



STATEMENT

We, ACON Laboratories, Inc., having a registered office at *5850 Oberlin Drive #340, San Diego, CA 92121* authorize SRL Sanmedico having a registered office at *A. Corobceanu street 7A, apt. 9, Chisinău, MD-2012, Moldova*

to register, notify, renew or modify the registration of medical devices on the territory of the Republic of Moldova.

Date: March 18, 2024

Signature:

A handwritten signature in black ink, appearing to read "Xie", is written over a horizontal line.

Qiyi Xie, Md, MPH
V.P. of Regulatory & Clinical Affairs
ACON Laboratories, Inc.



Certificate

No. Q5 104507 0001 Rev. 03

Holder of Certificate: **ACON Laboratories, Inc.**
5850 Oberlin Drive, #340
San Diego CA 92121
USA

Certification Mark:



Scope of Certificate: **Design and Development, Manufacture and distribution of In Vitro Diagnostic Test Kits and Reagents for the Determination of Infectious Diseases, Clinical Chemistry, Drugs of Abuse, Tumor/Cardiac Marker, Fertility/Pregnancy and Blood Glucose Monitoring System, Lancing Devices and Lancets**

The Certification Body of TÜV SÜD Product Service GmbH certifies that the company mentioned above has established and is maintaining a quality management system, which meets the requirements of the listed standard(s). All applicable requirements of the testing and certification regulation of TÜV SÜD Group have to be complied with. For details and certificate validity see: www.tuvsud.com/ps-cert?q=cert:Q5 104507 0001 Rev. 03

Report No.: SH22743A01

Valid from: 2022-09-15
Valid until: 2025-09-06

Date, 2022-09-15



Christoph Dicks
Head of Certification/Notified Body

Certificate

No. Q5 104507 0001 Rev. 03

Applied Standard(s):

EN ISO 13485:2016
Medical devices - Quality management systems -
Requirements for regulatory purposes
(ISO 13485:2016)
DIN EN ISO 13485:2016

Facility(ies):

ACON Laboratories, Inc.
5850 Oberlin Drive, #340, San Diego CA 92121, USA

Address holder for registration only

ACON Laboratories, Inc.
10125 Mesa Rim Road, San Diego CA 92121, USA

Manufacture and distribution of
In Vitro Diagnostic Test Kits and Reagents for the Determination of
Infectious Diseases, Clinical Chemistry, Drugs of Abuse,
Tumor/Cardiac Marker, Fertility/Pregnancy and Blood Glucose
Monitoring System, Lancing Devices and Lancets

ACON Laboratories, Inc.
6865 Flanders Dr., Suite B, San Diego CA 92121, USA

Storage of
In Vitro Diagnostic Test Kits and Reagents for the Determination of
Infectious Diseases, Clinical Chemistry, Drugs of Abuse,
Tumor/Cardiac Marker, Fertility/Pregnancy and Blood Glucose
Monitoring System, Lancing Devices and Lancets

AZURE Institute, Inc.
10125 Mesa Rim Road, San Diego CA 92121, USA

Design and Development of
In Vitro Diagnostic Test Kits and Reagents for the Determination of
Infectious Diseases, Clinical Chemistry, Drugs of Abuse,
Tumor/Cardiac Marker, Fertility/Pregnancy and Blood Glucose
Monitoring System, Lancing Devices and Lancets

Acon Laboratories Inc.
Guerrero Negro 9942 Parque Industrial Pacifico IV, 22644
Tijuana B.C. CP, MEXICO

Manufacture of
blood glucose test strips, antigen rapid test and IgG/IgM antibody
rapid test for infectious disease.



ACON Laboratories, Inc.

10125 Mesa Rim Road. · San Diego, CA 92121 · USA
Tel: (858) 875-8000 · Fax: (858) 875-8099 · E-mail: info@aconlabs.com

November 11th 2016

CERTIFICATION LETTER

This letter is to certify that, Vitalie Goreacii, employed by Sanmedico SRL located at: Republic of Moldova, city Chisinau, str. Petricani 88/1 of. 10, MD-2059, have received all required training and is enabled and authorized to provide services with installation, commissioning, and maintenance to the products listed below:

Mission® U120 Urine Analyzer
Mission® U120 Ultra Urine Analyzer
Mission® U500 Urine Analyzer
Mission® PT/INR Coagulation Monitoring System
Mission® Cholesterol Monitoring System
Mission® Ultra Cholesterol Monitoring System
Mission® HB Hemoglobin Testing System
Mission® Plus HB Hemoglobin Testing System
OnCall® Glucose Meter

For further questions or inquiries regarding this matter, please refer to the contact information below.

Sincerely

A handwritten signature in black ink, appearing to read "Jassy Alvarenga", is written over a red circular stamp.



Jassy Alvarenga
International Account Manager
ACON Laboratories, Inc. S.A.

jalvarenga@aconlabs.com

+1 858 875 8085



Benannt durch/Designated by
Zentralstelle der Länder
für Gesundheitsschutz
bei Arzneimitteln und
Medizinprodukten
www.zlg.de
ZLG-BS-245.10.07



Product Service

EC Certificate

Full Quality Assurance System

Directive 98/79/EC on In Vitro Diagnostic Medical Devices (IVDD), Annex IV excluding (4, 6)
(List A and B and devices for self-testing)

No. V1 104507 0003 Rev. 06

Manufacturer:

ACON Laboratories, Inc.

5850 Oberlin Drive, #340
San Diego CA 92121
USA

**Product Category(ies): Blood glucose measuring systems for self testing
and self-testing devices for clinical chemistry,
hematology and pregnancy and ovulation**

The Certification Body of TÜV SÜD Product Service GmbH declares that the aforementioned manufacturer has implemented a quality assurance system for design, manufacture and final inspection of the respective devices / device families in accordance with IVDD Annex IV. This quality assurance system conforms to the requirements of this Directive and is subject to periodical surveillance. For marketing of List A devices an additional Annex IV (4) certificate is mandatory. All applicable requirements of the testing and certification regulation of TÜV SÜD Group have to be complied with. For details and certificate validity see: www.tuvsud.com/ps-cert?q=cert:V1_104507_0003_Rev.06

Report no.: SH22743EXT01

Valid from: 2022-05-04

Valid until: 2025-05-26

Date, 2022-05-04

Christoph Dicks
Head of Certification/Notified Body



EC Certificate

Full Quality Assurance System

Directive 98/79/EC on In Vitro Diagnostic Medical Devices (IVDD), Annex IV excluding (4, 6)
(List A and B and devices for self-testing)

No. V1 104507 0003 Rev. 06

Model(s):

On Call Plus Blood Glucose Monitoring System,
On Call Plus Blood Glucose Test Strips,
On Call EZ II Blood Glucose Monitoring System,
On Call Advanced Blood Glucose Monitoring System,
On Call Advanced Blood Glucose Test Strips,
On Call Chosen Blood Glucose Test Strips,
On Call Vivid Blood Glucose Monitoring System (OGM-101),
On Call Vivid Blood Glucose Test Strips (OGS-101),
On Call Sharp Blood Glucose Monitoring System (OGM-121),
On Call Sharp Blood Glucose Test Strips (OGS-121)
On Call Plus II Blood Glucose Monitoring System (OGM-171),
On Call Plus II Blood Glucose Test Strips (OGS-171),
On Call Extra Blood Glucose Monitoring System (OGM-191),
On Call Extra Blood Glucose Test Strips (OGS-191),
On Call GK Dual Blood Glucose & Ketone Monitoring System (OGM-161),
On Call Blood Ketone Test Strips (OGS-161),
Urinalysis Reagent Strips (Urine),
UTI Urinary Tract Infection Test Strips,
Cholesterol Monitoring System (CCM-111),
CHOL Total Cholesterol Test Devices (CCS-111),
TRIG Triglycerides Test Devices (CCS-112),
HDL High Density Lipoprotein Test Devices (CCS-113),
3-1 Lipid Panel Test Devices (CCS-114),
Cholesterol CTRL Control Devices,
Cholesterol Monitoring System (CCM-101),
CHOL Total Cholesterol Test Strips (CCS-101),
PT/INR Monitoring System (CCM-151),
PT/INR Test Strips (CCS-151),
Hemoglobin Testing System (CCM-141),
Hemoglobin Test Strips (CCS-141),
hCG Pregnancy Rapid Test Cassette (Urine),
Pregnancy Rapid Test Midstream,
On Call Extra Mobile Blood Glucose Monitoring System (OGM-281),
On Call Sure Blood Glucose Monitoring System (OGM-211),
On Call Sure Sync Blood Glucose Monitoring System (OGM-212),
On Call Sure Blood Glucose Test Strips (OGS-211),
GIMA Blood Glucose Monitoring System,
GIMA Bluetooth Blood Glucose Monitoring System,
GIMA Blood Glucose Test Strips,
On Call GU Dual Blood Glucose & Uric Acid Monitoring



EC Certificate

Full Quality Assurance System

Directive 98/79/EC on In Vitro Diagnostic Medical Devices (IVDD), Annex IV excluding (4, 6)
(List A and B and devices for self-testing)

No. V1 104507 0003 Rev. 06

System (OGM-201),
On Call Blood Uric Acid Test Strips (OGS-201),
LH Ovulation Rapid Test Cassette (Urine),
Ovulation Rapid Test Midstream,
Ovulation & Pregnancy Test Combo Pack,
On Call Extra Voice Blood Glucose Monitoring System
(OGM-291),
Early Detection Pregnancy Test,
Digital Pregnancy Test,
Go-Keto Blood Glucose & Ketone Monitoring System (OGM-
161),
Go-Keto Blood Ketone Test Strips (OGS-161),
Go-Keto Blood Glucose Test Strips,
On Call Extra GM Blood Glucose Monitoring System(OGM-
191),
On Call Extra GM Blood Glucose Test Strips (OGS-191),
On Call Plus GM Blood Glucose Monitoring System,
On Call Plus GM Blood Glucose Test Strips,
Go-Keto Urinalysis Reagent Strips

Facility(ies):

ACON Laboratories, Inc.
5850 Oberlin Drive, #340, San Diego CA 92121, USA

ACON Laboratories, Inc.
10125 Mesa Rim Road, San Diego CA 92121, USA

AZURE Institute, Inc.
10125 Mesa Rim Road, San Diego CA 92121, USA

Acon Laboratories Inc.
Guerrero Negro 9942 Parque Industrial Pacifico IV, 22644 Tijuana
B.C. CP, MEXICO

Declaration of Conformity

ACON Laboratories, Incorporated
5850 Oberlin Drive #340
San Diego, CA 92121, USA

**We, the manufacturer, declare under our sole responsibility that the
in vitro diagnostic device:**

Mission[®] Urinalysis Reagent Strips (U031-XX1)

classified as Others in the directive 98/79/EC,

**meets all the provisions of the directive 98/79/EC on *in vitro* diagnostic
medical devices which apply to it**

**The self-declaration is according to Annex III
(excluding Section 6) of the Directive.**

Authorized Representative:
Medical Device Safety Service GmbH
Schiffgraben 41
30175 Hannover, Germany

Signed this 11 day of February, 2020
in San Diego, CA USA



Qiyi Xie, MD, MPH
Senior Staff, Regulatory Affairs & Clinical Affairs
Acon Laboratories, Inc.



Declaration of Conformity

ACON Laboratories, Incorporated
5850 Oberlin Drive, #340
San Diego, CA 92121, USA

**We, the manufacturer, declare under our sole responsibility that the
in vitro diagnostic device:**

Device Name	REF Number	Model Number
Mission® Liquid Urine Control	U021-011	n/a
SPINREACT Liquid Urine Control	U021-013A	n/a
Insight® Liquid Urine Control	U021-015	n/a
Mission® Liquid Diptube Urine Control	U021-071	n/a
Insight® Liquid Diptube Urine Control	U021-075	n/a

classified as Others in the directive 98/79/EC,

**meets all the provisions of the directive 98/79/EC on *in vitro* diagnostic
medical devices which apply to it**

**The self-declaration is according to Annex III
(excluding Section 6) of the Directive.**

Authorized Representative:
Medical Device Safety Service GmbH
Schiffgraben 41
30175 Hannover, Germany

Signed this 22 day of October, 2021
in San Diego, CA, USA



Qiyi Xie, MD, MPH
Senior Staff, Regulatory Affairs & Clinical Affairs
Acon Laboratories, Inc.



Mission® Urinalysis Reagent Strips and Urine Analyzers

Obtain reliable and cost-effective results with *Mission®* Urinalysis Reagent Strips and Urine Analyzers!

- *Accurate*
- *Reliable*
- *Convenient*



ACON®

Global Diagnostics for Local Markets™

Urinalysis Reagent Strips

Simple and Accurate

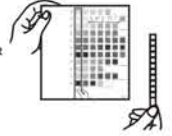
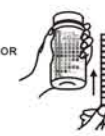
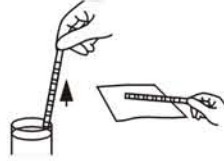
- Analytical sensitivity better than or comparable to market leaders
- High quality color chart ensures accurate visual reading

Flexible

- Compatible for visual and analyzer reading
- More than 30 different combinations available

Multiple Packaging Options and Long Shelf Life

- Canister Packaging
 - Available in 25, 50, 100 and 150 strips per kit
 - 2 year shelf life for unopened canisters which offers cost savings and convenience for high volume testing
 - 3 month shelf life for strips in opened canisters
- Pouch Packaging *New!*
 - Single-strip Pouch
 - Individually packaged strips with 1, 3, 6 and 20 strips and 1 color chart per kit for OTC or low volume testing
 - Unique packaging maintains 2 year shelf life for all strips in the kit compared to 3 months for remaining strips in an opened canister
 - Multi-strip Pouch
 - Canister Refill Kits with 25 strips/pouch uniquely packaged to save cost for low volume testing and extended shelf life by using the canister for refills



Step 1: Immerse strip into urine

Step 2: Remove excess urine

Step 3: Obtain results by analyzer or visual reading

Catalog No.	No. of Parameters	Type of Strip [♦]		Strips per Canister [◇]	Pouch Packaging [▲]	Reading Method			Analyzer-Read Strips: Standard (S) or Additional (A)	Parameters														
		For Visual Reading	For Analyzer Reading (U120/U500)			Visual	U120	U500		ASC	GLU	BIL	KET	SG	BLO	pH	PRO	URO	NIT	LEU	ALB	CRE		
U031-131	13	13C	NA	100*	✓	✓	NA	NA	A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
U031-111	11		11A	100	✓	✓	✓	✓	S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
U031-101	10		10U	100	✓	✓	✓	✓	S		*	*	*	*	*	*	*	*	*	*	*	*	*	
			10A			✓	✓	✓	A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
			10C			✓	✓	✓	S		*	*	*	*	*	*	*	*	*	*	*	*	*	*
U031-091	9		9U	100	✓	✓	✓	✓	S		*	*	*	*	*	*	*	*	*	*	*	*	*	
U031-081	8		8U	100	✓	✓	✓	✓	A		*	*	*	*	*	*	*	*	*	*	*	*	*	
			8N			✓	✓	✓	S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
			8S			✓	✓	✓	A	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
U031-071	7		7N	100	✓	✓	✓	✓	A		*	*	*	*	*	*	*	*	*	*	*	*	*	
U031-061	6	6N	6NE	100	✓	✓	✓	✓	A		*	*	*	*	*	*	*	*	*	*	*	*	*	
		6U	6UE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*	*	*
U031-051	5	5B	5BE	100	✓	✓	✓	✓	A		*	*	*	*	*	*	*	*	*	*	*	*	*	
		5N	5NE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*	*	
		5S	5SE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*	*	*
		5U	5UE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*	*	*
U031-041	4	4S	4SE	100	✓	✓	✓	✓	A		*	*	*	*	*	*	*	*	*	*	*	*	*	
		4B	4BE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*	*	
		4K	4KE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*	*	
		4G	4GE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*	*	
		4N	4NE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*	*	
		4P	4PE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*	*	
U031-031	3	3P	3PE	100	✓	✓	✓	✓	A		*	*	*	*	*	*	*	*	*	*	*	*	*	
		3K	3KE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*		
		3G	3GE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*		
		3N	3NE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*		
U031-021	2	2G	2GE	100	✓	✓	✓	✓	A		*	*	*	*	*	*	*	*	*	*	*	*	*	
		2K	2KE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*		
		2N	2NE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*		
		2B	2BE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*		
		2U	2UE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*		
		2S	2SE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*		
		2C	2CE			✓	✓	✓			*	*	*	*	*	*	*	*	*	*	*	*		
U031-011	1	1B	1BE	100	✓	✓	✓	✓	A					*										
		1P	1PE			✓	✓	✓						*										
		1G	1GE			✓	✓	✓			*													
		1K	1KE			✓	✓	✓				*												
		1R	1RE			✓	✓	✓							*									

♦Type of Strip:
 Visual Strip Size
 1-6 Parameters: 5 mm x 80 mm; 7-11 Parameters: 5 mm x 108 mm;
 12-13 Parameters: 5 mm x 121 mm
 U120/U500 Strip Size
 1-11 Parameters: 5 mm x 108 mm;
 "E" means extended strip length for 1-6 Parameters

◇ Also available in canisters of 25, 50 and 150 strips
 * Not available in canisters of 150 strips
 ▲ Single-strip Pouch available in 1, 3, 6 and 20 strip kit
 Canister Refill Kit, with 25 strips per pouch or canister, available in 3-pouch and 1- canister kit, or 4-pouch kit



U120 Urine Analyzer



Accurate

- Up to 120 tests/hour in Continuous Test Option
- Capable of reading 1 strip at a time in Single Test Option
- Test modes include Routine, STAT and QC
- Automatic calibration for accurate results and easy operation

Reliable

- Can read up to 4 Strip combinations with 8, 9, 10, 11 parameters, additional strips with 1-11 parameters available upon request
- Minimal training required

Convenient Operation

- Saves and recalls the last 2,000 results automatically
- Audible beep signals operator to dip strips in urine
- Can print up to 3 copies per test for convenient reviewing and easy record keeping
- Option to print results on sticker paper for quick and simple record management

Easy Data Management

- Includes RS232C port for easy data transfer to an external computer or LIS
- Optional Barcode Reader to record patient ID

Unique Lockout Functions *new!*

- Strip Lockout
 - Prevents using strips of another brand on the U120 Urine Analyzer
 - Requires barcode reader scan or manual entry of the canister code
- User Lockout
 - Eliminates unapproved users from testing
 - Up to 10 lab operators can perform testing, but only the lab administrator can change analyzer settings
- QC Lockout
 - Prevents testing without passing QC
 - QC tests can be performed once every 8 hours, day, week or month
 - Analyzer will alert when to run QC test
 - If QC tests fail, analyzer will switch to STAT mode and list "E" at the end of each test number

Specifications

Feature	Specifications
Analyzer Type	Manual
Methodology	Reflectance Photometry
Detection	Photosensitive Diode
Throughput	Single Test Option: 60 tests/hour Continuous Test Option: 120 tests/hour
Test Modes	Routine, STAT and QC
Lockout Functions	Strip Lockout: Available Upon Request; User/QC Lockout: Included with option to turn ON/OFF
Memory	Last 2,000 results
Strip Incubation Time	1 Minute
Wavelength of Monochromatic LED	525 nm and 635 nm
Standard Strips	8, 9, 10, 11 Parameters (5 mm x 108 mm)
Additional Strips Available	1-11 Parameters (5 mm x 108 mm); see URS Parameters
Total Combinations Per Analyzer	4 Combinations
Analyzer Ports	Standard RS232C Port for Barcode Reader or Data Transfer USB Port for Data Transfer 25 Pin Parallel Port for External Printer
Capabilities	Internal Thermal Printer (included) RS232C Barcode Reader (optional) Optional External Printer (not included) USB or RS232C Data Transfer Cable (optional)
Major Readable Barcodes	Code 128, Code 39, Codabar (NW-7), Interleaved 25, UPC-A, UPC-E, EAN 8, EAN 13
Calibration	Automatic
Available Languages on the Screen	English and additional language(s)
Operating Conditions	0-40°C (32-104°F); ≤ 85% RH
Storage Conditions	-5-50°C (23-122°F); ≤ 90% RH
Power Source	100-240 VAC, 50-60 Hz
Dimensions (L x W x H)	27.2 cm x 26.9 cm x 14.6 cm (10.7" x 10.6" x 5.7")
Display Dimensions (L x W)	10.8 cm x 5.7 cm (4.2" x 2.2")
Weight	2.6 kg (5.7 lbs)

Ordering Information

Product Name	Catalog No.	Components	Kit Box Dimensions (L x W x H) & Weight	Carton Dimensions (L x W x H) & Weight	Number of Kits/Carton
U120 Urine Analyzer	U111-101 [†]	1 Urine Analyzer 2 Strip holder 2 Printer Paper Rolls	2 Fuses (2.0A) 1 Power Cord 1 Quick Start Guide 1 Instruction Manual	42.0 cm x 41.5 cm x 31 cm; 5.0 kg 16.4" x 16.2" x 12.1"; 176.4 oz	1
U120 Urine Analyzer with Barcode Reader	U111-111 [†]	1 Urine Analyzer 1 Strip holder 2 Printer Paper Rolls 1 Barcode Reader (RS232C)	2 Fuses (2.0A) 1 Power Cord 1 Serial Splitter Cable (RS232C) 1 Quick Start Guide 1 Instruction Manual	44.5 cm x 44.5 cm x 40.0 cm; 5.5 kg 17.5" x 17.5" x 15.7"; 194 oz	1
Barcode Reader	U221-111 [†]	1 Barcode Reader (RS232C)	1 Serial Splitter Cable (RS232C)	23.6 cm x 10.8 cm x 7.8 cm; 0.482 kg 9.3" x 4.3" x 3.1"; 17.0 oz 63.0 cm x 37.0 cm x 30.0 cm; 12.0 kg 24.8" x 14.6" x 11.8"; 423.3 oz	22
Printer Paper Rolls	U121-101	4 Printer Paper Rolls	Thermal Paper (0.06 m x 20 m): 200 results/roll Sticker Paper (0.06 m x 9 m): 100 results/roll	12.0 cm x 12.0 cm x 6.5 cm; 0.36 kg 4.7" x 4.7" x 2.6"; 12.7 oz 63.0 cm x 37.0 cm x 30.0 cm; 21.4 kg 24.8" x 14.6" x 11.8"; 684.3 oz 12.0 cm x 12.0 cm x 6.5 cm; 0.4 kg 4.7" x 4.7" x 2.6"; 14.1 oz 24.8" x 14.6" x 11.8"; 684.3 oz; 754.9 oz	50
U120 Data Transfer Kit	U221-131 [†]	1 Data Transfer Cable (RS232C)	1 Package Insert	16.0 cm x 13.0 cm x 3.5 cm; 0.147 kg 6.3" x 5.1" x 1.4"; 5.2 oz 25.0 cm x 21.0 cm x 15.0 cm; 1.36 kg 9.8" x 8.3" x 5.9"; 48.0 oz	8

✓ CE Marked for sale in the European Community **CE**
 † Cleared for US 510(k)

U500 Urine Analyzer



Accurate and Efficient

- Up to 500 tests/hour for medium/large volume sample testing
- Professional accuracy equivalent to market leader
- Automatic strip detection and alignment for better efficiency
- Test modes include Routine, STAT and QC

Easy to Operate

- Large touch screen LCD offers simple menu navigation
- Uniquely designed strip platform/waste tray unit for easy one-step cleaning

Convenient

- Automatic calibration and waste disposal reduce hands-on time
- Can read strips with 8, 9, 10, 11 parameters, additional strips with 1-11 parameters available upon request
- Strip selection of up to 4 combinations for analyzer reading
- Stores up to 2,000 records and automatically flags abnormal results
- Capable of printing results on sticker paper for quick and easy record management

Data Management Capability

- Includes RS232C port for easy data transfer to an external computer or LIS
- Optional Barcode Reader to record patient ID

Unique Lockout Functions Coming Soon!

- Strip Lockout
 - Prevents using strips of another brand on the U500 Urine Analyzer
 - Requires barcode reader scan or manual entry of the canister code
- User Lockout
 - Eliminates unapproved users from testing
 - Up to 10 lab operators can perform testing, but only the lab administrator can change analyzer settings
- QC Lockout
 - Prevents testing without passing QC
 - QC tests can be performed once every 8 hours, day, week or month
 - Analyzer will alert when to run QC test
 - If QC tests fail, analyzer will switch to STAT mode and list "E" at the end of each test number

Specifications

Feature	Specifications
Analyzer Type	Semi-Automatic
Methodology	Reflectance Photometry
Detection	Photosensitive Diode
Throughput	500 tests/hour (Measuring cycle: 7 seconds/test)
Test Modes	Routine, STAT and QC
Lockout Functions	Strip Lockout: Available Upon Request; User/QC Lockout: Included with option to turn ON/OFF
Memory	Last 2,000 Records
Strip Incubation Time	1 Minute
Wavelength	525 and 635 nm
Standard Strips	8, 9, 10, 11 Parameters (5 mm x 108 mm)
Additional Strips Available	1-11 Parameters (5 mm x 108 mm); see URS Parameters
Total Combinations Per Analyzer	4 Combinations
Waste Disposal Capacity	Up to 150 Strips
Analyzer Ports	Standard RS232C Port for Barcode Reader or Data Transfer 25 Pin Parallel Port for External Printer
Capabilities	Internal Thermal Printer (included) RS232C Barcode Reader (optional) Optional External Printer (not included) RS232C Data Transfer Cable (optional)
Major Readable Barcodes	Code 128, Code 39, Codabar (NW-7), Interleaved 25, UPC-A, UPC-E, EAN 8, EAN 13
Calibration	Automatic
Available Languages on the Screen	English and additional language(s)
Operating Conditions	0-40°C (32-104°F); ≤85% RH
Storage Conditions	-5-50°C (23-122°F); ≤90% RH
Power Source	100-240 VAC, 50-60 Hz
Dimensions (L x W x H)	36.6 cm x 28.3 cm x 19.5cm (14.4" x 11.1" x 7.7")
Display Dimensions (L x W)	11.5 cm x 9.0 cm (4.5" x 3.5")
Weight	4.0 kg (8.8 lbs)

Ordering Information

Product Name	Catalog No.	Components	Kit Box Dimensions (L x W x H) & Weight	Carton Dimensions (L x W x H) & Weight	Number of Kits/Carton
U500 Urine Analyzer	U211-101 [✓]	1 Urine Analyzer 1 Strip Platform/Waste Tray 2 Printer Paper Rolls	2 Fuses (2.0A) 1 Power Cord 1 Instruction Manual	51.0 cm x 42.0 cm x 38.5 cm; 7 kg 20.1" x 16.5" x 15.2"; 246.9 oz	1
U500 Urine Analyzer with Barcode Reader	U211-111 [✓]	1 Urine Analyzer 1 Strip Platform/Waste Tray 2 Printer Paper Rolls 1 Barcode Reader (RS232C)	2 Fuses (2.0A) 1 Power Cord 1 Serial Splitter Cable (RS232C) 1 Instruction Manual	55.0 cm x 55.0 cm x 55.0cm; 9.2 kg 21.7" x 21.7" x 21.7"; 324.5 oz	1
Barcode Reader	U221-111 ^{✓†}	1 Barcode Reader (RS232C)	1 Serial Splitter Cable (RS232C)	23.6 cm x 10.8 cm x 7.8 cm; 0.482 kg 9.3" x 4.3" x 3.1"; 17.0 oz	22
Printer Paper Rolls	U121-101	4 Printer Paper Rolls	Thermal Paper (0.06 m x 20 m): 200 results/roll Sticker Paper (0.06 m x 9 m): 100 results/roll	12.0 cm x 12.0 cm x 6.5 cm; 0.360 kg 4.7" x 4.7" x 2.6"; 12.7oz 63.0 cm x 37.0 cm x 30.0 cm; 19.4 kg 24.8" x 14.6" x 11.8"; 684.3 oz 12.0 cm x 12.0 cm x 6.5 cm; 0.40 kg 4.7" x 4.7" x 2.6"; 14.1oz 63.0 cm x 37.0 cm x 30.0 cm; 21.4 kg 24.8" x 14.6" x 11.8"; 684.3 oz; 754.9 oz	50
U500 Data Transfer Kit	U221-131 [✓]	1 Data Transfer Cable (RS232C)	1 Package Insert	16.0 cm x 13.0 cm x 3.5 cm; 0.147kg 6.3" x 5.1" x 1.4"; 5.2 oz	8

We also offer other rapid diagnostic and medical products:

Blood Glucose Monitoring Systems, Immunoassay EIA/ELISA and more.

✓ CE Marked for sale in the European Community **CE**

† Cleared for US 510(k)



Mission® Urinalysis Reagent Strips (Urine)

Package Insert

REF U031-011	REF U031-051	REF U031-091	English
REF U031-021	REF U031-061	REF U031-101	
REF U031-031	REF U031-071	REF U031-111	
REF U031-041	REF U031-081		

For rapid detection of multiple analytes in human urine.

For *in vitro* diagnostic use only.

INTENDED USE

The Urinalysis Reagent Strips (Urine) are firm plastic strips onto which several separate reagent areas are affixed. The test is for the qualitative and semi-quantitative detection of one or more of the following analytes in urine: Ascorbic acid, Glucose, Bilirubin, Ketone (Acetoacetic acid), Specific Gravity, Blood, pH, Protein, Urobilinogen, Nitrite and Leukocytes.

SUMMARY

Urine undergoes many changes during states of disease or body dysfunction before blood composition is altered to a significant extent. Urinalysis is a useful procedure as an indicator of health or disease, and as such, is a part of routine health screening. The Urinalysis Reagent Strips (Urine) can be used in general evaluation of health, and aids in the diagnosis and monitoring of metabolic or systemic diseases that affect kidney function, endocrine disorders and diseases or disorders of the urinary tract.^{1,2}

PRINCIPLE AND EXPECTED VALUES

Ascorbic acid: This test involves decolorization of Tillmann's reagent. The presence of ascorbic acid causes the color of the test field to change from blue-green to orange. Patients with adequate diet may excrete 2-10 mg/dL daily. After ingesting large amounts of ascorbic acid, levels can be around 200 mg/dL.

Glucose: This test is based on the enzymatic reaction that occurs between glucose oxidase, peroxidase and chromogen. Glucose is first oxidized to produce gluconic acid and hydrogen peroxide in the presence of glucose oxidase. The hydrogen peroxide reacts with potassium iodide chromogen in the presence of peroxidase. The extent to which the chromogen is oxidized determines the color which is produced, ranging from green to brown. Glucose should not be detected in normal urine. Small amounts of glucose may be excreted by the kidney.³ Glucose concentrations as low as 100 mg/dL may be considered abnormal if results are consistent.

Bilirubin: This test is based on azo-coupling reaction of bilirubin with diazotized dichloroaniline in a strongly acidic medium. Varying bilirubin levels will produce a pinkish-tan color proportional to its concentration in urine. In normal urine, no bilirubin is detectable by even the most sensitive methods. Even trace amounts of bilirubin require further investigation. Atypical results (colors different from the negative or positive color blocks shown on the color chart) may indicate that bilirubin-derived bile pigments are present in the urine specimen, and are possibly masking the bilirubin reaction.

Ketone: This test is based on ketones reacting with nitroprusside and acetoacetic acid to produce a color change ranging from light pink for negative results to a darker pink or purple color for positive results. Ketones are normally not present in urine. Detectable ketone levels may occur in urine during physiological stress conditions such as fasting, pregnancy and frequent strenuous exercise.⁴⁻⁶ In starvation diets, or in other abnormal carbohydrate metabolism situations, ketones appear in the urine in excessively high concentration before serum ketones are elevated.⁷

Specific Gravity: This test is based on the apparent pKa change of certain pretreated polyelectrolytes in relation to ionic concentration. In the presence of an indicator, colors range from deep blue-green in urine of low ionic concentration to green and yellow-green in urine of increasing ionic concentration. Randomly collected urine may vary in specific gravity from 1.003-1.035.⁸ Twenty-four hour urine from healthy adults with normal diets and fluid intake will have a specific gravity of 1.016-1.022.³ In cases of severe renal damage, the specific gravity is fixed at 1.010, the value of the glomerular filtrate.

Blood: This test is based on the peroxidase-like activity of hemoglobin which catalyzes the reaction of diisopropylbenzene dihydroperoxide and 3,3',5,5'-tetramethylbenzidine. The resulting color ranges from orange to green to dark blue. Any green spots or green color development on the reagent area within 60 seconds is significant and the urine specimen should be examined further. Blood is often, but not invariably, found in the urine of menstruating females. The significance of a trace reading varies among patients and clinical judgment is required in these specimens.

pH: This test is based on a double indicator system which gives a broad range of colors covering the entire urinary pH range. Colors range from orange to yellow and green to blue. The expected range for normal urine specimens from newborns is pH 5-7.⁹ The expected range for other normal urine specimens is pH 4.5-8, with an average result of pH 6.⁹

Protein: This reaction is based on the phenomenon known as the "protein error" of pH indicators where an indicator that is highly buffered will change color in the presence of proteins (anions) as the indicator releases hydrogen ions to the protein. At a constant pH, the development of any green color is due to the presence of protein. Colors range from yellow to yellow-green for negative results and green to green-blue for positive results. 1-14 mg/dL of protein may be excreted by a normal kidney.¹⁰ A color matching any block greater than trace indicates significant proteinuria. Clinical judgment is required to evaluate the significance of trace results.

Urobilinogen: This test is based on a modified Ehrlich reaction between p-diethylaminobenzaldehyde and urobilinogen in strongly acidic medium to produce a pink color. Urobilinogen is one of the major compounds produced in heme synthesis and is a normal substance in urine. The expected range for normal urine with this test is 0.2-1.0 mg/dL (3.5-17 µmol/L).⁸ A result of 2.0 mg/dL (35 µmol/L) may be of clinical significance, and the patient specimen should be further evaluated.

Nitrite: This test depends upon the conversion of nitrate to nitrite by the action of Gram negative bacteria in the urine. In an acidic medium, nitrite in the urine reacts with p-arsanilic acid to form a diazonium compound. The diazonium compound in turn couples with 1 N-(1-naphthyl) ethylenediamine to produce a pink color. Nitrite is not detectable in normal urine.⁹ The nitrite area will be positive in some cases of infection, depending on how long the urine specimens were retained in the bladder prior to collection. Retrieval of positive cases with the nitrite test ranges from as low as 40% in cases where little bladder incubation occurred, to as high as approximately 80% in cases where bladder incubation took place for at least 4 hours.

Leukocytes: This test reveals the presence of granulocyte esterases. The esterases cleave a derivatized pyrazole amino acid ester to liberate derivatized hydroxy pyrazole. This pyrazole then reacts with a diazonium salt to produce a beige-pink to purple color. Normal urine specimens generally yield negative results. Trace results may be of questionable clinical significance. When trace results occur, it is recommended to retest using a fresh specimen from the same patient. Repeated trace and positive results are of clinical significance.

REAGENTS AND PERFORMANCE CHARACTERISTICS

Based on the dry weight at the time of impregnation, the concentrations given may vary within manufacturing tolerances. The following table below indicates read times and performance characteristics for each parameter.

Reagent	Read Time	Composition	Description
Ascorbic Acid (ASC)	30 seconds	2,6-dichlorophenolindophenol; buffer and non-reactive ingredients	Detects ascorbic acid as low as 5-10 mg/dL (0.28-0.56 mmol/L).
Glucose (GLU)	30 seconds	glucose oxidase; peroxidase; potassium iodide; buffer; non-reactive ingredients	Detects glucose as low as 50-100 mg/dL (2.5-5 mmol/L).
Bilirubin (BIL)	30 seconds	2, 4-dichloroaniline diazonium salt; buffer and non-reactive ingredients	Detects bilirubin as low as 0.4-1.0 mg/dL (6.8-17 µmol/L).
Ketone (KET)	40 seconds	sodium nitroprusside; buffer	Detects acetoacetic acid as low as 2.5-5 mg/dL (0.25-0.5 mmol/L).
Specific Gravity (SG)	45 seconds	bromthymol blue indicator; buffer and non-reactive ingredients; poly (methyl vinyl ether/maleic anhydride); sodium hydroxide	Determines urine specific gravity between 1.000 and 1.030. Results correlate with values obtained by refractive index method within ± 0.005.
Blood (BLO)	60 seconds	3,3',5,5'-tetramethylbenzidine (TMB); diisopropylbenzene dihydroperoxide; buffer and non-reactive ingredients	Detects free hemoglobin as low as 0.018-0.060 mg/dL or 5-10 Ery/µL in urine specimens with ascorbic acid content of <50 mg/dL.
pH	60 seconds	methyl red sodium salt; bromthymol blue; non-reactive ingredients	Permits the quantitative differentiation of pH values within the range of 5-9.
Protein (PRO)	60 seconds	tetrabromophenol blue; buffer and non-reactive ingredients	Detects albumin as low as 7.5-15 mg/dL (0.075-0.15 g/L).
Urobilinogen (URO)	60 seconds	p-diethylaminobenzaldehyde; buffer and non-reactive ingredients	Detects urobilinogen as low as 0.2-1.0 mg/dL (3.5-17 µmol/L).
Nitrite (NIT)	60 seconds	p-arsanilic acid; N-(1-naphthyl) ethylenediamine; non-reactive ingredients	Detects sodium nitrite as low as 0.05-0.1 mg/dL in urine with a low specific gravity and less than 30 mg/dL ascorbic acid.
Leukocytes (LEU)	120 seconds	derivatized pyrrole amino acid ester; diazonium salt; buffer; non-reactive ingredients	Detects leukocytes as low as 9-15 white blood cells Leu/µL in clinical urine.

The performance characteristics of the Urinalysis Reagent Strips (Urine) have been determined in both laboratory and clinical tests. Parameters of importance to the user are sensitivity, specificity, accuracy and precision. Generally, this test has been developed to be specific for the parameters to be measured with the exceptions of the interferences listed. Please refer to the Limitations section in this package insert.

Interpretation of visual results is dependent on several factors: the variability of color perception, the presence or absence of inhibitory factors, and the lighting conditions when the strip is read. Each color block on the chart corresponds to a range of analyte concentrations.

PRECAUTIONS

- For *in vitro* diagnostic use only. Do not use after the expiration date.
- The strip should remain in the closed canister until use.
- Do not touch the reagent areas of the strip.
- Discard any discolored strips that may have deteriorated.
- All specimens should be considered potentially hazardous and handled in the same manner as an infectious agent.
- The used strip should be discarded according to local regulations after testing.

STORAGE AND STABILITY

Store as packaged in the closed canister either at room temperature or refrigerated (2-30°C). Keep out of direct sunlight. The strip is stable through the expiration date printed on the canister label. Do not remove the desiccant. Remove only enough strips for immediate use. Replace cap immediately and tightly. **DO NOT FREEZE.** Do not use beyond the expiration date.

Note: Once the canister has been opened, the remaining strips are stable for up to 3 months. Stability may be reduced in high humidity conditions.

SPECIMEN COLLECTION AND PREPARATION

A urine specimen must be collected in a clean and dry container and tested as soon as possible. Do not centrifuge. The use of urine preservatives is not recommended. If testing cannot be done within an hour after voiding, refrigerate the specimen immediately and let it return to room temperature before testing.

Prolonged storage of unpreserved urine at room temperature may result in microbial proliferation with resultant changes in pH. A shift to alkaline pH may cause false positive results with the protein test area. Urine containing glucose may decrease in pH as organisms metabolize the glucose.

Contamination of the urine specimen with skin cleansers containing chlorhexidine may affect protein (and to a lesser extent, specific gravity and bilirubin) test results.

MATERIALS

Materials Provided

- Strips
- Package insert

Materials Required But Not Provided

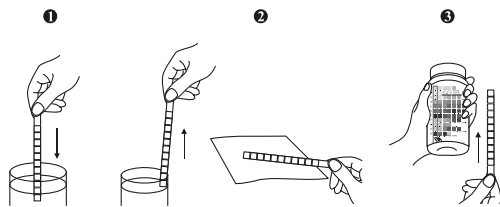
- Specimen collection container
- Timer

DIRECTIONS FOR USE

Allow the strip, urine specimen, and/or controls to reach room temperature (15-30°C) prior to testing.

- Remove the strip from the closed canister and use it as soon as possible. Immediately close the canister tightly after removing the required number of strip(s). Completely immerse the reagent areas of the strip in fresh, well-mixed urine and immediately remove the strip to avoid dissolving the reagents. See illustration 1 below.
- While removing the strip from the urine, run the edge of the strip against the rim of the urine container to remove excess urine. Hold the strip in a horizontal position and bring the edge of the strip into contact with an absorbent material (e.g. a paper towel) to avoid mixing chemicals from adjacent reagent areas and/or soiling hands with urine. See illustration 2 below.
- Compare the reagent areas to the corresponding color blocks on the canister label at the specified times. Hold the strip close to the color blocks and match carefully. See illustration 3 below.

Note: Results may be read up to 2 minutes after the specified times.



INTERPRETATION OF RESULTS

Results are obtained by direct comparison of the color blocks printed on the canister label. The color blocks represent nominal values; actual values will vary close to the nominal values. In the event of unexpected or questionable results, the following steps are recommended: confirm that the strips have been tested within the expiration date printed on the canister label, compare results with known positive and negative controls and repeat the test using a new strip. If the problem persists, discontinue using the strip immediately and contact your local distributor.

QUALITY CONTROL

For best results, performance of reagent strips should be confirmed by testing known positive and negative specimens/controls whenever a new test is performed, or whenever a new canister is first opened. Each laboratory should establish its own goals for adequate standards of performance.

LIMITATIONS

Note: The Urinalysis Reagent Strips (Urine) may be affected by substances that cause abnormal urine color such as drugs containing azo dyes (e.g. Pyridium®. Azo Gantrisin®, Azo Gantanol®), nitrofurantoin (Microdantin®, Furodantin®), and riboflavin.⁸ The color development on the test pad may be masked or a color reaction may be produced that could be interpreted as false results.

Ascorbic acid: No interference is known.
Glucose: The reagent area does not react with lactose, galactose, fructose or other metabolic substances, nor with reducing metabolites of drugs (e.g. salicylates and nalidixic acid). Sensitivity may be decreased in specimens with high specific gravity (>1.025) and with ascorbic acid concentrations of ≥ 25 mg/dL. High ketone levels ≥ 100 mg/dL may cause false negative results for specimens containing a small amount of glucose (50-100 mg/dL).

Bilirubin: Bilirubin is absent in normal urine, so any positive result, including a trace positive, indicates an underlying pathological condition and requires further investigation. Reactions may occur with urine containing large doses of chlorpromazine or rifampin that might be mistaken for positive bilirubin.⁹ The presence of bilirubin-derived bile pigments may mask the bilirubin reaction. This phenomenon is characterized by color development on the test patch that does not correlate with the colors on the color chart. Large concentrations of ascorbic acid may decrease sensitivity.

Ketone: The test does not react with acetone or β-hydroxybutyrate.⁸ Urine specimens of high pigment, and other substances containing sulfhydryl groups may occasionally give reactions up to and including trace (±).⁹

Specific Gravity: Ketoacidosis or protein higher than 300 mg/dL may cause elevated results. Results are not affected by non-ionic urine components such as glucose. If the urine has a pH of 7 or greater, add 0.005 to the specific gravity reading indicated on the color chart.

Blood: A uniform blue color indicates the presence of myoglobin, hemoglobin or hemolyzed erythrocytes.⁸ Scattered or compacted blue spots indicate intact erythrocytes. To enhance accuracy, separate color scales are provided for hemoglobin and for erythrocytes. Positive results with this test are often seen with urine from menstruating females. It has been reported that urine of high pH reduces sensitivity, while moderate to

high concentration of ascorbic acid may inhibit color formation. Microbial peroxidase, associated with urinary tract infection, may cause a false positive reaction. The test is slightly more sensitive to free hemoglobin and myoglobin than to intact erythrocytes.

pH: If the procedure is not followed and excess urine remains on the strip, a phenomenon known as "runover" may occur, in which the acid buffer from the protein reagent will run onto the pH area, causing the pH result to appear artificially low. pH readings are not affected by variations in urinary buffer concentration.

Protein: Any green color indicates the presence of protein in the urine. This test is highly sensitive for albumin, and less sensitive to hemoglobin, globulin and mucoprotein.⁸ A negative result does not rule out the presence of these other proteins. False positive results may be obtained with highly buffered or alkaline urine. Contamination of urine specimens with quaternary ammonium compounds or skin cleansers containing chlorhexidine may produce false positive results.⁸ The urine specimens with high specific gravity may give false negative results.

Urobilinogen: All results lower than 1 mg/dL urobilinogen should be interpreted as normal. A negative result does not at any time preclude the absence of urobilinogen. The reagent area may react with interfering substances known to react with Ehrlich's reagent, such as p-aminosalicylic acid and sulfonamides.⁹ False negative results may be obtained if formalin is present. The test cannot be used to detect porphobilinogen.

Nitrite: The test is specific for nitrite and will not react with any other substance normally excreted in urine. Any degree of uniform pink to red color should be interpreted as a positive result, suggesting the presence of nitrite. Color intensity is not proportional to the number of bacteria present in the urine specimen. Pink spots or pink edges should not be interpreted as a positive result. Comparing the reacted reagent area on a white background may aid in the detection of low nitrite levels, which might otherwise be missed. Ascorbic acid above 30 mg/dL may cause false negatives in urine containing less than 0.05 mg/dL nitrite ions. The sensitivity of this test is reduced for urine specimens with highly buffered alkaline urine or with high specific gravity. A negative result does not at any time preclude the possibility of bacteruria. Negative results may occur in urinary tract infections from organisms that do not contain reductase to convert nitrate to nitrite; when urine has not been retained in the bladder for a sufficient length of time (at least 4 hours) for reduction of nitrate to nitrite to occur; when receiving antibiotic therapy or when dietary nitrate is absent.

Leukocytes: The result should be read between 60-120 seconds to allow for complete color development. The intensity of the color that develops is proportional to the number of leukocytes present in the urine specimen. High specific gravity or elevated glucose concentrations (≥ 2,000 mg/dL) may cause test results to be artificially low. The presence of cephalixin, cephalothin, or high concentrations of oxalic acid may also cause test results to be artificially low. Tetracycline may cause decreased reactivity, and high levels of the drug may cause a false negative reaction. High urinary protein may diminish the intensity of the reaction color. This test will not react with erythrocytes or bacteria common in urine.⁸

BIBLIOGRAPHY

- Free AH, Free HM. *Urinalysis, Critical Discipline of Clinical Science*. CRC Crit. Rev. Clin. Lab. Sci. 3(4): 481-531, 1972.
- Yoder J, Adams EC, Free, AH. *Simultaneous Screening for Urinary Occult Blood, Protein, Glucose, and pH*. Amer. J. Med Tech. 31:285, 1965.
- Shchersten B, Fritz H. *Subnormal Levels of Glucose in Urine*. JAMA 201:129-132, 1967.
- McGarry JD, Lilly. Lecture, 1978: New Perspectives in the Regulation of Ketogenesis. Diabetes 28: 517-523 May, 1978.
- Williamson DH. *Physiological Ketoses, or Why Ketone Bodies?* Postgrad. Med. J. (June Suppl.): 372-375, 1971.
- Paterson P, et al. *Maternal and Fetal Ketone Concentrations in Plasma and Urine*. Lancet: 862-865; April 22, 1967.
- Fraser J, et al. *Studies with a Simplified Nitroprusside Test for Ketone Bodies in Urine, Serum, Plasma and Milk*. Clin. Chem. Acta II: 372-378, 1965.
- Henry JB, et al. *Clinical Diagnosis and Management by Laboratory Methods*, 20th Ed. Philadelphia. Saunders. 371-372, 375, 379, 382, 385, 2001.
- Tietz NW. *Clinical Guide to Laboratory Tests*. W.B. Saunders Company. 1976.
- Burtis CA, Ashwood ER. *Tietz Textbook of Clinical Chemistry* 2nd Ed. 2205, 1994.

Index of Symbols

	Consult instructions for use		Tests per kit		Manufacturer
	For <i>in vitro</i> diagnostic use only		Use by		Do not reuse
	Store between 2-30°C		Lot Number		Catalog #
	Authorized Representative				

ACON Laboratories, Inc.
10125 Mesa Rim Road,
San Diego, CA 92121, USA

MDSS GmbH
Schiffgraben 41
30175 Hannover, Germany

REF U021-011	English
REF U021-021	
REF U021-031	

For validating visual and analyzer reading of urinalysis.
For *in vitro* diagnostic use only.

INTENDED USE

The Liquid Urine Control is intended for use in validating the visual and analyzer reading of urinalysis. The results should be compared to the expected results listed below to ensure the consistent performance of *Mission®* and *Mission® Expert* Urinalysis Reagent Strips and Urine Analyzers. The Liquid Urine Control is available in two levels and is ready to use for monitoring routine urinalysis.

PRECAUTIONS

- For *in vitro* diagnostic use only. Do not use after the expiration date.
- All materials should be considered potentially hazardous and handled in the same manner as an infectious agent.
- Discard if there is excessive turbidity or evidence of microbial contamination.
- The used materials should be discarded according to local regulations after testing.
- This product is not intended for use as a standard.
- The use of quality control materials is an important part of good laboratory practices. Quality control materials are an objective method of assessing techniques or practices in use.

REAGENTS

The product is a liquid stable control prepared from simulated human urine with added chemicals, constituents of animal origin, preservatives and stabilizers. The control does not include human resource materials. Various pure chemicals are used to adjust each analyte level.

STORAGE AND STABILITY

- Store and ship at 2-8°C (35-46°F). Do not freeze.
- Controls are stable until the expiration date printed on the bottle label when stored at 2-8°C (35-46°F).
- All analytes are stable for 20 days at 2-30°C (35-86°F) once opened and stored with the cap on tightly.

MATERIALS

Materials Provided

- Liquid Urine Control Level 1 and/or Level 2
- Package Insert

Materials Required But Not Provided

- Strips
- Timer

DIRECTIONS FOR USE

Allow all test materials to reach room temperature (15-30°C) prior to testing.

1. Invert the urine control bottle 3 times to ensure reproducible results, then remove the cap. While holding the urinalysis reagent strip, invert the urine control bottle and gently squeeze the urine control bottle to dispense the urine control. Ensure each reagent area on urinalysis reagent strip is completely saturated with urine control. See illustration 1 below.

Note:

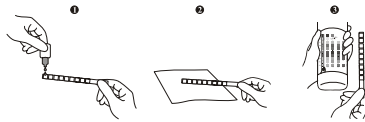
- Do not touch the tip of the urine control bottle to the reagent areas on the urinalysis reagent strip to avoid contamination.
 - Dispense the remaining hanging drop of urine control before turning the urine control bottle upright.
- Dispose of the hanging drop of urine control to avoid contaminating the unused control with reagents from the urinalysis reagent strip.

2. Hold the strip in a horizontal position and bring the edge of the strip into contact with an absorbent material (e.g. a paper towel) to avoid mixing chemicals from adjacent reagent areas and/or soiling hands with the urine control. See illustration 2 below.
3. Compare the reagent areas to the corresponding color blocks on the canister label at the specified times. Hold the strip close to the color blocks and match carefully. See illustration 3 below.

Note:

- Results may be read up to 2 minutes after the specified times.
- Results may also be read using the *Mission®* and *Mission® Expert* Urine Analyzers. Refer to the Instruction Manual for details.

4. Clean the dropper tip, and immediately replace the cap tightly.



EXPECTED VALUES

The expected values listed on the following page should only be used for the specific lots printed. Expected values were obtained from replicate analysis. The urine control and urinalysis reagent strip lots can create slight differences in expected results. Different laboratory methods, instruments and reagents can create variations between laboratories and variations over time. Use the results provided as reference only. It is recommended that each laboratory establish its own parameters of precision.

Note: The color reactions of Urobilinogen and Bilirubin reagent areas on the urinalysis reagent strips may produce colors that are atypical when visually compared to the color blocks on the color chart.

LIMITATIONS

The *Mission®* Liquid Urine Control can only be used with *Mission®* and *Mission® Expert* Urinalysis Reagent Strips and Urine Analyzers. Ensure reproducible results by inverting the urine control bottle 3 times before each use. Interpretation of visual results depends on several factors: the variability of color perception, the presence or absence of inhibitory factors, and the lighting conditions when the strip is read. Each color block on the color chart does not correspond to a specific concentration, but it does correspond to a range of analyte concentrations.

Index of Symbols

	Attention, see instructions for use		Tests per kit		Manufacturer
	For <i>in vitro</i> diagnostic use only		Use by		Authorized Representative
	Store between 2-8°C		Lot Number		Catalog #



ACON Laboratories, Inc.
10125 Mesa Rim Road,
San Diego, CA 92121, USA



EC REP
MDSS GmbH
Schiffgraben 41
30175 Hannover, Germany

Declaration of Conformity

ACON Laboratories, Incorporated
5850 Oberlin Drive #340
San Diego, CA 92121 USA

**We, the manufacturer, declare under our sole responsibility that the
in vitro diagnostic device:**

Device Name	REF Number
On Call® Plus Blood Glucose Monitoring System	G113-111
On Call® Plus Blood Glucose Meter	G113-211, G113-214
On Call® Plus Blood Glucose Test Strips	G133-111, G133-112, G133-114, G133-115, G133-117, G133-118, G133-119, G133-211
On Call® Plus Glucose Control Solution	G123-311

**classified for Annex II List B of the directive 98/79/EC,
meets all the provisions of the directive 98/79/EC on *in vitro*
diagnostic medical devices which apply to it**

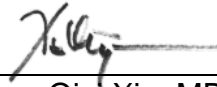
**The declaration according to Annex IV of the Directive
is based on approval by the notified body
TÜV SÜD Product Service GmbH,
Ridlerstraße 65,
80339 MÜNCHEN, Germany,
notified under No. 0123 to the EC Commission**

This declaration is valid until expiration of EC Certificate
No. V1 104507 0003 Rev. 06
Expiration Date: 2025-05-26

Authorized Representative:
Medical Device Safety Service GmbH
Schiffgraben 41
30175 Hannover, Germany



Signed this 25 day of May, 2022
in San Diego, CA USA



Qiyi Xie, MD, MPH
Senior Staff, Regulatory Affairs & Clinical Affairs
ACON Laboratories, Inc.



5850 Oberlin Drive #340-San Diego, CA 92121, USA · Tel: (858) 875-8000 · Fax: (858) 875-8099
E-mail: info@aconlabs.com

Specification



Feature	Specification
Technology	Biosensor/Electrochemical, Glucose oxidase (GOD)
Result Calibration	Plasma-equivalent
Test Time	10 seconds
Sample Size	0.5 µL
Sample Type	Fresh capillary whole blood
Hematocrit Range	25 - 60%
Glucose Test Range	20 - 600 mg/dL (1.1 - 33.3 mmol/L)
Memory Storage	300 results with date and time
Test Averaging	7, 14, 30-day averages
Data Transfer	USB
Control Solution	3 levels
Audio Feature	Optional beep for sample detection, error messages
Automatic Shutoff	2 minutes after last action
Battery	One (1) CR 2032 3.0V coin cell battery
Battery Life	1,000 measurements
Operating Conditions	41 - 113 °F (5 - 45°C) and 10 - 90% relative humidity
Strip Storage Temperature	2-35°C
Expiration Date	24 months (6 months after first opening)

Catalog

Product Name	Catalog No.	Contents			
On-Call [®] Plus Blood Glucose Monitoring System	G113-111 v †	1 Meter 1 Manual 10 Lancets	10 Test Strips 1 Carrying Case 1 Code Chip	1 Control Solution 1 1 Quick Reference Guide 1 Clear Cap (for testing on forearm and palm)	1 Lancing Device 1 Warranty Card
On-Call [®] Plus Blood Glucose Meter	G113-211 v †	1 Meter 1 Manual	1 Control Solution 1 1 Warranty Card	1 Carrying Case 1 Quick Reference Guide	
	G113-214 v	1 Meter 1 Manual 10 Lancets	1 Lancing Device 1 Carrying Case 1 Warranty Card	1 Control Solution 1 1 Quick Reference Guide 1 Clear Cap (for testing on forearm and palm)	
On-Call [®] Plus Blood Glucose Test Strips	G133-111 v †	50 Test Strips (25/vial)		1 Code Chip	1 Package Insert
		50 Test Strips (50/vial)		1 Code Chip	1 Package Insert
	G133-112 v	100 Test Strips (25/vial)		1 Code Chip	1 Package Insert
	G133-114 v	10 Test Strips (10/vial)		1 Code Chip	1 Package Insert
	G133-115 v	25 Test Strips (Individually Foil Wrapped)		1 Code Chip	1 Package Insert
	G133-117 v	50 Test Strips (Individually Foil Wrapped)		1 Code Chip	1 Package Insert
G133-118 v	25 Test Strips (25/vial)		1 Code Chip	1 Package Insert	
On-Call [®] Plus Blood Glucose Test Strips and Lancets	G133-211 v	50 Test Strips (25/vial)	50 Lancets (25/bag)	1 Code Chip	1 Package Insert
On-Call [®] Plus Blood Glucose Control Solution	G123-311 v †	1 Control Solution 0	1 Control Solution 1	1 Control Solution 2	1 Package Insert
On-Call [®] Lancets	G124-10A v †	100 Lancets (25/bag)			
On-Call [®] Lancing Device	G124-11AV	1 Lancing Device		1 Package Insert	
On-Call [®] Diabetes Management Software Kit	G124-13A †	1 USB Data Transfer Cable		1 Installation Disk	

v CE Marked for sale in the European Community 0123 † US 510(k) Cleared and CLIA Waived



On-Call[®] Plus
Blood Glucose Monitoring System



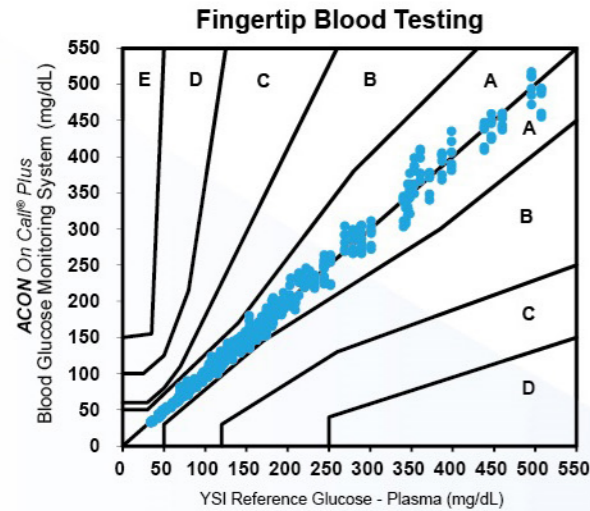
Delivers Value and Quality

- 0.5 µL Blood Sample
- Accurate & Reliable Results
- 25 - 60% HCT Range
- US 510(k) & CE

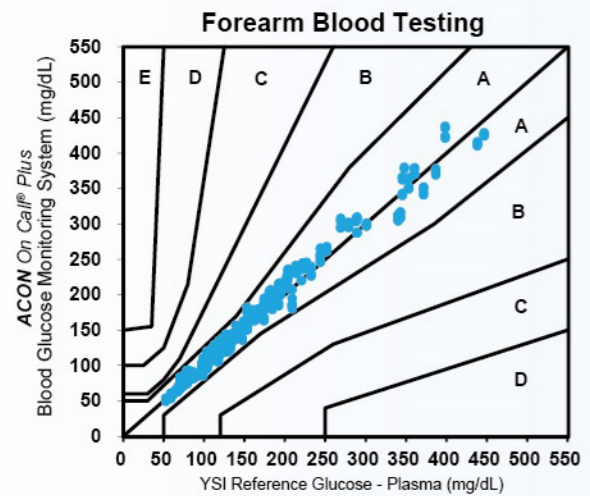


Accurate and Reliable

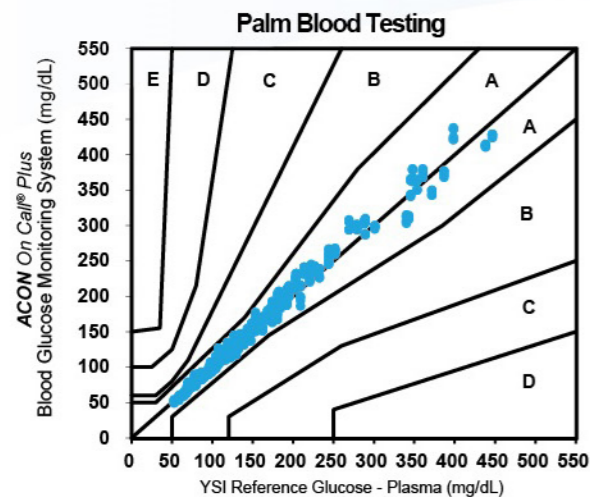
Extensive clinical studies proved the accuracy of *On-Call Plus* Blood Glucose Monitoring System with fresh capillary blood samples, which can comply with EN ISO 15197: 2015.



Consensus Error Grid Analysis Clinical Trial - Fingertip Capillary Blood, by Technican ACON On-Call Plus Blood Glucose Monitoring System vs. YSI		
System Accuracy Results for Glucose Concentration ≥ 100 mg/dL		
Within $\pm 5\%$	Within $\pm 10\%$	Within $\pm 15\%$
290 / 462 (62.8%)	432 / 462 (93.5%)	462 / 462 (100.0%)
System Accuracy Results for Glucose Concentration < 100 mg/dL		
Within ± 5 mg/dL	Within ± 10 mg/dL	Within ± 15 mg/dL
145 / 198 (73.2%)	193 / 198 (97.5%)	198 / 198 (100.0%)
System Accuracy Results for both Glucose Concentration ≥ 100 mg/dL and < 100 mg/dL		
Within $\pm 15\%$ or ± 15 mg/dL		
658 / 660 (99.7%)		



Consensus Error Grid Analysis Clinical Trial - Forearm Capillary Blood, by Technican ACON On-Call Plus Blood Glucose Monitoring System vs. YSI		
System Accuracy Results for Glucose Concentration ≥ 100 mg/dL		
Within $\pm 5\%$	Within $\pm 10\%$	Within $\pm 15\%$
202 / 444 (45.5%)	375 / 444 (84.5%)	440 / 444 (99.1%)
System Accuracy Results for Glucose Concentration < 100 mg/dL		
Within ± 5 mg/dL	Within ± 10 mg/dL	Within ± 15 mg/dL
110 / 168 (65.5%)	154 / 168 (91.7%)	168 / 168 (100.0%)
System Accuracy Results for both Glucose Concentration ≥ 100 mg/dL and < 100 mg/dL		
Within $\pm 15\%$ or ± 15 mg/dL		
608 / 612 (99.3%)		



Consensus Error Grid Analysis Clinical Trial - Palm Capillary Blood, by Technican ACON On-Call Plus Blood Glucose Monitoring System vs. YSI		
System Accuracy Results for Glucose Concentration ≥ 100 mg/dL		
Within $\pm 5\%$	Within $\pm 10\%$	Within $\pm 15\%$
219 / 444 (49.3%)	395 / 444 (89.0%)	441 / 444 (99.3%)
System Accuracy Results for Glucose Concentration < 100 mg/dL		
Within ± 5 mg/dL	Within ± 10 mg/dL	Within ± 15 mg/dL
130 / 168 (77.4%)	166 / 168 (98.8%)	168 / 168 (100.0%)
System Accuracy Results for both Glucose Concentration ≥ 100 mg/dL and < 100 mg/dL		
Within $\pm 15\%$ or ± 15 mg/dL		
609 / 612 (99.5%)		

Key Features

0.5 μ L blood sample

HCT 25 - 60% HCT range

2 - 35°C strip storage temperature

Optional individually packaged test strips available

Alternative testing sites including fingertip, forearm and palm

Automatic detection of insufficient sample

300 test memory with date and time

7, 14, 30 - day averages calculation

Easy PC data transfer and smart App data analysis

Authority Certificate



On-Call[®] Plus

Blood Glucose Monitoring System

User's Manual



ACON[®]
 ACON Laboratories, Inc.
 10125 Mesa Rim Road
 San Diego, CA 92121, USA
www.acondiabetescare.com

EC REP
 MDSS GmbH
 Schiffgraben 41
 30175 Hannover, Germany

Number: 1150923902
 Effective Date: 2017-05-19

© 2017 ACON Laboratories, Inc.

IVD  CE 0123

Attention: By approving the enclosed design draft, you (ACON's Customer) accept all responsibility for the accuracy of the design. If an error is detected following the printing or manufacturing of a material, you (ACON's Customer) are responsible for the cost of any inventory which is deemed unsuitable for sale.

US

OUS

DOMESTIC

OTHER

Description	OCP F CE0123 Aconlab User's Manual(En)	Part Number	1150923902	Size	165x110mm
Printing Contents	/	L Number	/	Size	/
Designer	zoey	Design Date/Version	May 12, 2017 / A		
Artwork checked by		Material	封面200g双铜复亚膜, 内页70g双胶		Checked by
Approved by Customer		Approved by Marketing/Sales			
Approved by P.M.T.		Approved by QA		Effective Date	

On Call[®] Plus

Blood Glucose Monitoring System

Self-monitoring of blood glucose (SMBG) is an integral part of diabetes care, but the high cost of testing can make this impossible. At **ACON**, our goal is to provide high quality glucose monitoring at a price that allows you to test as often as necessary. Together, we can better manage your diabetes and help you live a longer and healthier life.

Welcome, and thank you for choosing the On Call[®] Plus Blood Glucose Monitoring System. The On Call[®] Plus Blood Glucose Monitoring System will give you accurate blood glucose results in just a few simple steps.

To ensure accurate results from your On Call[®] Plus Blood Glucose Monitoring System, please follow these guidelines:

- Read instructions before use.
- Use the code chip that accompanies each box of test strips.
- Use only On Call[®] Plus Blood Glucose Test Strips with the On Call[®] Plus Blood Glucose Meter.
- For *in vitro* diagnostic use only. Your blood glucose monitoring system is to be used only outside the body for testing purposes.
- For self-testing and professional use.
- Test only whole blood samples with the On Call[®] Plus Blood Glucose Test Strips and On Call[®] Plus Meter.
- For self-testers, consult your physician or diabetes healthcare professional before making any adjustments to your medication, diet or activity routines.
- Keep out of reach of children.

Following the instructions outlined in this User's Manual. You will be able to use your On Call[®] Plus Blood Glucose Monitoring System to monitor your blood glucose and better manage your diabetes.

Table of Contents

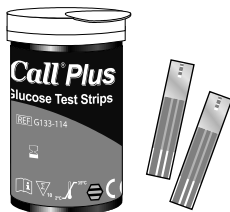
Getting Started	1
Component Descriptions.....	2
<i>On Call® Plus</i> Blood Glucose Meter	3
Meter Display.....	4
<i>On Call® Plus</i> Blood Glucose Test Strips.....	6
<i>On Call® Plus</i> Glucose Control Solution	8
Installing the Battery	10
Meter Setup Before Testing	11
Step 1 – Coding the Meter	11
Step 2 – Adjusting the Meter Settings	12
Performing a Quality Control Test	14
Testing Your Blood	18
Step 1 – Getting a Drop of Blood	18
Step 2 – Testing Blood Glucose	23
“HI” and “LO” Messages.....	25
Using the Meter Memory	27
Viewing Stored Records.....	27
Clearing the Memory.....	28
Transferring Records.....	29
Maintenance	30
Replacing the Battery.....	30
Caring for Your <i>On Call® Plus</i> Blood Glucose Monitoring System	31
Suggested Testing Times and Target Goals	32
Comparing Meter and Laboratory Results	33
Troubleshooting Guide	34
Specifications	36
Warranty	37
Index of Symbols	38
Index	39

Getting Started

Before testing, read the instructions carefully and learn about all the components of your *On Call® Plus* Blood Glucose Monitoring System. Depending on the *On Call® Plus* product you purchase, some of the components may need to be purchased separately. Please check the list of contents on the outer box for details on which components are included with your purchase.



Blood Glucose Meter



Test Strips



Code Chip



Lancing Device



Clear Cap



Sterile Lancet



Control Solution



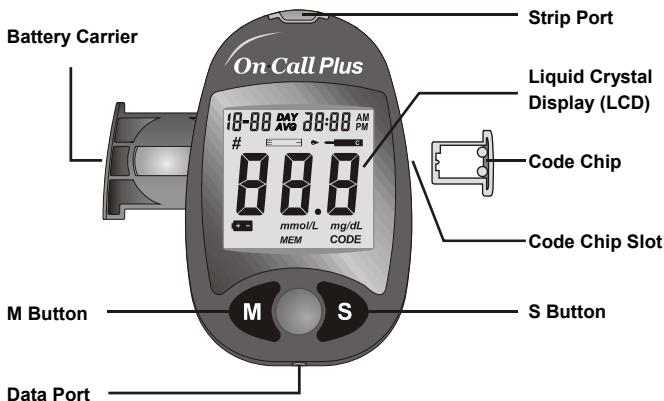
Carrying Case

Component Descriptions

1. Blood Glucose Meter: Reads the test strips and displays the blood glucose concentration.
2. Test Strips: Strips with a chemical reagent system used with the meter to measure glucose concentration in blood.
3. Code Chip: Automatically calibrates the meter with the code number when inserted into the meter.
4. Lancing Device: Used with sterile lancets to prick the fingertip, palm (at the base of the thumb) or forearm for blood sample collection. The packaged lancing device has multiple depth settings, allowing users to adjust the depth of the puncture and minimize discomfort.
5. Clear Cap: Used with the lancing device and sterile lancet to draw a blood sample from the forearm or palm.
6. Sterile Lancets: Used with the lancing device to draw a blood sample. Sterile lancets are inserted into the lancing device with each blood draw and discarded after use.
7. Control Solution: Verifies the proper operation of the blood glucose monitoring system by checking the test strips and meter against a pre-calibrated control solution. Control Solution 1 is all you need most of the time. Control Solution 0 and Control Solution 2 are also available if you want to do a level 0 or level 2 test. The three levels of control solution, CTRL 0, CTRL 1 and CTRL 2 are available in the *On Call® Plus* Glucose Control Solution package which is sold separately.
8. Carrying Case: Provides portability for blood glucose testing wherever you go.
9. User's Manual: Provides detailed instructions on using the blood glucose monitoring system.
10. Quick Reference Guide: Provides a brief overview of the blood glucose monitoring system and testing procedures. This small guide can be kept in your carrying case.
11. Warranty Card: Should be completed and returned to the distributor to qualify for the 5-year meter warranty.

On Call® Plus Blood Glucose Meter

The meter reads the test strips and displays the blood glucose concentration. Use this diagram to become familiar with all the parts of your meter.



Liquid Crystal Display (LCD): Shows your test results and helps you through the testing process.

M Button: Recalls previous test results from the meter memory and performs other menu selection functions.

S Button: Selects meter settings and performs other menu selection functions.

Strip Port: Test strips are inserted into this area to perform a test.

Battery Carrier: The battery carrier is located on the back of the meter.

Code Chip Slot: Insert the code chip here.

Code Chip: For coding the meter. A new code chip comes with every box of test strips.

Data Port: Sends information to a computer via an optional data transfer cable. Allows you to view, analyze and print stored data in the meter. The data transfer cable is available for order as an optional add-on.

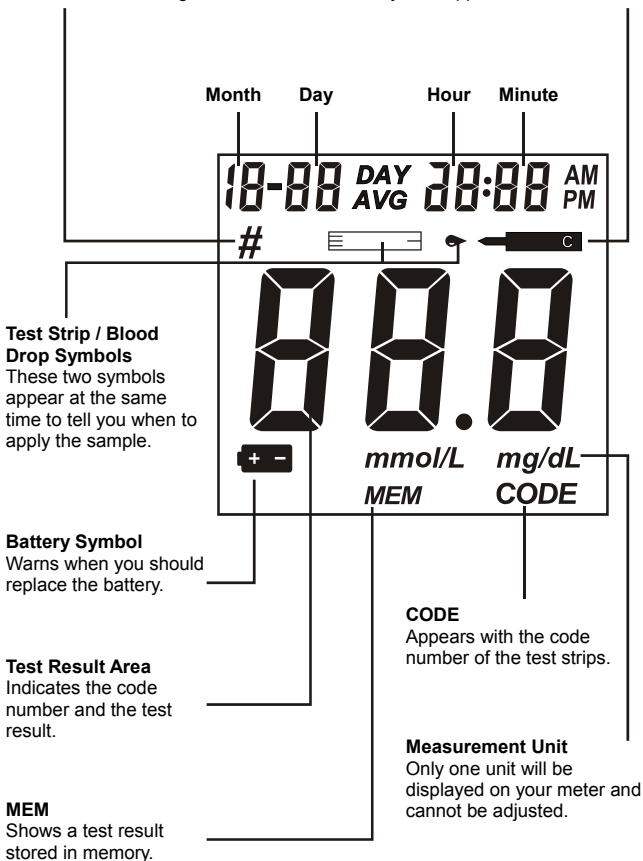
Meter Display

Pound Sign (#)

Appears with the control solution test result or when you mark an invalid result to prevent it from being included in the averages.

Control Solution Symbol

Indicates a control test result. A pound sign (#) will also be displayed when control solution symbol appears.



Meter Use and Precautions

- The meter is pre-set to display blood glucose concentration in either millimoles per liter (mmol/L) or milligrams per deciliter (mg/dL) depending on which unit of measure is standard in your country. This unit of measure cannot be adjusted.
- Meter will shut off by itself after 2 minutes of inactivity.
- Do not get water or other liquids inside the meter.
- Keep the strip port area clean.
- Keep your meter dry and avoid exposing it to extremes temperature or humidity. Do not leave it in your car.
- Do not drop the meter or get it wet. If you do, check the meter by running a quality control test. Refer to **Quality Control Test** on page **14** for instructions.
- Do not take the meter apart. This will void the warranty.
- Refer to the **Caring for Your Meter** section on page **31** for details on cleaning the meter.
- Keep the meter and all associated parts out of the reach of children.

Note: Follow proper precautions and all local regulations when disposing of the meter and used battery.

Note: Ensure that the code number on the *On Call® Plus* code chip matches the code number on the *On Call® Plus* test strip vial or on the individual strip pouch. If the code number on the code chip does not match the code number on the test strip vial label or on the individual strip pouch an erroneous result can be obtained. Contact the local distributor to correct the problem.

All Glucose Systems Preventive Warnings with Regard to EMC:

1. This instrument is tested for immunity to electrostatic discharge as specified in IEC 61000-4-2. However, use of this instrument in a dry environment, especially if synthetic materials are present (synthetic clothing, carpets, etc.) may cause damaging static discharges that may cause erroneous results.
2. This instrument complies with the emission and immunity requirements described in EN61326-1 and EN61326-2-6. Do not use this instrument in close proximity to sources of strong electromagnetic radiation, as these may interfere with proper operation of the meter.
3. For professional use, the electromagnetic environment should be evaluated prior to operation of this device.

On Call® Plus Blood Glucose Test Strips

The *On Call® Plus* Blood Glucose Test Strips are thin strips with a chemical reagent which work with the *On Call® Plus* Blood Glucose Meter to measure the glucose concentration in whole blood. After the strip is inserted into the meter, blood is applied to the sample tip of the test strip, it is then automatically absorbed into the reaction cell where the reaction takes place. A transient electrical current is formed during the reaction and the blood glucose concentration is calculated based on the electrical current detected by the meter, then the result is shown on the meter display. The meter is calibrated to display plasma equivalent results.

Sample Tip

Apply blood or control solution here.



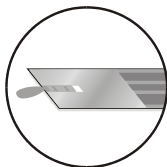
Check Window

Check to confirm that sufficient sample has been applied.

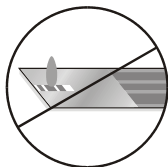
Contact Bars

Insert this end of the test strip into the meter until it stops.

IMPORTANT: Apply the sample only to the sample tip of the test strip. Do not apply blood or control solution to the top of the test strip. This may result in an inaccurate reading.

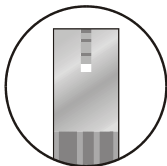


Correct

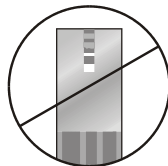


Incorrect

Hold the blood drop to the sample tip of the test strip until the check window is completely full and until the meter begins to count down. If the check window does not fill, do not add more blood to the test strip. You may get an E-5 message or an inaccurate test result. Discard the strip and retest. Even if the meter begins to countdown but the check window does not fill, discard the strip and begin the test again with a fresh test strip.

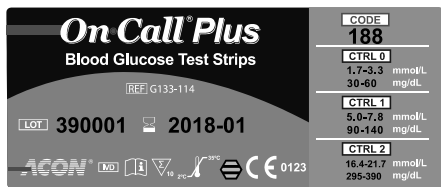


Correct



Incorrect

Code Number



Each package of test strips is printed with a code number (CODE), lot number (LOT), unopened expiration date (📅) and control range (CTRL 0, CTRL 1 and CTRL 2).

Storage and Handling

Please review the following storage and handling instructions:

- Store test strips in a cool, dry place at room temperature, 2-35°C (36-95°F). Store them away from heat and direct sunlight.
- Do not freeze or refrigerate.
- Do not store or use test strips in a humid place such as a bathroom.
- Do not store the meter, the test strips or control solution near bleach or cleaners that contain bleach.
- Replace the cap on the test strip vial immediately after removing a test strip.
- The test strip should be used immediately after removing it from container.
- Do not use your test strips past the unopened expiration date printed on the label. Using test strips past the unopened expiration date may produce incorrect test results.

Note: The expiration date is printed in Year-Month format. 2018-01 means January, 2018.

Special Instructions for Test strip in the Vial

- Test strips must be stored in the original vial with the cap tightly closed to keep them in good working condition.
- Do not store test strips outside their protective vial. Test strips must be stored in the original vial with the cap tightly closed.
- Do not transfer test strips to a new vial or any other container.

- Replace the cap on the test strip vial right away after removing a test strip.
- A new vial of test strips may be used for 6 months after first being opened. The opened expiration date is 6 months after the date the vial was first opened. Write the opened expiration date on the vial label after opening. Discard the vial 6 months after you first open it. Usage after this period may result in inaccurate readings.

Special Instructions for Test Strip in the Foil Pouch

- Tear the pouch carefully starting from the tear gap. Avoid damaging or bending the test strip.
- Use test strip immediately after removing it from the pouch.

Test Strip Precautions

- For *in vitro* diagnostic use. Test strips are to be used only outside the body for testing purposes.
- Do not use test strips that are torn, bent, or damaged in any way. Do not reuse test strips.
- Before running a blood glucose test, make sure that the code number on the meter display matches the number shown on the test strip vial or on the pouch.
- Keep the test strip vial or the foil pouch away from children and animals.
- Consult your physician or healthcare professional before making any changes in your treatment plan based on your blood glucose test results.

See the test strip insert for more details.

On Call® Plus Glucose Control Solution

The *On Call® Plus* Glucose Control Solution contains a known concentration of glucose. It is used to confirm that your *On Call® Plus* Blood Glucose Meter and test strips are working together properly and that you are performing the test correctly. It is important to run a quality control test regularly to make sure you are getting correct results.

You should run a quality control test:

- Before you first use your meter, to familiarize yourself with its operation.
- Before using a new box of test strips.



- When you suspect that the meter or test strips are not working properly.
- When you suspect that your test results are inaccurate, or if they are inconsistent with how you feel.
- When you suspect your meter is damaged.
- After cleaning your meter.
- At least once a week.

Refer to **Quality Control Test** on page **14** for instructions on running a quality control test.

Storage and Handling

Please review the following storage and handling instructions:

- Store the control solution at room temperature, 2-35°C (36-95°F).
- Do not refrigerate or freeze.
- If the control solution is cold, do not use until it has warmed to room temperature.
- Use before the unopened expiration date that is shown on the bottle.

Note: The expiration date is printed in Year-Month format. 2018-01 means January, 2018.

- The control solution will expire 6 months after the bottle is opened for the first time. After opening the bottle for the first time, record this opened expiration date on the bottle label.

Control Solution Precautions

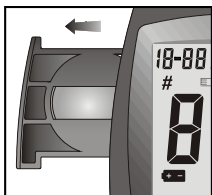
- For *in vitro* diagnostic use. The control solution is for testing only outside the body. Do not swallow or inject.
- Shake well before using.
- Control solution tests are designed to be accurate only when tested between 10 and 40 °C (50-104 °F).
- The control ranges shown on the test strip vial (or on the foil pouch) are not recommended ranges for your blood glucose level. Your personal blood glucose target ranges should be determined by your diabetes healthcare professional.
- Do not touch the test strip with the tip of the control solution bottle.
- Use only the same brand of control solution that was provided with your kit.

See the control solution insert for more details.

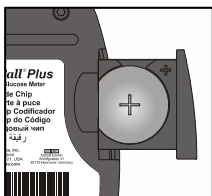
Installing the Battery

Battery may not be preinstalled in the meter. One CR 2032 3.0 V coin cell battery is required. Please find the battery in your carrying case and install it according to the following steps:

1. Pull the battery carrier on the left side of the meter. The battery carrier should be easily opened with your finger.



2. Place a new CR 2032 3.0 V coin cell battery. Make sure it is aligned with the (+) side facing up in the battery carrier.



3. Close the battery cover and make sure that it snaps shut.

Meter Setup Before Testing

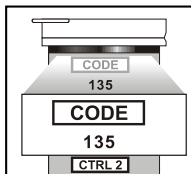
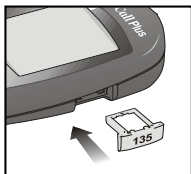
Before testing, the following steps should be followed:

Step 1 – Coding the Meter

Simply insert the code chip to code the meter. Every time you change to a new box of test strips, you need to insert the code chip packed with the new box of test strips. You can see the code number appears on the meter. Make sure this number matches the code number printed on the test strip vial label (or on the foil pouch) and the number printed on the code chip. Note: Ensure that the code number on the *On Call® Plus* code chip matches the code number on the *On Call® Plus* test strip vial or on the individual strip pouch. If the code number on the code chip and displayed on the meter does not match the code number on the test strip vial label or on the individual strip pouch an erroneous result can be obtained. Contact the local distributor to correct the problem.

You can easily find a code chip in your starter kit box. This code chip is used with the test strip packed in your carrying case when you first open the carrying case. If there is already one code chip inserted, remove it and insert the new code chip.

1. Take the code chip from the test strip box. Compare the code number on the code chip with the code number printed on the test strip vial label (or on the foil pouch). If the two numbers are not the identical, you may get inaccurate results. If the code number on the code chip does not match the number on the vial or foil pouch of strips with which it was packaged, please contact your local dealer immediately.
2. With your meter turned off, insert the new code chip into the code chip slot of the meter. It should easily snap into place. The code chip should remain in the meter, do not take it out until you change to another new box of test strips.



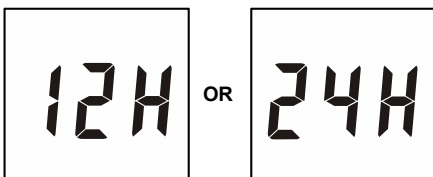
Note: If a test strip is inserted and no strip code is stored in memory, the display will flash “--- CODE”.

Step 2 – Adjusting the Meter Settings

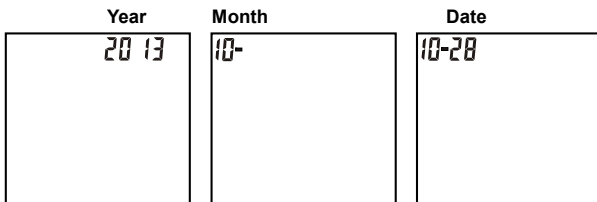
Adjust the meter settings to set the clock, ensuring that results stored in the memory are shown with the correct date and time. You can also turn the meter audio feature on or off. You need to adjust the meter settings before you first use your meter.

You will need to set the clock settings after replacing the battery.

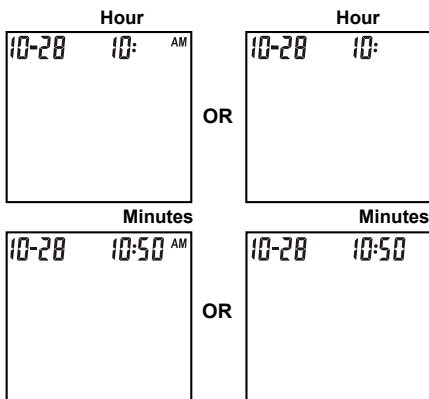
1. Press the S button to enter the meter setup mode. The meter will automatically enter the setup mode when turned on for the first time by any method.
2. First, set the clock for either 12 or 24 hour mode. Press the M button to switch between the two settings, then press the S button to save your choice and start setting the year, month and date.



3. The year will appear at the top of the display. Press the M button until the correct year is displayed. Once you have selected the correct year, press the S button to save your choice and start setting the month. Press the M button until the correct month is displayed, then press the S button to save your choice and start setting the date. Press the M button until the correct date is displayed, then press the S button to save your choice and start setting the time.



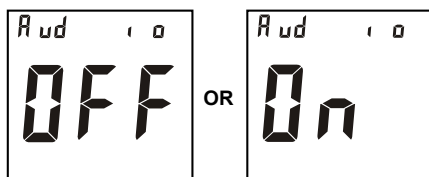
4. The hour will appear at the top of the display. Adjust the hour with the M button until the correct hour is displayed. Press the S button to save your choice and set the minutes. Press the M button to change to the correct minute. Press the S button to save your choice and move to set the audio feature.



5. Audio Feature:

The meter comes with the meter audio feature enabled. The meter will give one short beep when it is turned on, after sufficient sample has been applied to the test strip and when the result is ready. The meter will sound three short beeps to sound a warning when an error has occurred. Please check the error number on the display to confirm what kind of error has occurred.

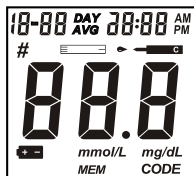
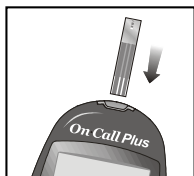
Press the M button to switch between turning the meter beep "On" and "Off". Press the S button to confirm your selection. Pressing S at this point will end the set up mode and power off the meter.



Performing a Quality Control Test

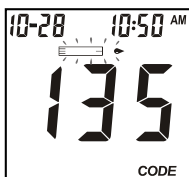
The quality control test confirms that the test strips and meter are working together properly, and that you are performing the test correctly. It is important to perform this test:

- Before you first use your meter.
 - Before using a new box of test strips.
 - When you suspect that the meter or test strips are not working properly.
 - When you suspect that your test results are inaccurate, or if they are inconsistent with how you feel.
 - When you suspect your meter is damaged.
 - After cleaning your meter.
 - At least once a week.
1. Insert a test strip into the strip port, contact bars end first and facing up to turn on the meter and display all the display segments. If the audio option is on, the meter will beep, signaling the meter is turned on.

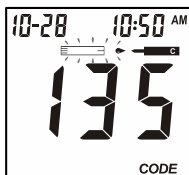


2. Check the display to confirm that all the display segments turn on (see display illustration above).
3. Following this display check, the system will enter the test mode. The display will show the date and time and the strip icon with the blood sample icon blinking. The code number will be displayed in the center of the screen. Make sure that the code number that appears on the display matches the code number (CODE) on the test strip vial (or on foil pouch). If not, make sure to locate and insert the code chip that came with the box of strips. If the codes still do not match, do not perform a test. You will need a new package of test strips to perform a test. The blinking test strip and blood drop icon indicates that the test strip is inserted correctly and a drop of control solution can be added.

Note: If the test strip has been inserted incorrectly, the meter will not turn on.



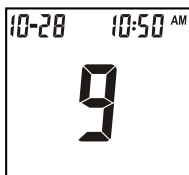
4. Press the M button to mark the test as a control solution test. Once the M button is pressed, the control solution symbol will appear on the display.

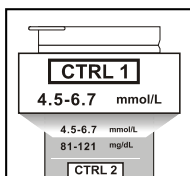
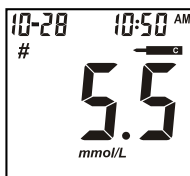


5. Shake the control solution bottle well, then squeeze it gently and discard the first drop. If the tip clogs, tap the tip gently on a clean, hard surface, shake again and then use. Squeeze out a second small drop on a clean nonabsorbent surface. Touch the sample tip of the test strip to the control solution drop. If the audio option is turned on, the meter will beep to indicate a sufficient sample has been applied.

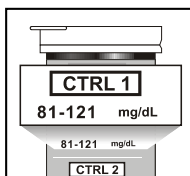
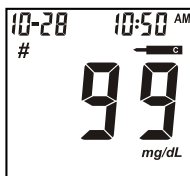
Notes:

- Do not apply control solution to the test strip directly from the bottle.
 - If the control solution sample does not fill the check window, do not add a second drop. Discard the test strip and start over with a new test strip.
6. Once a sufficient sample has been applied, the meter display will count down from 9 to 1 and then display the result. The control solution test results should be within the control range (CTRL 1) printed on the test strip vial (or on foil pouch). This means that your blood glucose monitoring system is working properly and that you are performing the procedure correctly.





OR



Test results are displayed either in mmol/L or mg/dL depending on the unit of measure most common in your country.

7. Remove and discard the test strip.

The display should also show a pound sign (#) indicating the test is a control solution test. This shows that the number will not be counted in the 7, 14 and 30-day averages. The pound sign (#) will also be displayed when reviewing the results stored in memory.

If the result falls outside the indicated control range:

- Confirm you are matching the correct range. Control Solution 1 results should be matched to the CTRL 1 range printed on the test strip vial (or on the foil pouch).
- Check the expiration date of the test strip and control solution. Make sure that the test strip vial and control solution bottle have not been opened for more than 6 months. Discard any test strips or control solution that has expired.
- Confirm the temperature in which you are testing is between 10 and 40 °C (50-104 °F).
- Make sure that the test strip vial and control solution bottle have been tightly capped.

- Make sure code number on the strip vial label or on the foil pouch matches the code number appears on the meter display.
- Confirm that you are using the same brand of control solution that was provided with your kit.
- Make sure that you followed the test procedure correctly.

After checking all of the conditions listed above, repeat the quality control test with a new test strip. If your results still fall outside of the control range shown on the test strip vial (or on the foil pouch), your meter may be defective. Please contact your local distributor for help.

Three levels of control solution are available labeled Control Solution 0, Control Solution 1 and Control Solution 2. Control Solution 1 is sufficient for most all self-testing needs. If you think your meter or strips may not be working correctly, you may also want to do a level 0 or level 2 test. The ranges for CTRL 0, CTRL 1 and CTRL 2 are displayed on the test strip vial (or on the foil pouch). Simply repeat step 4 through 6, using Control Solution 0 or Control Solution 2.

To confirm your results, Control Solution 0 tests should fall within the CTRL 0 range, Control Solution 1 tests should fall within the CTRL 1 range and Control Solution 2 tests should fall within the CTRL 2 range. If the control solution test results do not fall within their respective ranges, DO NOT use the system to test blood, as the system may not be working properly. If you cannot fix the problem, please contact your local distributor for help.

Please contact your local distributor for information on ordering the *On Call® Plus* Glucose Control Solution kit. The kit contains Control Solution 0, Control Solution 1 and Control Solution 2.

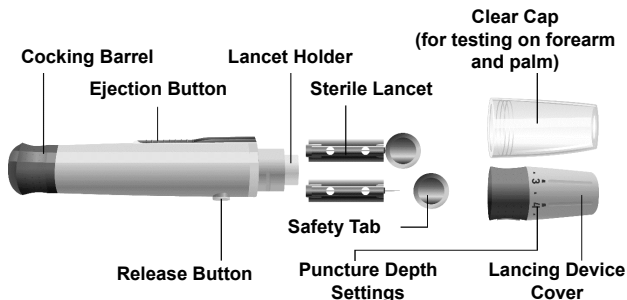
Testing Your Blood

The following steps will show how to use the meter, test strips, lancing device and sterile lancets together to measure your blood glucose level.

Step 1 – Getting a Drop of Blood

The *On Call® Plus* Blood Glucose Monitoring System requires a very small drop of blood which may be obtained from the fingertip, palm (at base of the thumb) or forearm. See page 20 for information on obtaining a blood sample from the palm or forearm. Before testing, choose a clean, dry work surface. Familiarize yourself with the procedure and make sure you have all the items needed to obtain a drop of blood.

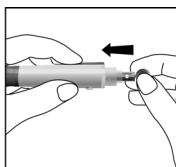
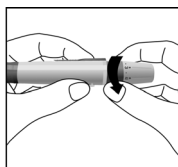
IMPORTANT: Prior to testing, wipe the test site with an alcohol swab or soapy water. Use warm water to increase blood flow if necessary. Then dry your hands and the test site thoroughly. Make sure there is no cream or lotion on the test site.



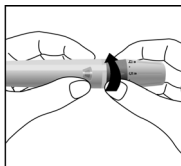
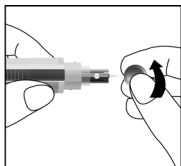
Fingertip Testing

For fingertip sampling, adjust the depth penetration to reduce the discomfort. You do not need the clear cap for fingertip sampling.

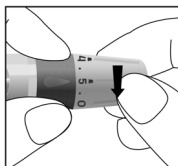
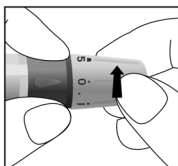
1. Unscrew the lancing device cover from the body of the lancing device. Insert a sterile lancet into the lancet holder and push it until the lancet comes to a complete stop in the lancing device.



2. Hold the lancet firmly in the lancing device and twist the safety tab of the lancet until it loosens. Then pull the safety tab off the lancet. Save the safety tab for lancet disposal.
3. Carefully screw the cover back onto the lancing device. Avoid contact with the exposed needle. Make sure the cover is fully sealed on the lancing device.



4. Adjust the puncture depth by rotating the lancing device cover. There are a total of 11 puncture depth settings. To reduce the discomfort, use the lowest setting that still produces an adequate drop of blood.

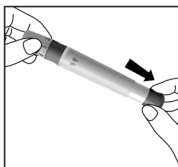


Adjustments:

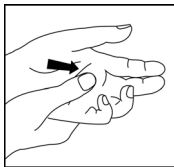
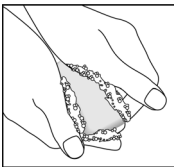
- 0 – 1.5 for delicate skin
- 2 – 3.5 for normal skin
- 4 – 5 for calloused or thick skin

Note: Increased pressure of the lancing device against the finger will also increase the puncture depth.

5. Pull the cocking barrel back to set the lancing device. You may hear a click; while the release button changes to orange to indicate the lancing device is now loaded and ready for obtaining a drop of blood.

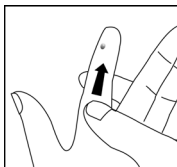
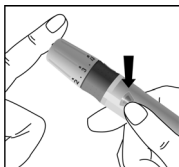


6. Prior to testing, wipe your hands with an alcohol swab or wash your hands with soap. Use warm water to increase blood flow in your fingers if necessary. Dry your hands thoroughly. Massage your hand from the wrist up to the fingertip a few times to encourage blood flow.



7. Hold the lancing device against the side of the finger to be lanced with the cover resting on the finger. Push the release button to prick your fingertip. You may hear a click as the lancing device activates. Gently massage your finger from the base to the tip of the finger to obtain the required blood volume. Avoid smearing the drop of blood.

For the greatest reduction in pain, lance on the sides of the fingertips. Rotation of sites is recommended. Repeated punctures in the same spot can make your fingers sore and callused.



Forearm and Palm Testing

The forearm and palm areas have less nerve endings than the fingertip. For that reason, you may find that obtaining blood from these sites is less painful than from the fingertip. The procedure for forearm and palm sampling is different. You need the clear cap to draw blood from these sites. The clear cap is not adjustable for puncture depth.

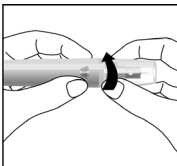
IMPORTANT: On Call® Plus Blood Glucose Monitoring System allows alternative site testing for forearm and palm testing in addition to fingertip testing. There are important differences among forearm, palm and fingertip samples that you should know. Important information about forearm and palm glucose testing:

- You should consult your healthcare professional before choosing to perform forearm or palm testing.

- When blood glucose levels are changing rapidly such as after a meal, an insulin dose or exercise, blood from the fingertips may show these changes more rapidly than blood from other areas.
- Fingertips should be used if testing is within 2 hours of a meal, an insulin dose or exercise and any time you feel glucose levels are changing rapidly.
- You should test with the fingertips anytime there is a concern for hypoglycemia or you suffer from hypoglycemia unawareness.

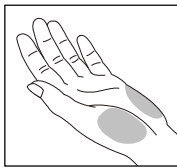
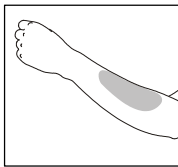
Please refer to **Fingertip Testing** to insert the lancet and load the lancing device.

1. Screw the clear cap onto the lancing device.

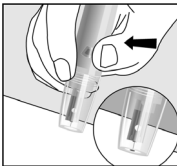


2. Choose a puncture site on the forearm or palm. Select a soft and fleshy area of the forearm or palm that is clean and dry, away from bone, and free of visible veins and hair.

Note: *To bring fresh blood to the surface of the puncture site, massage the puncture site vigorously for a few seconds until you feel it getting warm.*

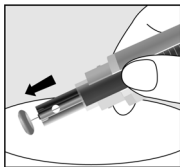
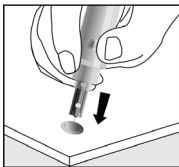


3. Place the lancing device against the puncture site. Press and hold the clear cap against the puncture site for a few seconds. Press the release button of the lancing device. **Do not immediately lift the lancing device** from the puncture site. Continue to hold the lancing device against the puncture site until you can confirm a sufficient blood sample has formed.



Disposal of the Lancet

1. Unscrew the lancing device cover. Place the safety tab of the lancet on a hard surface. Carefully insert the lancet needle into the safety tab.
2. Press the release button to make sure that the lancet is in the extended position. Slide the ejection button forward to discard the used lancet. Place the lancing device cover back on the lancing device.



Lancet Precautions

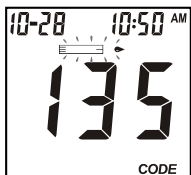
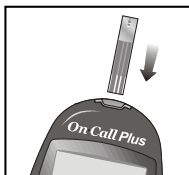
- Do not use the lancet if the safety tab is missing or loose when you take the lancet out of the bag.
- Do not use the lancet if the needle is bent.
- Use caution whenever the lancet needle is exposed.
- Never share lancets or the lancing device with other people.
- In order to reduce the risk of infection from prior use of the instrument, always use a new, sterile lancet. Do not reuse lancets.
- Avoid getting the lancing device or lancets dirty with hand lotion, oils, dirt or debris.

Step 2 – Testing Blood Glucose

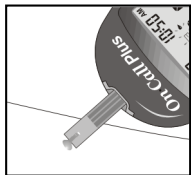
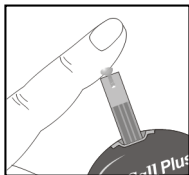
Note: Insertion of a new test strip at any time, except while in the data transfer mode (detailed on page 29) will cause the meter to automatically enter the test mode.

1. Insert a test strip into the strip port, contact bars end first and facing up, to turn on the meter and display all the display segments. If the audio option is on, the meter will beep, signaling the meter is turned on.

Make sure that the code number that appears on the display matches the code number (CODE) on the test strip vial (or on foil pouch). If not, make sure to locate and insert the code chip that came with the box of strips. If the codes still do not match, do not perform a test. You will need a new package of test strips to perform a test.



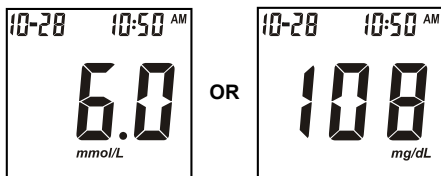
2. The blinking test strip and blood drop icon will indicate that the test strip is inserted correctly and a drop of blood can be added.
3. Touch the blood sample to the sample tip at the end of the test strip. If the audio option is turned on, the meter will also beep to indicate the sample is sufficient and the measurement has started.



DO NOT:

- Apply sample to the front or back of the test strip.
- Smear the blood drop onto the test strip.
- Press your finger against the test strip.
- Apply a second drop of blood.

4. The meter will count down from 9 to 1 and then display the measurement results. The meter will also beep to indicate that measurement is complete.



To mark invalid results and to prevent them from being included in the 7, 14 and 30-day averages, press the M and S buttons together. A pound sign (#) will appear on the display to show that the result will not be included when calculating the 7, 14 and 30-day averages. If a result is marked by accident, press the M and S buttons again to unmark the result. After marking the invalid result, run the test again with a new test strip.

If an error message appears on the display, refer to the on page 34. If a "HI" or "LO" error appears on the display, refer to "HI" and "LO" messages below.

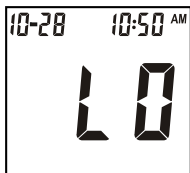
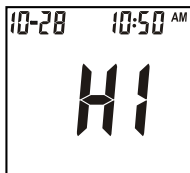
5. After inspection, record valid results in your logbook with the date and time, and compare them to the target goals set by your diabetes healthcare professional. Refer to **Suggested Testing Times and Target Goals** on page 32 for more details on your target blood glucose level goals.
6. Remove and discard the test strip.

“HI” and “LO” Messages


The meter can accurately measure blood glucose concentrations between 1.1 to 33.3 mmol/L (20 to 600 mg/dL). “HI” and “LO” messages indicate results outside of this range.

If “HI” appears on the display, the measured concentration value is above 33.3 mmol/L (600 mg/dL). The test should be retaken to ensure that no mistake was made in the procedure. If you are certain the meter is functioning properly and no mistakes were made in the procedure, and your blood glucose is still consistently measured as “HI”, it indicates severe hyperglycemia (high blood glucose). You should contact your healthcare professional immediately.

If “LO” appears on the display, the measured concentration value is below 1.1 mmol/L (20 mg/dL). The test should be retaken to ensure that no mistake was made in the procedure. If you are certain the meter is functioning properly and no mistakes were made in the procedure, and your blood glucose is still consistently measured as “LO”, it may indicate severe hypoglycemia (low blood glucose). You should treat yourself for hypoglycemia immediately as recommended by your healthcare professional.



Precautions and Limitations

- The meter, test strips and other components have been designed, tested and proven to work together effectively to provide accurate blood glucose measurements. Do not use components from other brands.
- Use only with whole blood. Do not use with serum or plasma samples.
- Do not use for testing neonates.
- Do not use the meter in any manner not specified by the manufacturer. Otherwise, the protection provided by the meter may be impaired.
- Very high (above 60%) and very low (below 25%) hematocrit can cause false results. Talk to your healthcare professional to find out your hematocrit level.
- Abnormally high levels of Vitamin C, Acetaminophen, Uric Acid, L-Dopa, Tolazamide or other reducing substances will produce falsely high blood glucose measurements.
- Fatty substances (Triglycerides up to 3,000 mg/dL or Cholesterol up to 500 mg/dL) have no major effect on blood glucose test results.
- The *On Call® Plus* Blood Glucose Monitoring System has been tested and shown to work properly up to 10,000 ft. (3,048 meters).
- Severely ill persons should not run the glucose test with the *On Call® Plus* Blood Glucose Monitoring System.
- Blood samples from patients in shock, or with severe dehydration or from patients in a hyperosmolar state (with or without ketosis) have not been tested and are not recommended for testing with *On Call® Plus* Blood Glucose Monitoring System.
- Dispose of blood samples and materials carefully. Treat all blood samples as if they are infectious materials. Follow proper precautions when disposing of materials.
- These products are labeled with  symbol to distinguish them from earlier product versions that were subject to the EN ISO 15197:2015 non-compliance. Test strips with the symbol are compatible only with the control solutions that have the same symbol. The symbol can be found on the boxes, labels and individual pouches.

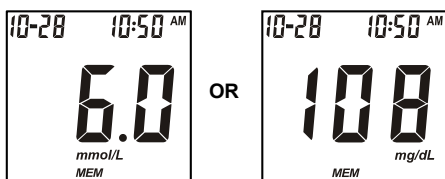
Using the Meter Memory

The meter automatically stores up to 300 test records. Each record includes the test result, time and date. If there are already 300 records in memory, the oldest record will be erased to make room for a new one. The meter will also calculate the average values of records from the last 7, 14 and 30 days.

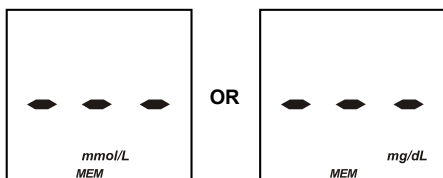
Viewing Stored Records

To view stored records:

1. Press the M button to turn the meter on and enter memory mode. The most recent value and the word "MEM" will appear on the display.



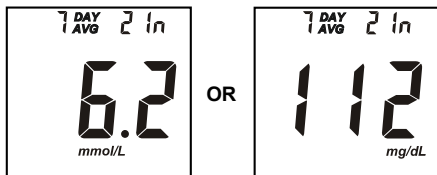
If you are using the meter for the very first time, the meter display will show three dashed lines (---), the word "MEM" and the unit of measure. This shows that no data have been stored in memory.



2. The date and time will be displayed together with the results stored in memory. A pound sign (#) indicates records that will be omitted from the 7, 14 and 30 day averages.
3. Press the M button to go through the stored records.
4. Press the S button to view the data averages. The words "DAY AVG" will appear on the screen.

Note: If you do not wish to view your average glucose measurements, you can press the S button again to turn off the display.

5. While in memory mode, press the M button to switch between the 7, 14 and 30 day averages. The meter will calculate the average that you selected. The number of records used in the "DAY AVG" will also appear in the display.



6. If there are fewer than 7, 14 and 30 days in memory, all the readings without the pound sign (#) currently stored in memory will be averaged.

If you are using the meter for the very first time, no value will appear on the display. This means that no records have been stored in memory.

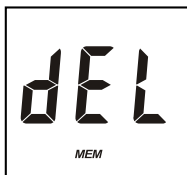
7. Press the S button to turn off the display.

Note: Results from quality control tests will not be included in the averages. When viewing results in memory, the values are marked with a pound sign (#) to show that they will not be included in the 7, 14 and 30 day averages.

Clearing the Memory

Extreme caution should be used when clearing the memory. This is not a reversible operation. To clear the memory:

1. With the meter powered off, press and hold the M button for three seconds. This will turn on the meter and enter the delete mode.



2. To clear the memory, press and hold both the M and S buttons for two seconds.
3. The display will show "MEM" and "--", the meter will clear its memory and after a moment turn itself off.
4. If you entered the delete mode but want to exit without deleting the recorded data, press the S button. This will turn the meter off without deleting any data.

Transferring Records

The meter can transfer stored information to a Windows-based personal computer (PC) using an optional data transfer cable and software package. To use this feature, first install the software packaged with the data transfer cable. Then follow these steps:

1. Turn on the PC and connect the data transfer cable to the serial port on the PC and to the data port on the meter.
2. Press and hold the S button on the meter to enter the data transfer mode. "PC" will appear on the display when the meter enters the data transfer mode.



3. Run the PC software, and enable the data transfer mode. Refer to the instructions packaged with the data transfer cable for this operation.
4. During the data transfer, the meter will display "to" and "PC". This indicates the data is being transferred from the meter to the PC.
5. Once the data transfer is complete, the meter will display "End" and "PC" and after a moment the meter will turn itself off.
6. If you entered the data transfer mode but want to exit before performing the data transfer procedure, press the S button. This will turn the meter off and exit the PC mode.

See the package insert included with your Data Management Kit for detailed instructions.

Maintenance

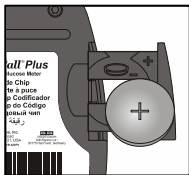
Proper maintenance is recommended for best results.

Replacing the Battery

When the battery icon (+ -) appears, it means the battery is running low and you should replace the battery as soon as possible. An "E-6" error message will appear if the battery is too low to perform any more blood glucose tests. The meter will not function until the battery is replaced.

Instructions:

1. Make sure the meter is off before removing the battery.
2. Pull the battery carrier on the left side of the meter. The battery carrier should be easily opened with your finger.
3. Remove and discard the old battery. Replace it with a fresh CR 2032 3.0 V coin cell battery. Make sure it is aligned with the (+) side facing up in the battery carrier.



4. Close the battery carrier and make sure that it snaps shut.
5. Recheck and reset the clock setting as necessary after battery replacement to ensure time is set correctly. To set the meter clock, see **Meter Setup Before Testing** on page 11.

Caring for Your *On Call*[®] *Plus* Blood Glucose Monitoring System

Blood Glucose Meter

Your *On Call*[®] *Plus* Blood Glucose Meter does not require special maintenance or cleaning. A cloth dampened with water and a mild detergent solution can be used to wipe the outside of the meter. Take care to avoid getting liquids, dirt, blood or control solution into the meter through the strip or data ports. It is recommended that you store the meter in the carrying case after each use.

The *On Call*[®] *Plus* Blood Glucose Meter is a precision electronic instrument. Please handle it with care.

Lancing Device

Use mild soap and warm water to clean with a soft cloth as required. Carefully dry the device thoroughly. Do not immerse the lancing device.

Please refer to the lancing device insert for more details.

Suggested Testing Times and Target Goals

Tracking your blood glucose concentration through frequent testing is an important part of proper diabetes care. Your diabetes healthcare professional will help you to decide the normal target range for your glucose levels. They will also help you determine when and how often to test your blood glucose. Some suggested times are:

- When you wake up (fasting level)
- Before breakfast
- 1-2 hours after breakfast
- Before lunch
- 1-2 hours after lunch
- Before or after exercise
- Before dinner
- 1-2 hours after dinner
- Before bedtime
- After a snack
- At 2 or 3 AM, if taking insulin

You may need to test more often whenever¹:

- You add or adjust your diabetes medication.
- You think your blood glucose levels may be too low or too high.
- You are ill, or feeling uncomfortable over long periods of time.

Expected blood glucose levels for people without diabetes²:

Time	Range, mg/dL	Range, mmol/L
Fasting and Before Meals	70-100	3.9-5.6
2 Hours after Meals	Less than 140	Less than 7.8

Consult your diabetes healthcare professional to set your own optimal target ranges throughout the day².

Time of Day	Your Target Range
Waking up (Fasting level)	
Before meals	
2 hours after meals	
Bedtime	
2 AM to 3 AM	
Other	

(Note: 1 mmol/L = 18 mg/dL)

Use the logbook to record your blood glucose measurements and related information. Bring the logbook with you when you visit your doctor. Together, you can determine how well your blood glucose is being controlled. This can help you and your doctor make the best decisions about your glucose control plan.

1. Jennifer Mayfield and Stephen Havas, "Self-Control: A Physician's Guide to Blood Glucose Monitoring in the Management of Diabetes – An American Family Physician Monograph"
2. ADA Clinical Practice Recommendations, 2013. Diabetes Care, 2013, Vol.36, Supplement 1, S67-S74

Comparing Meter and Laboratory Results

Your *On Call® Plus* Blood Glucose Monitoring System and laboratory results both report the glucose concentration in the serum or plasma component of your blood. However, the results may differ somewhat due to normal variation. This is expected, but the difference under normal operating conditions should be no greater than 20%. To ensure a reasonable comparison, follow the guidelines below.

Before you go to the lab:

- Bring your meter, test strips and control solution with you.
- Make sure your meter is clean.
- Perform a quality control test to make sure the meter is working properly.
- Comparisons will be more accurate if you do not eat for at least four hours (preferably eight hours) before testing.








At the lab:

- Wash your hands before obtaining a blood sample.
- Take blood samples for a laboratory test and for your meter within 10 minutes of each other. This will ensure an accurate comparison of results.
- Never use your meter with blood that has been placed in test tubes containing fluoride or other anticoagulants. This will cause falsely low results.

Troubleshooting Guide

The meter has built-in messages to alert you of problems. When error messages appear, note the error number. Turn off the meter and then follow these instructions.

Display	Causes	Solution
Meter fails to turn on	Battery may be damaged or not be charged	Replace battery.
	Meter is too cold	If meter has been exposed to or stored in cold conditions, wait 30 minutes to allow meter to reach room temperature then repeat test.
E-0	Power On self check error	Remove battery for 30 seconds and then put battery back and turn meter on again. If problem persists, contact your local dealer.
E-1	Internal calibration check error	If a cell phone, radio frequency source or a high On/Off electrical source is nearby, place more distance between the meter and any of these sources then retest. If the problem persists, please contact your local distributor.
E-2	Test strip was removed during the test	Repeat the test and ensure test strip remains in place.
E-3	Sample was applied to the test strip too soon	Repeat test and apply sample after blood drop/test strip icon appears.
E-4	Test strip is contaminated or used	Repeat the test with a new test strip.
E-5	Insufficient sample	Repeat the test and apply enough sample to fill the test strip check window.
H1.t	Temperature has exceeded the operating temperature of the system	Move to a cooler environment and repeat the test.
L0.t	Temperature is below the operating temperature of the system	Move to a warmer environment and repeat the test.

Display	Causes	Solution
	Battery is low but has enough power to run 10 more tests	Test results will still be accurate, but replace the battery as soon as possible.
	Battery is discharged and the meter does not allow more tests until replacement with a new battery	Replace the battery and repeat the test.
	No code chip in the meter	Insert the code chip that accompanied the box of test strips.
	Damaged code chip or the code chip was removed during a test	If the code chip is damaged, use a new code chip with the correct code number and run the test. If the chip is removed during a test, confirm the code chip matches the test strip code and repeat the test.
	Meter electronics failure	If the problem persists, please contact your local distributor.
	Non <i>On Call® Plus</i> code chip inserted in the meter	Please make sure you use the <i>On Call® Plus</i> test strip with the <i>On Call® Plus</i> Blood Glucose Meter. If the problem persists, please contact your local distributor.
	Communications failure	There is an error in transferring data to the PC. See the package insert included with the Diabetes Management Kit for troubleshooting.

Specifications

Feature	Specification
Measurement Range	1.1 – 33.3 mmol/L (20 – 600 mg/dL)
Result Calibration	Plasma-equivalent
Sample	Fresh capillary whole blood
Minimum Sample Size	0.5 μ L
Test Time	10 seconds
On/Off Source	One (1) CR 2032 3.0V coin cell battery
Battery Life	12 months or approximately 1,000 tests
Glucose Units of Measure	The meter is pre-set to either millimoles per liter (mmol/L) or milligrams per deciliter (mg/dL) depending on the standard of your country.
Memory	Up to 300 records with time and date
Automatic Shutoff	2 minutes after last action
Meter Size	85 mm \times 54 mm \times 20.5 mm
Display Size	35 mm \times 32.5 mm
Weight	Approximately 49.5 g (with battery installed)
Operating Temperature	5 - 45 $^{\circ}$ C (41 - 113 $^{\circ}$ F)
Operating Relative Humidity	10 - 90% (non-condensing)
Hematocrit Range	25 – 60 %
Data Port	9600 baud, 8 data bits, 1 stop bit, no parity

Warranty












Please complete the warranty card that came with this product and mail it to your dealer to register your purchase.

If the meter fails to work for any reason other than obvious abuse within the first five (5) years from purchase, we will replace it with a new meter free of charge. For your records, also write the purchase date of your product here.

Date of purchase: _____

Note: This warranty applies only to the meter in the original purchase, and does not apply to the battery supplied with the meter.

Index of Symbols

	Consult instructions for use
IVD	For <i>in vitro</i> diagnostic use only
	Store between 2-35°C (36-95°F)
	Contains sufficient for <n> tests
	Use by
LOT	Lot Number
	Manufacturer
EC REP	Authorized Representative
STERILE R	Sterilized using irradiation
CODE	Code Number
CTRL	Control Range
REF	Catalog #
SN	Serial Number
	Do not dispose along with household waste
	Fragile, handle with care
	This Side Up
	Keep away from sunlight and heat
	Keep Dry
	The symbol distinguishes the products from earlier product versions that were subject to the EN ISO 15197:2015 non-compliance.

Index

Averaging Results	27	Setting the Clock.....	12
Battery, Replacing the	30	Specifications.....	36
Carrying Case	1	Procedure	
Clearing the Memory	28	Precautions and Limitations.....	25
Data Port	3	Testing Your Blood.....	18
Date Format	7,9	Quality Control Test	14
Guidelines	i	Control Solution.....	8
Hematocrit	36	How to Run.....	14
Install the Battery	10	Results	
Lancing Device	1,18,31	Blood Glucose.....	24
Lancets	1,18	Control Solution.....	16
Maintenance and Disposal	5,22	Meter vs. Lab Results.....	33
Measure, Unit of	5,16	Target Goals.....	32
Meter	3	Unit of Measure.....	15,32
Audio Feature.....	13	Suggested Testing Times ...	32
Cleaning.....	28	Symbols, Index of	38
Code chip.....	2	Test Strip	6
Display.....	4	Code.....	7
Error Messages.....	34,35	Expiration.....	7
"HI" and "LO" Messages.....	25	Precautions.....	8
M Button.....	3	Testing Your Blood	18
Memory.....	27	Getting a Drop of Blood....	18
Meter code.....	11	Test Blood Glucose.....	23
Meter Setup.....	11	Troubleshooting	34,35
Meter Use and Precautions...	5	Viewing Stored Records	27
S Button.....	3	Warranty	2,37

