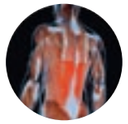
▶ PRO Series: XS, S, M & XL

PHOSPHORUS

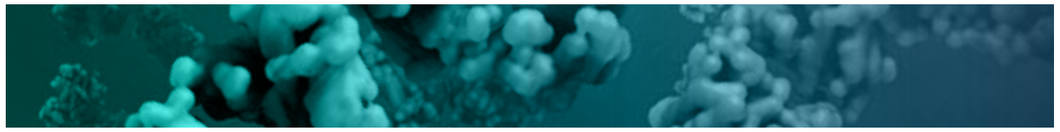
Reference	Method	Reagent 1	Reagent 2	Tests / Kit
PHOS-0230	PHOSPHOMOLYBDATE -UV	6 x 20 mL	-	340

VITAMIN D

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
VITD-0250	LATEX-IMMUNO-TURBIDIMETRY Needs Calibrator VITD-0043 and Control VITD-0049	2 x 21 mL	2 x 5 mL	200



Infection /Inflammation



ANTI-STREPTOLYSIN O

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ASLO-0250	LATEX-IMMUNO-TURBIDIMETRY calibrator included (1 x 1 mL) Needs Controls IRCT-0046 and IRCT-0047	2 x 25 mL	1 x 6 mL	210

CRP

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
ICRP-0400	IMMUNO-TURBIDIMETRY Needs Calibrator ICRP-0043 and Controls IRCT-0046 and IRCT-0047	2 x 25 mL	1 x 5 mL	160

IGA

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IIGA-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	80

IGG

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IIGG-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	160

IGM

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IIGM-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	100

ALPHA-1-ACID GLYCOPROTEIN / OROSOMUCOID

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IORO-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	100

PREALBUMIN

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IPAL-0400	IMMUNO-TURBIDIMETRY Needs Calibrator IPRO-0043	2 x 25 mL	1 x 5 mL	190

RHEUMATOID FACTOR

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
IRFA-0230	IMMUNO-TURBIDIMETRY Calibrator included (1 x 2 mL) Needs Controls IRCT-0046 and IRCT-0047	2 x 20 mL	2 x 5 mL	140

Tests/Kit: Estimate only; Variation expected.

Special Chemistry

CHOLINESTERASE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
CHEB-0250	DGKC /BUTYRYLTHIOCHOLINE METHOD	1 x 8 mL	1 x 5 mL	65

LACTATE

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
LACI-0250	LACTATE OXIDASE	2 x 8 mL	1 x 5 mL	65

LITHIUM

Reference	Method	Reagent 1	Reagent 2	Tests / Kit
LITH-0230	Substituted porphyrin Needs Control LITH-0048	2 x 8 mL		65

Ion Selective Electrode Consumables

ISE CALIBRATORS

Reference	Description	Quantity
ISCA-0250	CAL L	6 x 20 mL
	CAL H	6 x 20 mL

ISE CONSUMABLES

Reference	Description	Quantity	
ISRS-0800	ISE REFERENCE SOLUTION	1 x 500 mL	-
ISDI-0250	ISE DILUENT	12 x 25 mL	-
ISCC-0280	ISE CLEANER/CONDITIONER	6 x 8 mL	3 x 25 mL

ION SELECTIVE ELECTRODES

Reference	Description	Quantity
3918-004	Sodium Electrode (Na^+)	1 pc.
3918-005	Potassium Electrode (K^+)	1 pc.
3918-006	Chloride Electrode (Cl^-)	1 pc.
3918-003	Carbon Dioxide Electrode (CO_2)	1 pc.
3918-002	Reference Electrode (REF)	1 pc.

▶ PRO Series: XS, S, M & XL

System Solutions & Consumables

System Solutions

Reference	Description	Configuration
SLHC-5900	ACID SOLUTION	1 x 1 L
SLNA-5900	SYSTEM CLEANING SOLUTION	1 x 1 L
SLSY-5905	SYSTEM SOLUTION	1 x 1 L
SOLA-M163	WASH SOLN A (MACH5 ONLY)	16 x 26 mL
SOLA-5M90	WASH SOLN A (MACH5 ONLY)	52 x 90 mL
SOLB-M830	WASH SOLN B (MACH5 ONLY)	8 x 26 mL

Reagent Containers

PRO SERIES

Reference	Description	Configuration
CVTL-1010	VIALS / CAPS 10 mL	1x 10 units
CVTL-2530	VIALS / CAPS 25 mL	1x 30 units

MACH SERIES

Reference	Description	Configuration
CMAC-1084	LARGE WEDGE/CAP	4 UNITS / pack
CMAC-3010	SMALL WEDGE/CAP	10 UNITS / pack

General Clinical Chemistry Reagents

General Chemistry

ALBUMIN

Reference	Method	Reagent 1	Reagent 2		Standard
ALBU-0600	BROMOCRESOL GREEN (BCG) Standard included	2 x 125 mL	-		1 x 2 mL

ALKALINE PHOSPHATASE (ALP)

Reference	Method	Reagent 1	Reagent 2		Standard
PASL-0400	DGKC/SCE DEA BUFFER	2 x 50 mL	1 x 26 mL		-
PASL-0420	DGKC/SCE DEA BUFFER	4 x 50 mL	2 x 26 mL		-

ALANINE AMINOTRANSFERASE (ALT/GPT)

Reference	Method	Reagent 1	Reagent 2		Standard
ALSL-0410	IFCC	2 x 50 mL	1 x 26 mL		-
ALSL-0430	IFCC	4 x 50 mL	2 x 26 mL		-
ALSL-0510	IFCC	5 x 100 mL	1 x 127 mL		-

AMYLASE

Reference	Method	Reagent 1	Reagent 2		Standard
AMSL-0400	CNPG3 DIRECT/IFCC TRACEABILITY	6 x 50 mL	-		-

ASPARTATE AMINOTRANSFERASE (AST/GOT)

Reference	Method	Reagent 1	Reagent 2		Standard
ASSL-0410	IFCC	2 x 50 mL	1 x 26 mL		-
ASSL-0430	IFCC	4 x 50 mL	2 x 26 mL		-
ASSL-0510	IFCC	5 x 100 mL	1 x 127 mL		-

BILIRUBIN DIRECT

Reference	Method	Reagent 1	Reagent 2		Standard
BIDI-0500	DIAZOTIZED SULPHANILIC ACID	1 x 100 mL	1 x 25mL		-

BILIRUBIN TOTAL

Reference	Method	Reagent 1	Reagent 2		Standard
BITO-0600	DIAZO REACTION/SURFACTANT ACCELERATOR	2 x 100 mL	1 x 50 mL		-

CALCIUM

Reference	Method	Reagent 1	Reagent 2		Standard
CALA-0600	ARSENAZO III Standard included	2 x 125 mL	-		1 x 5 mL

CHOLESTEROL HDL

Reference	Method	Reagent 1	Reagent 2		Standard
CHDL-0600	SELECTIVE DETERGENT	2 x 90 mL	1 x 60 mL		

CHOLESTEROL

Reference	Method	Reagent 1	Reagent 2		Standard
CHSL-0507	CHOD-PAP Standard included	6 x 100 mL	-		1 x 5 mL
CHSL-0707	CHOD-PAP Standard included	4 x 250 mL	-		1 x 5 mL

CREATINE KINASE (CK NAC)

Reference	Method	Reagent 1	Reagent 2		Standard
CKSL-0410	IFCC	2 x 50 mL	1 x 26 mL		

CREATINE KINASE-MB (CK-MB)

Reference	Method	Reagent 1	Reagent 2		Standard
CMSL-0410	IMMUNOINHIBITION-IFCC	2 x 50 mL	1 x 26 mL		-

CREATININE

Reference	Method	Reagent 1	Reagent 2		Standard
CRCO-0600	KINETIC JAFFE Standard included	1 x 125 mL	1 x 125 mL		1 x 5 mL
CRSL-0630	ENZYMATIC-PAP	2 x 100 mL	1 x 70 mL		-

GAMMA-GLUTAMYLTRANSFERASE (GAMMA-GT)

Reference	Method	Reagent 1	Reagent 2		Standard
GISL-0420	IFCC-GLUPA-C	4 x 50 mL	2 x 26 mL		-

GLUCOSE

Reference	Method	Reagent 1	Reagent 2		Standard
GPSL-0507	GLUCOSE OXIDASE Standard included	6 x 100 mL	-		1 x 5 mL
GPSL-0707	GLUCOSE OXIDASE Standard included	4 x 250 mL	-		1 x 5 mL

IRON

Reference	Method	Reagent 1	Reagent 2		Standard
IRON-0600	FERENE Standard included	2 x 100 mL	1 x 50 mL		1 x 5 mL

General Chemistry *(Cont'd)*

LACTATE DEHYDROGENASE (LDH)

Reference	Method	Reagent 1	Reagent 2		Standard
LLSL-0400	IFCC (LACTATE TO PYRUVATE)	2 x 50 mL	1 x 26 mL		-

MAGNESIUM

Reference	Method	Reagent 1	Reagent 2		Standard
MGXB-0600	XYLIDYL BLUE Standard included	2 x 100 mL	-		1 x 5 mL

TOTAL PROTEIN (URINE)

Reference	Method	Reagent 1	Reagent 2		Standard
PRTU-0600	PYROGALLOL RED Standard included	2 x 125 mL	-		1 x 2 mL

PHOSPHORUS

Reference	Method	Reagent 1	Reagent 2		Standard
PHOS-0600	PHOSPHOMOLYBDATE-UV Standard included	2 x 125 mL	-		1 x 5 mL

TOTAL PROTEIN (SERUM)

Reference	Method	Reagent 1	Reagent 2		Standard
PROB-0600	BIURET Standard included	2 x 125 mL	-		1 x 5 mL

TRIGLYCERIDES

Reference	Method	Reagent 1	Reagent 2		Standard
TGML-0427	GPO-PAP Standard included	6 x 50 mL	-		1 x 5 mL
TGML-0517	GPO-PAP Standard included	6 x 100 mL	-		1 x 5 mL
TGML-0707	GPO-PAP Standard included	4 x 250 mL	-		1 x 5 mL

UREA

Reference	Method	Reagent 1	Reagent 2		Standard
URSL-0427	UREASE/GLDH Standard included	4 x 50 mL	2 x 26 mL		1 x 5 mL
URSL-0507	UREASE/GLDH Standard included	5 x 100 mL	1 x 127 mL		1 x 5 mL

URIC ACID

Reference	Method	Reagent 1	Reagent 2		Standard
AUML-0427	URICASE-PAP Standard included	6 x 50 mL	-		1 x 5 mL
AUML-0507	URICASE-PAP Standard included	6 x 100 mL	-		1 x 5 mL

▶ Calibrators, Controls & Standards

Calibrators (Human Based)

Reference	Description	Configuration
CALI-0550	ELICAL 2 MULTIPARAMETRIC	4 x 3 mL

Reference	Description	Configuration
HLCA-0041	LIPID CALIBRATOR (HDL & LDL CHOL)	4 x 1 mL

Reference	Description	Configuration
VITD-0043	Vit D Calibrator set 5 Levels	5 x 1 mL

Controls (Human Based)

Reference	Description	Configuration
CONT-0060	ELITROL I MULTIPARAMETRIC	10 x 5 mL
CONT-0160	ELITROL II MULTIPARAMETRIC	10 x 5 mL
CKMB-0900	CK-MB	4 x 3 mL

eLITROL SelectQC IQC Program™

eLITROL SelectQC provides a comprehensive dedicated web-based Internal Quality Control (IQC) platform for all Selectra System users in Clinical Chemistry laboratories seeking confidence in performance through peer IQC data.

Reference	Description
ONLINEQC	eLITROL SelectQC License Software
ONLINEQC-RE	eLITROL SelectQC Renewal Software

Specific Proteins Calibrators & Controls

CRP CALIBRATOR SET

Reference		Configuration
ICRP-0043	5 LEVELS	5 x 1 mL

CRP CONTROL

Reference		Configuration
ICRP-0046	CRP CONTROL I	2 x 1 mL
ICRP-0047	CRP CONTROL II	2 x 1 mL

FERRITIN CALIBRATOR

Reference		Configuration
IFRT-0042	FERRITIN CALIBRATOR	2 x 3 mL

HbA1c CALIBRATORS

Reference		Configuration
HBAC-0043	FOR USE WITH HBAC-0240 4 LEVELS	CAL Level 1 to 4 x 0.5 mL
HBAE-0043	FOR USE WITH HBAE-M130 2 LEVELS	CAL L 2 x 0.5 mL CAL H 2 x 0.5 mL

HbA1c CONTROLS

Reference		Configuration
HBAC-0049	FOR USE WITH HBAC-0043 & HBAE-0043	L 2 x 0.5 mL H 2 x 0.5 mL

LITHIUM CONTROL

Reference		Configuration
LITH-0048	FOR USE WITH LITH-0230	4 x 8 mL

MICROALBUMIN (URINE) CALIBRATOR SET

Reference		Configuration
IMAL-0043	5 LEVELS	5 x 1 mL

MICROALBUMIN (URINE) CONTROL I

Reference		Configuration
IMAL-0046	CONTROL I	2 x 1 mL
IMAL-0047	CONTROL II	2 x 1 mL

PROTEIN CALIBRATOR SET

Reference		Configuration
IPRO-0043	5 LEVELS	5 x 1 mL

RF CALIBRATOR

Reference		Configuration
IRFA-0042	RF CALIBRATOR	2 x 2 mL

RHEUMATOLOGY CONTROL I

Reference		Configuration
IRCT-0046	CONTROL I	2 x 1 mL
IRCT-0047	CONTROL II	2 x 1 mL

VITAMIN D CONTROL

Reference		Configuration
VITD-0049	BI-LEVEL CONTROLS	2 x 3 mL

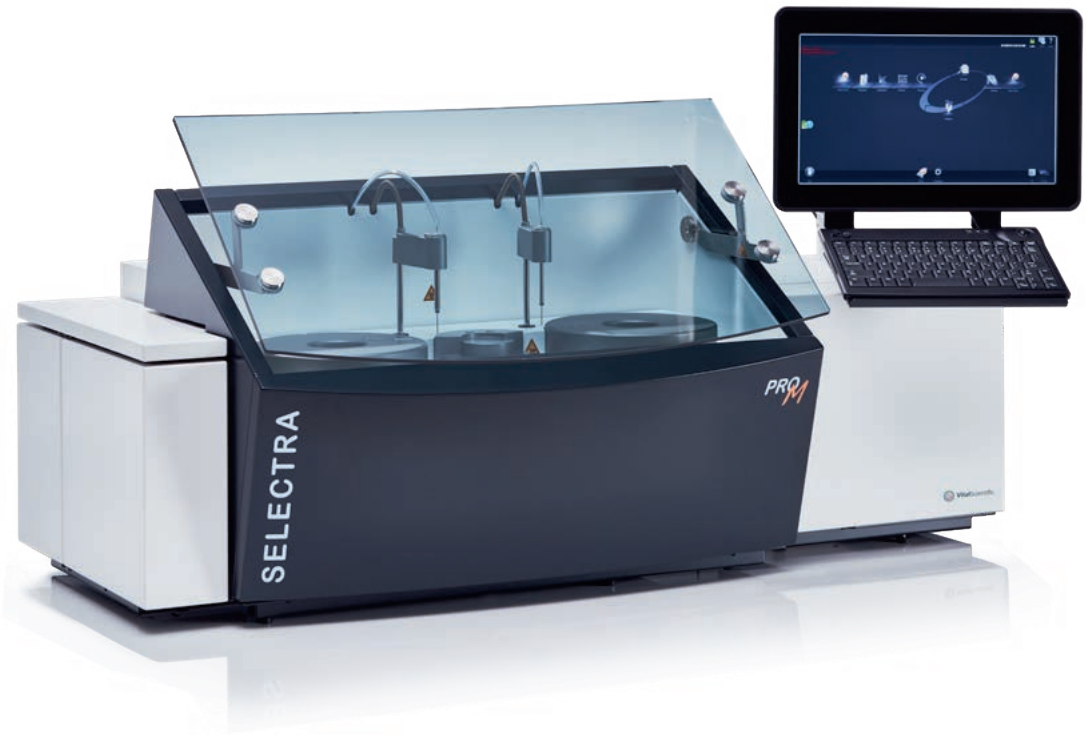
▶ Calibrators, Controls & Standards

Clinical Chemistry

Selectra ProM™

Selectra Solutions

THE SMARTEST CHOICE FOR YOUR GROWING LABORATORY NEEDS



VitalScientific
Diagnostics for Life

Clinical Chemistry

SPECIFICATIONS

THROUGHPUT
- Typically 180 tests/hour
- Up to 333 ISE tests/hour (Dry ISE optional)

REAGENT HANDLING
- Refrigerated reagent rotor controlled with Peltier elements
- Cooled to 10°C+/-4°C at normal laboratory conditions
- 32 reagent positions for 10 mL and 25 mL reagent bottles
- Reagent ID and automated programming of assays, calibrators and controls via barcode
- All reagent positions can be assigned as R1, R2 and R3
- Pre-heated needle with level detection, collision protection and integrated mixer

SAMPLE HANDLING
- Sample rotor containing:
  - Outer segment with 50 barcode readable positions
  - Inner segment with 12 auxiliary positions
  - All positions fit 13x75 mm primary and secondary tubes and pediatric cups
  - All positions can be used for calibrators, controls, normal, pediatric and STAT samples
- Sample probe with level detection, integrated mixer and collision protection
- Programmable dilution ratios 1 : 5 up to 1 : 200 in one step increments with 3 possible diluents

PIPETTING SYSTEM
- 1000 µL reagent syringe:
  - R 1 volume 110 - 399 µL
  - R 2 volume 10 - 289 µL
  - R 3 volume 10 - 289 µL
  - Programmable in 1 µL steps
- 100 µL sample syringe:
  - Sample volume 1 - 30 µL
  - Programmable in 0.1 µL steps

CUVETTE ROTOR
- Cost effective, semi-disposable cuvette rotor with 48 cuvettes, path length 7 mm
- >10,000 tests per rotor
- Minimum measuring volume 220 µL
- Measuring temperature 37°C, controlled by Peltier elements

LIGHT SOURCE
- Quartz-iodine lamp 12V-20W

WAVELENGTH RANGE
- 340 - 800 nm
- Optical unit with 8 position filter wheel
- Automatic wavelength selection
- 340, 405, 505, 546, 578, 620, 660, 700 nm standard installed
- Other wavelengths available on request

PHOTOMETRIC RANGE
- -0.1 to 3.0 Absorbance
- Resolution 0.001 Abs

ANALYTICAL MODES (SINGLE, DUAL AND TRIPLE REAGENT SYSTEM)
- Kinetic measurement with linearity check
- Mono and bichromatic end point measurement with or without bichromatic reagent blank and/or sample blank correction
- Two point measurement; with or without slope blank
- Graphic plot of all measuring points
- Predilution, post-dilution and automatic reflex dilution as needed
- Non-linear calibration curves
- Prozone check for immunology tests
- Cut-off declaration
- Calculated tests

QUALITY CONTROL
- Up to 15 different controls can be defined, 3 per test
- Westgard rules
- Levey-Jennings plots
- Quality control statistics

WATER CONSUMPTION
- ~500 mL per hour max, continuous operation

STANDARDS AND REGULATIONS
- CE-IVDR
- USA FDA 510(k)
- CB
- UL

DIMENSIONS & WEIGHT
- 125 cm (50 in) x 59 cm (23 in) x 62 cm (25 in) excl. monitor and panel PC (WxHxD)
- 95 kg (210 lbs)

INTERFACE
- State of the art Host-Query interface available
- Host: RS232 or Ethernet (TCP/IP) through LIS-2A protocol
- Hand held CCD barcode reader used for reagent identification and automated programming of assays, controls, and calibrators

INSTALLATION CONDITIONS
- Temperature: 15 - 32 °C (59 - 90°F)
- Humidity: 15 - 85% RH
- Altitude: up to 2000 m
- Plumbing: no dedicated system water or drain required
- Electrical: Voltage: 100 - 240 Vac; Frequency: 50 / 60 Hz; Power (max): 400 VA

INTEGRATED PC
- Touch screen navigation
- Operating System: MS Windows 10 IoT

OPTIONS

ISE MODULE
- Patented Solid State Dry Electrode Technology
- Indirect measurement
- Dilution 1:14
- Measures Sodium, Potassium, Chloride and Bicarbonate

POSITIVE SAMPLE IDENTIFICATION
- Positive Sample Identification (PSID) via integrated barcode reader
- Reads all popular formats including Codes 39, 128, 11, 93, CODABAR and Interleaved 2/5

PRINTER
- Printer supported by MS Windows™

PROACTIVE MAINTENANCE KIT
- Complete parts kit for annual preventive maintenance

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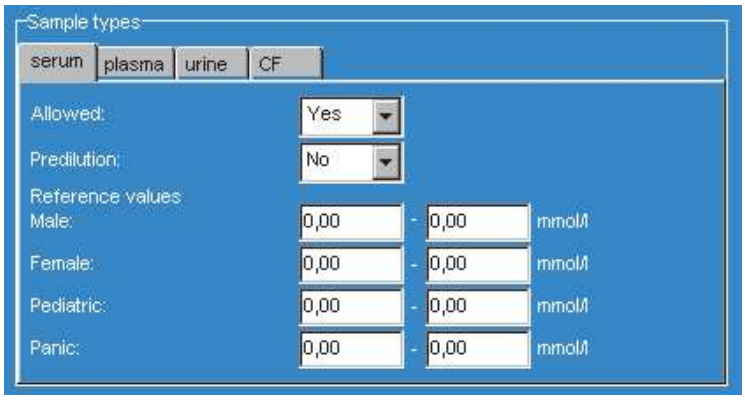
6003-404-490-08EN APR 2024

Calibrator name:	Calibrator used for this test. Click on the button next to the calibrator name. The screen with calibrator settings opens. Set the calibration parameters for this test. See par. 6.2.5.
Prozone check:	Select one of the options from the list. See par. 3.3.1.
Minimum ratio:	This field only shows when a minimum prozone check method was chosen. Enter the minimum deviation percentage.
Maximum ratio:	This field only shows when a maximum prozone check method was chosen. Enter the maximum deviation percentage.

8. Set the parameters in the ***Sample types*** section.



Sample types can be defined for your analyzer. This is done in the ***System configuration***. See par. 6.5.2. For each sample type, separate settings can be defined here. Click on the tab for the required sample type to see and change the parameters.

Allowed:	Select ***Yes*** to allow this test for the sample type. When this sample type is chosen in the ***Request samples*** screen, the test is included in the selection list.
Predilution:	Select ***Yes*** to switch on predilution for this sample type in this test. For details on predilution, see par. 3.3.4.
Male:	Limits to be used for samples of male patients.
Female:	Limits to be used for samples of female patients.
Pediatric:	Limits to be used for samples of pediatric patients.
Panic:	Limits to be used as absolute limits for all samples.

Note
The ***Sex:*** field in the sample data determines the reference values that are used to check the measurement results. If the results exceed the applicable limits, the appropriate error flag is set for the result. Results that exceed the ***Panic:*** limits are always flagged.