SFRL
Medical Diagnostics

GENERAL CATALOG 2023

HEMATOLOGY BIOCHEMISTRY IMMUNOLOGY

Improve Healthcare worldwide

"Why shouldn't small and medium laboratories have access to the same level of quality and precise results as big laboratories ?"

Bringing technology within everyone's reach is a choice. We could have reserved French know-how to developed countries, but we decided to make healthcare available to all; to produce quality and performant reagents and instruments, in France and in Europe, at competitive prices.

That is why we at SFRI do not sell to sell. We have always had at heart a bigger ambition: to really improve world health. Its approach. Its access.

How to achieve this ambition?
First, we rely on the NEOVITEA group which offers all the skills SFRI needs.Then, we keep listening to our partners, their needs and theirs recommendations. They are the ones in the field. They guide us. Together we grow and work to improve healthcare worldwide. Finally, we stay motivated and keep pioneering.

I'm proud to say that during our last annual seminar, my team associated 4 words to SFRI: "Warmth, Adventure, Diversity and Ambition". This idea is really stimulating for the businessman that I am.

We put together our project and decided that SFRI should "aim to make Healthcare accessible to all" and make sure that we remain "a Human Adventure for Life".

And for that, I know I can count on my dedicated staff to meet any upcoming challenges. We will keep on sharing our know-how, developing our product range and bettering our customer care. My team is experienced, motivated but what's more, they are confident in SFRI's future.

Gilles Mougin, NEOVITEA CEO (SFRI's CEO)

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HEMIX 3-60

Premium analyzer, with 2 reagets only

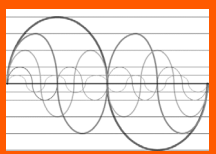
3-part diff - 60 tests / h

2 REAGENTS ONLY

PREMIUM ANALYZER

OUR BESTSELLER ONLY BETTER

RELIABLE & PRECISE



PRECISION AND RELIABILITY
Perfect CVs, reliability, repetability and reproducibility
DESIGNED FOR ALL DEMANDING LABS

ECONOMY
Limited cost per test - low consumption
+2 reagents only + high stability reagents
→ a winning situation

USER FRIENDLY
Latest state of the art user-friendly SFRI's software

Parameters	WBC, Lymph#, Mid#, Gran#, Lymph%, Mid%, Gran%, RBC, HGB, MCV, MCH, MCHC, RDW-CV, RDW-SD, HCT, PLT, MPV, PDW, PCT, P-LCR, P-LCC
Measuring principles	Impedance technology for blood cell counting and cyanide-free optical detection for hemoglobin
Performance	<table><tr><th>Parameter</th><th>Linearity Range</th><th>Accuracy (CV%)</th></tr><tr><td>WBC (10^9/L)</td><td>1.0~10.0</td><td>≤ 2.0% (7.0~15)</td></tr><tr><td></td><td>10.1~99.9</td><td>≤ 3.5% (4.0~6.9)</td></tr><tr><td>RBC (10^{12}/L)</td><td>0.30~1.00</td><td>≤ 1.5% (3.5~6.5)</td></tr><tr><td></td><td>1.01~7.00</td><td></td></tr><tr><td>HGB (g/L)</td><td>20~70</td><td>≤ 1.5% @ (100~180)</td></tr><tr><td></td><td>71~240</td><td></td></tr><tr><td>PLT (10^9/L)</td><td>20~100</td><td>≤ 5.0% (100~149)</td></tr><tr><td></td><td>101~999</td><td>≤ 4.0% (150~500)</td></tr></table>
Quality control	Levey Jennings charts and calculation of Mean, SD, CV; up to 9 control files, 31 runs/ file.
Throughput	60 tests per hour
Sample volume	Venous ≤ 14 µl Pre-diluted ≤ 20 µl
Memory storage	50 000 patients files - Multiple conditions query available - LIS transfer HL7 protocol
Input / Output	External monitor - RS232 x 1; USB port x 4 ; Ethernet x 1 Mouse, keyboard and barcode reader (optional)
Printout	Fast thermal printer, 57.5 mm wide paper, recording width 48 mm Optional external printer, Ink jet or laser
Display	8'' TFT LCD touchscreen, high resolution 800 x 600, true colors
Interface	Multilingual Linux® software highly user-friendly & intuitive
Operating environment	Temperature 18°C - 30°C Humidity < 70 Atmospheric pressure 70 - 106 kPa
Power requirements	A.C. 110 / 220 V ± 10%; 50 - 60 Hz ; Input : ≤ 150VA - Fuse: A.C. 230V; 3.15 A
Dimensions & weight	330 (W) x 430 (H) x 380 (D) mm ; 23 kg

	NAME	VOLUME	REFERENCE
REAGENTS	SFRI DILUENT 3.60	20 L	HSD326
	SFRI LYSE 3.60	500 mL	HSL306
MAINTENANCE SOLUTION	SFRI CLEAN EZ 3.60	60 mL	HSC306
	SFRI CLAIR 3.60	60 mL	HSC106
	TYPE		REFERENCE
CONTROLS	BLOODTROL 16 - 3 TUBES N		R021005
	BLOODTROL 16 - 3 TUBES LNH		R021001
	BLOODTROL 16 - 6 TUBES N		R021002
	BLOODTROL 16 - 6 TUBES LNH		R021006
CALIBRATOR	BLOODCAL - 1 x 3.0 mL		R021003

HEMIX 5-60

The reference analyzer

5-part diff - 60 tests / h

REDUCED CONSUMPTION

ONLY 3 REAGENTS

DRASTIC REDUCTION OF USELESS SLIDES

FIT ANY LAB

PRECISION
precise & reliable instrument
as good results as any bigger analyzer

MODULARITY & ADAPTABILITY
4-in-1 instrument : open/closed tubes
+ manual & autoloader

USER - FRIENDLY
touchscreen & intuitive software

Parameters	CBC + 5 DIFF mode 26 parameters: WBC, LYM#&%, MON #&%, NEU#&%, EOS#&%, BAS#&%, RBC, HGB, HCT, MCV, RDW (sd/cv), MCH, MCHC, PLT, PCT, MPV, PDW (sd/cv), P-LCR, P-LCC ; 2 histograms: RBC, PLT ; 2 scattergrams: 4 diff, BASO	
Measuring principles	Laser light scatter technology for 5-part WBC diferential Impedence method for CBC: WBC(80µm), RBC & PLT (70µm) Light absorbance for HGB measurement: cyanide free method	
Reagents & sampling system	Samples Volume: 100 µL of whole blood Closed & open tube sampling with optional autosampler Stat mode, specific control materials & calibration	Reagents 3 cyanide-free reagents - 1x diluent, 2x lyse
Quality control	Separate QC database, unlimited number of QC files + Levey-Jennings graphs	
Throughput	60 tests per hour	
Optional autosampler	Capacity: 100 tubes - 10 racks with 10 sample tubes Accept primary tubes, monovette, vacutainer, vacuette Built-in barcode reader / Built-in sampler mixer Cap recognition (only capped tubes are mixed & processed) Dimensions: 300 (W) x 300 (D) x 180 (H) mm Weight: 10 kg	
Display	User interface 600 x 800 color graphics LCD, touchscreen 10.4''	
Printout	External Microsoft Windows®compatible printers	
Memory storage	100 000 records	
Input / Output	External keyboard - PS/2 or USB, RS232, USB, Ethernet	
Interface	Windows® 8.1 embedded, multilingual, multiuser mode (multi level user modes with individual identification ex: username, password ...), software upgrade via USB port (USB memory stick)	
Operating environment	Temperature 15°C - 35°C Relative humidity max 80% (non-condensing)	
Power requirements	A.C. 110 / 220 V ± 10%; 50 - 60 Hz Input power 400 W	
Dimensions & weight	400 (W) x 450 (H) x 500 (D) mm ; 35 kg	

	NAME	VOLUME	REFERENCE
REAGENTS	SFRI DILUENT 5.1	20 L	HSD512
	SFRI LYSE 5.1	5 L	HSL551
	SFRI QUENCH 5.1	1 L	HSL502
MAINTENANCE SOLUTION	SFRI CLAIR 5.1	60 mL	HSC103
	TYPE		REFERENCE
CONTROLS	BLOODTROL 22 - 3 x 3 TUBES LNH		R024001
	BLOODTROL 22 - 12 x 3 TUBES LNH		R024002
	BLOODTROL 22 - 3 x 3 TUBES N		R024006
	BLOODTROL 22 - 6 x 3 TUBES N		R024007
CALIBRATOR	BLOODCAL - 1 x 3.0 mL		R021003

HEMIX 5-PRIME

SOON Launched end of 2023

SOON TO COME

LOWER CONSUMPTION
ON ITS MARKET

19.8 µL SAMPLING

XL
TOUCHSCREEN
FOR OUR NEWEST
SOFTWARE

3 REAGENTS ONLY
ON A 5-PART DIFF

€

VERY LOW COST PER TEST
19.8 µl sampling only + 3 reagents only
+ 20-50% less reagents consumption
→ ECONOMICAL INSTRUMENT

EASY TO MAINTAIN
clients & service engineer will love it

XL TOUCHSCREEN 14''
To display all results, alarms, scattergrams
and kinectics graphs on 1 screen !

Parameters	Whole Blood Mode: WBC, Neu%, Lym%, Mon%, Eos%, Bas%, Neu#, Lym#, Mon#, Eos#, Bas#, RBC, HGB, MCV, MCH, MCHC, RDW-CV, RDW-SD, HCT, PLT, MPV, PDW, PCT, P-LCC, P-LCR; 4 Research Parameters: ALY%, LIC%, ALY#, LIC# 3 Histograms: Baso , RBC, PLT 1 Scattergram for WBC Differential
Measuring principles	Flow cytometry technology for 5-part WBC differential Impedance method for CBC: WBC, RBC and PLT Coloric method for HGB determination
Performance	Parameters Linearity — Precision CV% WBC 1 ~ 300 x 10^9/L — ≤ 2.0% (3.5 ~ 15.0) RBC 0.3 ~ 7 x 10^{12}/L — ≤ 1.5% (3.5 ~ 6.0) HGB 20 ~ 240 g/L — ≤ 1.5% (110 ~ 180) HCT 0 ~ 75 % PLT 10 ~ 7000 x 10^9/L — ≤ 4.0% (100 ~ 500) MCV — ≤ 1.0% (70 ~ 120) fL
Quality control	Separate QC database, unlimited number of QC files Levey-Jennings + X-B QC program + X-AVG QC + X-AVG R QC
Throughput	60 tests per hour
Sample volume	Whole blood 19.8 µL Capillary & Pre-diluted 26 µL
Memory storage	+ 100 000 records including numeric and graphs
Input / Output	4 x USB - Bidirectionnal LIS via LAN port support HL7 protocol
Printout	External laser / InkJet printer compatible printers
Display	8" LCD screen, high resolution 800 x 600, colorful - soon touchscreen
Interface	14" full color touchscreen supporting a 100% SFRI's software
Operating environment	Temperature 15°C - 30°C Humidity < 85% (non-condensing) Atmospheric pressure 70 - 106 kPa
Power requirements	A.C. 100 / 220 V ± 10%; 50 - 60 Hz ; Input power 300 VA
Dimensions & weight	375 (W) x 480 (H) x 517 (D) mm ; 36 kg

	NAME	VOLUME	REFERENCE
REAGENTS	SOON IN 2023		
MAINTENANCE SOLUTION			
	TYPE		REFERENCE
CONTROLS	BLOODTROL 22 - 3 x 3 TUBES LNH		R024001
	BLOODTROL 22 - 12 x 3 TUBES LNH		R024002
	BLOODTROL 22 - 3 x 3 TUBES N		R024006
	BLOODTROL 22 - 6 x 3 TUBES N		R024007
CALIBRATOR	BLOODCAL - 1 x 3.0 mL		R021003

ESR 3000

Erythrocyte Sedimentation analyzer

Fully automatic

RANDOM MODE
FOR A ROUTINE
WITH NO RESTRICTION

FAST, SIMPLE
& EFFICIENT

COST & TIME
SAVING

AUTOMATION
from manual to automatic without hesitation

ECONOMIC
easy, compact, just to make your routine lighter

FAST & RELIABLE
reading time 30 min & 60 min
equivalent to the 1 & 2 h Westergren method

Principles	Photometric infrared reading principle Automatic measurement of RBC level every 3 min
Measuring mode	30 min or 60 min correlated modified Westergren method
Capacity	30 samples processed simultaneously with random access
Throughput	60 tests per hour (30 minutes mode)
Accuracy rate	‹ 0.2 mm
Temperature accuracy	‹ 0.3° C
Reproducibility	‹ 3%; ± 2 mm
Automatic temperature correction	ESR results can be automatically adjusted to 18°C
Quality Control	Normal and pathological controls; 9 ml vials
Memory Storage	200 results per day
SFRI Vacuum Glass Tubes	Total sample volume 1.28 ml Contains sodium citrate solution 0.32 ml Tubes complete with labels
Input/output	Barcode interface (optional barcode) Parallel printer interface RS232 port for mono-directional LIS
Printout	Fast thermal printer, 57.5 mm wide paper, recording width 48 mm
Display	5” LCD touch screen Monochrome display
Operating environment	Temperature 10°C – 40°C Humidity ‹ 85% (max humidity)
Power requirements	A.C. 110/220 V ±10%; 50 – 60 Hz Consumption: 50 W
Dimensions	300(W) x 180(H) x 400(D) mm
Weight	10 kg

	NAME	TYPE	QUANTITY / VOLUME	REFERENCE
TUBES	ESR CITRATED TUBES	VACUUM GLASS TUBES	1 000 units	C030003

CONTROLS	NAME	LEVELS	QUANTITY	REF	CVS*	OVS*
	SEDTROL	NORMAL & PATHOLOGICAL	2 x 9 ml vials	R030001	115 days	28 days
			4 x 9 ml vials	R030002		

* close / open vial stability

COMPATIBLE REAGENTS

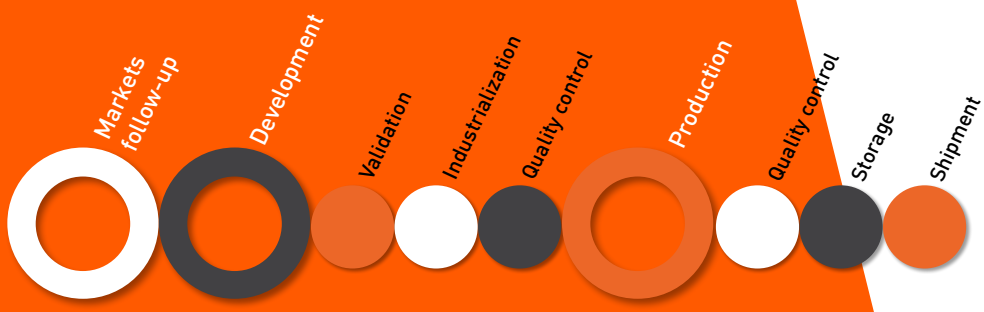
40 years experience in development and manufacturing

MORE THAN 100 REFERENCES

PRIORITY:

excellent correlation with "original" reagents

SFRI PRODUCT: LIFE CYCLE



ABBOTT®

	TYPE	NAME	REFERENCE	VOLUME
CD 1600 CD 1700 CD 1800 CD 2000	DILUENT	ISOTONIC SOLUTION LMG	HAD320	20 L
	LYSE	LYSE LMG	HAL302	2 L
	CLEANER	ISOTONIC DETERGENT LMG	HAG320	20 L
CD 3000 CD 3500 CD 3700	DILUENT	DILUTON CD 3000	HAD520	20 L
	LYSE	LYSOGLOBINE CD 3000	HAL510	10 L
	CLEANER	DILUCLAIR CD 3000	HAC512	125 mL
	SHEATH	SHEATH CD 3000	HAM510	10 L
	CLEANER FOR CD 3500 / 3700	ISOTONIC DETERGENT LMG	HAG320	20 L
CD 3200 CD RUBY	DILUENT	DILUTON CD 3200	HAD521	20 L
	LYSE	LYSOGLOBINE CD 3200	HAL506	5 L
	LYSE	LYSE HGB CD 3200	HAL505	5 L

BECKMAN COULTER®

	TYPE	NAME	REFERENCE	VOLUME
MD II ACT 3 DIFF ONYX / T SERIE	DILUENT	DILUTON 3	HCD320	20L
	LYSE	LYSOGLOBINE 3D	HCL302	1 L
	CLEANER	DILUCLAIR	HCC302	5 L
STKS MAXM GENS HMX	DILUENT	DILUTON 3	HCD320	20 L
	LYSE	LYSOGLOBINE 3D	HCL302	1 L
	CLEANER	DILUCLAIR	HCC302	5 L

DIATRON®

	TYPE	NAME	REFERENCE	VOLUME
ABACUS 3 DIFF	DILUENT	DILUTON 3	HCD320	20 L
	LYSE	LYSE REAGENT AB	HDIL301	1 L
	CLEANER	ENZYMATIC CLEANER	HDIC301	1 L
			HDIC305	5 L
ABACUS 5 DIFF	DILUENT	DILUTON 5D	HDID520	20 L
	QUENCH	DIFF 5D	HDIL502	1 L
	CLEANER	HEMACLAIR 5D	HDIC501	60 mL
	LYSE	LYSOGLOBINE 5D	HDIL501	5 L

HORIBA MEDICAL® (ABX)®

	TYPE	NAME	REFERENCE	VOLUME
MICROS 8	Diluent, lyse & cleaner available upon simple request			
MICROS 18	DILUENT	DILUTON LMG	HXD320	20 L
			HXD310	10 L
	LYSE	LYSOGLOBINE LMG2	HXL321	1 L
	CLEANER	DILUCLAIR A	HXC302	1 L
		HEMACLAIR	HXC101	500 mL
PENTRA 60 PENTRA 80 PENTRA 80 XL	DILUENT	DILUTON 5A	HXD520	20 L
	LYSE	LYSOGLOBINE Hb	HXL521	500 mL
		LYSOGLOBINE Eo	HXL522	1 L
			HXL524	500 mL
		LYSOGLOBINE BA	HXL523	1 L
	CLEANER	DILUCLAIR A	HXC302	1 L

MEDONIC®

	TYPE	NAME	REFERENCE	VOLUME
CA 530 CA 570 M16 / M20 M-SERIES	DILUENT	DILUTON 3M	HMD320	20L
	LYSE	LYSOGLOBINE 3M	HML305	5 L
	CLEANER	DILUTERGE M	HMG305	5 L

MINDRAY®

	TYPE	NAME	REFERENCE	VOLUME
BC 2300 BC 2800 BC 3000 BC 3200 BC 3600 BC 5100 BC 5180 BC 5300 BC 5380	DILUENT	DILUTON 3I	HID320	20 L
	LYSE	LYSOGLOBINE 3I	HIL301	500 mL
	CLEANER	DILUTERGE 3I	HIG320	20 L
		DILUCLAIR I	HIC301	60 mL
		HEMACLAIR I	HIC101	60 mL

NIHON KOHDEN®

	TYPE	NAME	REFERENCE	VOLUME
MEK 6318 MEK 6400	DILUENT	DILUANT LMG	HNKD320	20 L
	LYSE	LYSING REAGENT LMG	HNKL301	1 L
	CLEANER	ENZYMATIC CLEANER	HNKG005	5 L
		CHLORINATED CLEANER	HNKG301	1 L
CELTAC E 7222 CELTAC F 8222	DILUENT	DILUANT LMG	HNKD320	20 L
	LYSE	LYSING REAGENT LMG	HNKL301	1 L
		LYSOGLOBINE 5NK	HNKL501	500 mL
	CLEANER	ENZYMATIC CLEANER	HNKG005	5 L
		CHLORINATED CLEANER	HNKG301	1 L

ORPHÉE®

	TYPE	NAME	REFERENCE	VOLUME
MYTHIC 18	DILUENT	DILUTON 3O	HOD320	20L
	LYSE	LYSOGLOBINE 30	HOL301	1 L
	CLEANER	DILUCLAIR O	HOC301	1 L

PROKAN®

	TYPE	NAME	REFERENCE	VOLUME
PE-SERIES	DILUENT	DILUTON PE	HKD320	20 L
	LYSE	LYSOGLOBINE PE	HKL301	500 mL
	CLEANER	DILUTERGE PE	HKG305	5 L
	STRONG CLEANER	HEMACLAIR PE	HKC101	60 mL
	CONCENTRATED CLEANER	DILUCLAIR PE	HKC301	60 mL

RAYTO®

	TYPE	NAME	REFERENCE	VOLUME
RT-7200	DILUENT	DILUTON 3R	HRD320	20 L
RT-7600	LYSE	LYSOGLOBINE 3R	HRL301	500 mL
RT-7600S	CLEANER	DILUCLAIR 3R	HRC301	1 L

SIEMENS®

	TYPE	NAME	REFERENCE	VOLUME
ADVIA 60 & 70	Diluent, Lyse, Cleaner & Sheath -> Available upon simple request			
ADVIA 120	REAGENT PEROX 1	SF OXYDIFF 1	HTAD101	650 mL
	REAGENT PEROX 2	SF OXYDIFF 2	HTAD102	575 mL
	REAGENT PEROX 3	SF OXYDIFF 3	HTAD103	590 mL
	PEROX SHEATH	SF OXYDIFF SH	HTAD301	2.725 mL
	RBC Plt REAGENT	SF DIL R	HTAC301	2.7 L
	Hgb REAGENT	SF LYSE H	HTAC201	1.1 L
	BASO REAGENT	SF LYSE B	HTAC202	1.1 L
	SHEATH RINSE	SF RINSE SH	HTAM520	20 L
	RETIC REAGENT	SF RETIC SH	HTAR101	820 mL
	EZ CLEAN	SF CLEAN	HTAG101	810 mL
	DEFOAMER	Available upon request		

SWELAB®

	TYPE	NAME	REFERENCE	VOLUME
AC 900 AC 920 AC 970	DILUENT	DILUANT	SWD320	20 L
	LYSE	LYSING REAGENT LMG	HSWL305	5 L
	DETERGENT	DETERGENT	HLWG305	5 L

SYSMEX®

	TYPE	NAME	REFERENCE	VOLUME
K 800 K 1000 K 4500	DILUENT	DILUENT ST	HYD001	20 L
	LYSE	LYSOGLOBINE 3ST	HYL305	500 mL
			HYL350	5 L
		LYSOGLOBINE ST Hb	HYL405	500 mL
			HYL450	5 L
	CLEANER	HEMACLAIR ST	HYC050	60 mL
KX 21 KX 21N	DILUENT	DILUENT ST	HYD001	20 L
	LYSE	LYSOGLOBINE K	HYL311	500 mL
	CLEANER	HEMACLAIR ST	HYC050	60 mL

BIOCHEMISTRY

BIOCHEMISTRY

1. BSA 3000
2. IONIX
3. ISE SERIES
4. COMPATIBLE REAGENTS

1

2

3

4

BSA 3000

Robust & reliable spectrophotometer

Programmable and customizable

TOUCHSCREEN OPERATIONS

INTUITIVE SOFTWARE EASY AND FULLY PROGRAMMABLE

COST & TIME SAVING

ROBUST

no breakdown, easy maintenance, operational analyzer

ECONOMIC

open instrument: use any reagent you want

ADAPTABLE

full range of filters, programms, measuring methods, ...

Measuring method	End point, Kinetic, two point Kinetic, Fixed time, Absorbance, Turbidimetry Reagent blank, Sample blank Monochromatic & bichromatic method
Light source	Quartz halogen lamp 12V / 20W Stray light: < 1.0% at 340 nm
Optics	Filter wheel can hold up to 8 filters 7 standard filters: 340 nm, 405 nm, 492 nm, 510 nm, 546 nm, 578 nm, and 630 nm 1 free position for extra filter Bandwidth < 8 nm
Photometric range	Measuring range: 0.0000 to 3.0000 ABS Resolution: 0.0001 ABS Drift: 0.002 ABS
Flowcell	Stainless steel with quartz window Optical path: 10 mm Measuring volume: 32 µl Programmable aspiration volume: 200 - 2000 µl
Calibration	Linear Non linear up to 6 points Factor
Memory storage	3000 results per day available in memory at any time and transferable via LIS
Thermostatic control	3000 results per day available in memory at any time and transferable via LIS
Input / output	RS232 port for mono-directional LIS
Printout	Built-in thermal printer, 57.5 mm wide paper, recording width 48 mm
Display	6” LCD touch screen Mono-color display
Operating environment	Temperature 15°C – 30°C Humidity 20% - 80% (max humidity)
Power requirements	A.C. 110/220 V ±10%; 50 – 60 Hz
Dimensions & weignt	445(W) x 190(H) x 420(D) mm 9kg

IONIX

The newest, greatest ion analyzer

Create your own IONIX from scratch!

STANDARD MODEL

1 position sample rack
MCI electrodes : Na+ & K+
Test on primary tubes
High ended C++ object software
Large color touch screen
Supports LIS
Capacitive needle + independant washing system
Secure internal sampling
Complete quality control (100 results for each of the 6 levels + Levey Jenning graphs)
Integrated thermal printer
Full traceability
Closed reagent system with dongles

OPTIONS

AUTOMATION

5 positions sample rack
Autoloader 4 x 5 positions
Real continuous loading

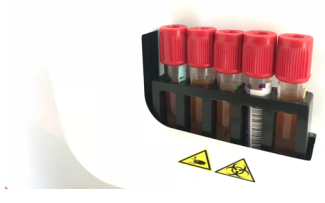
MCI ELECTRODES

Cl- electrode
Ca^{2+} electrode
pH electrode
Li^{+} electrode

MODULES

Module TCO_2
Internal sample & reagent barcode reader
12V battery connexion capability

100% MODULAR INSTRUMENT
SUITS ANY LAB
100% ACCEPTED BY LABORATORIES
NEWEST ANALYZER ON THE MARKET
MEASURE OF IONIZED CALCIUM
FULL TRACEABILITY



TEST ON PRIMARY TUBES

Principles	Ion Selective Electrode direct measurement Manometric method for TCO2
Parameters	8 parameters: Na+, K+, Cl-, Ca2+, pH, Li+, TCO2, A.G.
Sample	Serum, plasma & whole blood & other approx 120 µL Urine approx 150 µL
Throughput	60 tests / hour - without TCO2 45 tests / hour - with TCO2
Quality control	With SFRI controls : 3 levels with unlimited results per level and Levey Jenning graphs Any other control accepted
Calibration	2 points once a day
Memory storage	Infinate - depends on the SD card (8Go offered) - patients files with results & log journal & calibration
Software	C ++ object microprocessor software developed by SFRI - complete & intuitive
Reagents	Internal reference IonoRef Pathological control IonoTrol Patho IonoKit Calibrator IonoCal Normal control IonoTrol Cleaning solution IonoClean Na conditioner IonoCleanNa TCO2 Kit TCO2 reagent IonoReagTCO2 TCO2 control IonoTrol TCO2 with the TCO2 module TCO2 calibrator IonoCal TCO2
Electrodes	MCI : Micro Controller Integrated ; Non refillable, highly stable ; « Push & Plug » system
Connectivity	USB x 2 ; Ethernet (TCP/IP) or (UDP/IP)
Printer	Internal thermal printer
Display	Large backlit LCD 7" color touch screen ; High resolution 800 x 480
Operating environment	Temperature: 18 to 32°C (64. °F to 90°F) ; Humidity: 80% maximum at 32°C (90°F) Reagent storage temperature: 10°C to 40°C (50,0°F to 104,0°F)
Power requirements	A.C.: 100-240 V, 2.0 A, 50-60 Hz
Dimensions	270 x 380 x 420 mm (L x H x P)
Optional automation	Manual: 1 position rack ; Automatic: 5 positions rack ; Soon, autoloader 4 x 5 positions «walk away» true continuous loading
TCO2 module	1 easily installed module for quick & precise dosage of bicarbonates & Anion Gap measurement
6 electrodes available	1 reference electrode + 2 standard electrodes: Na+, K+ 4 optional electrodes: Cl-, Ca2+, pH, Li+

ISE SERIES

ION analyzers

Adapted to any labs need

QUALITATIVE INSTRUMENT RANGE

FULL AUTOMATION AUTOSAMPLER

EASY TO MANAGE THANKS TO THE REAGENT PACK

Models

2000 Na^+, K^+

3000 Na^+, K^+, Cl^-

4000 Na^+, K^+, Cl^-, TCO_2, A.G.

4500 Na^+, K^+, Cl^-, Li^+

5000 Na^+, K^+, Cl^-, iCa^{2+}, TCa^{2+}, pH

6000 Na^+, K^+, Cl^-, iCa^{2+}, TCa^{2+}, TCO_2, pH, A.G.

H.S.S. Electrodes

high Specificity & Sensitivity

Principles	Ion Selective Electrode direct measurement Manometric method for TCO2
Sample	Serum, plasma, urine and whole blood 150 µL Specific modes for urine and lipemic serum
Throughput	60 tests / hour - without TCO2 ; 45 tests / hour - with TCO2
Detection range	Whole blood, serum & plasma K^+ 0.5 - 15.0 mmol / L Na^+ 20 - 200 mmol / L Cl^- 20 - 200 mmol / L Li^+ 0.2 - 3.0 mmol / L Ca^{2+} 0.1 - 5.0 mmol / L pH 4.0 - 9.0 pH TCO_2 6.0 - 50.0 mmol / L Urine K^+ 50 - 250 mmol / L(pre-diluted) Na^+ 10 - 350 mmol / L Cl^- 10 - 350 mmol / L
Accuracy & reproducibility	Accuracy / Reproducibility K^+ ±0.2 mmol/L / < 1.0% Na+ ±2.0 mmol/L / < 1.0% Cl- ±2.5 mmol/L / < 1.0% Li+ ±0.1 mmol/L / < 3.0% Ca2+ ±0.1 mmol/L* / < 2.0% pH ±0.1 / < 1.0% TCO2 ±2.0 mmol/L* / < 3.0% * for plasma only
Quality control	Two levels with optional autosampler ; one level without autosampler
Calibration	Automatic: 2 points every 4h or on demande
Memory storage	256 patients files x 5 parameters each Transfer LIS mono-directional
Reagent pack	Shelf life: 12 to 18 months Standard Pack: Cal A, Cal B & waste Pack for ISE 4000 & 6000: Cal A, Cal B TCO_2 reagent
Electrodes	Long life: up to 5 years (6 months for Ca^{2+}) 12 months warranty (6 months warranty for Ca^{2+})
Input / output	Barcode interface (optional barcode) ; RS232 port for mono-directional LIS
Printout	Fast thermal printer, 57.5 mm wide paper, recording width 48 mm
Display	5" LCD touch screen with monochrome display ; multilingual interface: english, french, spanish & italian
Operating enviroment	Temperature 15°C - 32°C Humidity < 85% (max humidity)
Power requirements	A.C. 110/220 V ± 10%; 50 – 60 Hz Power: < 60 W
Dimensions & weight	390 (W) x 445(H) x 340(D) mm Main unit: 10kg Autosampler: 1.5 kg

COMPATIBLE REAGENTS

The economic & qualitative solution for labs

ELECTROLYTES
PROTEINS
ENZYMES
SUBSTRATES

QUALITATIVE RANGE

READY TO USE

A complete range of generic liquid ready-to-use reagents

high quality, stable and cost effective

excellent correlation with original products barcoded

A COMPREHENSIVE Biochemistry range for all labs

Electrolytes panel	Hepatic (liver profile)	Comprehensive metabolic panel	Basic metabolic panel	Lipid profile
Sodium (Na)	Albumine	Sodium (Na)	Sodium (Na)	Total Cholesterol
Potassium (K)	Total protein	Potassium (K)	Potassium (K)	LDL Cholesterol
Chloride (Cl)	Alkaline Phosphatase Alanine	Chloride (Cl)	Chloride (Cl)	HDL Cholesterol
Carbone Dioxyde (CO_2)	Aminotransferase (ALT)	Carbone Dioxyde (CO_2)	Carbone Dioxyde (CO_2)	Triglycerides
	Aspartate Aminotransferase (AST)	Glucose	Glucose	
	Total Bilirubin	Creatinine	Creatinine	
	Direct Bilirubin	Urea	Urea (BUN)*	
		Calcium		
		Total Protein		
		Albumine		
		Alanine Aminotransferase (ALT)	* BUN: Blood Urea Nitrogen	
		Aspartate Aminotransferase (AST)		
		Alkaline Phosphatase (ALP)		
		Total Bilirubin		

UNIVERSAL REAGENTS RANGE

	Reference	Name	Packaging	Method
ELECTROLYTES	G11BIC001	Bicarbonate	5 x 20 mL + CAL 1 x 2 mL	Enzymatic
	G11CAL001	Calcium ASX	6 x 50 mL	Arsenazo III
	G11CAL002	Calcium ASX	6 x 100 mL	Arsenazo III
	G11CAC002	Calcium OCP	6 x 100 mL	O-Cresolphtalein complexone
	G11CAC001	Calcium OCP	6 x 50 mL	O-Cresolphtalein complexone
	G11CHL001	Chloride	6 x 30 mL	Mercurious thiocyanate
	G11CHL002	Chloride	6 x 50 mL	Mercurious thiocyanate
	G11FER003	Iron	R1 5 x 80 mL / R2 1 x 100 mL	Ferene
	G11FER001	Iron	R1 5 x 40 mL / R2 1 x 50 mL	Ferene
	G11FER002	Iron	R1 6 x 40 mL + R2 6 x 10 mL	Ferene
	G11MAG002	Magnesium	6 x 50 mL	Xylidiyl Blue
	G11MAG001	Magnesium	6 x 30 mL	Xylidiyl Blue
	G11PHO001	Phosphorous	6 x 50 mL	Blue molybdate
ENZYMES	G11PAL001	ALP	R1 5 x 40 mL / R2 1 x 50 mL	DEA DGKC
	G11PAL002	ALP	R1 6 x 40 mL + R2 6 x 10 mL	DEA DGKC
	G11GPT002	ALT-GPT	R1 5 x 80 mL / R2 1 x 100 mL	Kinetic UV Optimized IFCC
	G11GPT001	ALT-GPT	R1 5 x 40 mL / R2 1 x 50 mL	Kinetic UV Optimized IFCC
	G11AMY001	Amylase	10 x 10 mL	CNPG3
	G11AMY002	Amylase	4 x 30 mL	CNPG3
	G11GOT002	AST-GOT	R1 5 x 80 mL / R2 1 x 100 mL	Kinetic UV Optimized IFCC
	G11GOT001	AST-GOT	R1 5 x 40 mL / R2 1 x 50 mL	Kinetic UV Optimized IFCC
	G11CHS001	Cholinesterase	R1 4 x 24 mL / R2 1 x 24 mL	Hexacyanoferrate III
	G11CKM001	CK MB	R1 1 x 24 mL + R2 1 x 6 mL	Enzymatic
	G11CPK002	CK NAC	R1 5 x 40 mL / R2 1 x 50 mL	Kinetic UV Optimized IFCC
	G11CPK001	CK NAC	R1 4x 24 mL / R2 1 x 24 mL	Kinetic UV Optimized IFCC
	G11GGT001	G-GT	R1 5 x 40 mL / R2 1 x 50 mL	SZASZ
	G11GGT002	G-GT	R1 6 x 40 mL + R2 6 x 10 mL	SZASZ
	G11LDH002	LDH	R1 5 x 40 mL / R2 1 x 50 mL	Kinetic Optimized SCE
	G11LDH001	LDH	R1 4 x 24 mL / R2 1 x 24 mL	Kinetic Optimized SCE
	G11LIP001	LIPASE	R1 4 x 10 mL + R2 1 x 8 mL +STD 1 x 1 mL	Colorimetric
	G11PAM001	Pancreatic amylase	R1 1 x 40 mL + R2 1 x 10 mL	EPS

	Reference	Name	Packaging	Method
SPECIFIC PROTEINS	G11APA001	APO A1	R1 1 x 40 mL + R2 1 x 10 mL	Turbidimetric
	G11APB001	APO B	R1 1 x 40 mL + R2 1 x 10 mL	Turbidimetric
	G11ASL001	ASO	R1 1 x 40 mL +R2 1 x 10 mL + CAL 1 x 1 mL	Turbidimetric
	G11BMI001	β2 Microglobin	R1 1 x 45 mL + R2 1 x 5 mL	Turbidimetric
	G11CRP001	CRP	R1 1 x 40 mL + R2 1 x 10 mL + STD 1 x 1 mL	Turbidimetric
	G11CC3001	C3	R1 1 x 40 mL + R2 1 x 10 mL	Turbidimetric
	G11CC4001	C4	R1 1 x 40 mL + R2 1 x 10 mL	Turbidimetric
	G11FIN001	Ferritin	R1 2 x 50 mL + R2 3 x 7 mL	Turbidimetric
	G11IGA001	IgA	R1 1 x 40 mL + R2 1 x 10 mL	Turbidimetric
	G11IGE001	IgE	R1 1 x 20 mL + R2 1 x 10 mL	Turbidimetric
	G11IGG001	IgG	R1 1 x 40 mL + R2 1 x 10 mL	Turbidimetric
	G11IGM001	IgM	R1 1 x 40 mL + R2 1 x 10 mL	Turbidimetric
	G11LPA001	LP (A)	R1 1 x 20 mL + R2 1 x 4 mL	Turbidimetric
	G11MIC001	MicroAlbumin	R1 1 x 40 mL + R2 1 x 10 mL + STD 1 x 1 mL	Turbidimetric
	G11RHF001	RF	R1 1 x 80 mL + R2 1 x 20 mL + CAL 1 x 1mL	Turbidimetric
	G11TRF001	Transferrin	R1 1 x 40 mL + R2 1 x 10 mL	Turbidimetric
SUBSTRATS	G11ALB002	Albumin	6 x 100 mL	BCG Bromocresol
	G11ALB001	Albumin	6x 50 mL	BCG Bromocresol
	G11BIA001	Bile acids	R1 1 x 30 mL + R2 1 x 10 mL + CAL 1 x 2 mL	Enzymatic
	G11CHO001	Cholesterol	6 x 100 mL	CHOD-PAP
	G11CRE002	Creatinine	R1 3 x 100 mL / R2 3 x 100 mL	JAFFÉ
	G11CRE001	Creatinine	R1 3 x 50 mL / R2 3 x 50 mL	JAFFÉ
	G11BID002	D Bilirubin	R1 5 x 80 mL / R2 1 x 100 mL	Jendrassik Grof Modified
	G11BID001	D Bilirubin	R1 5 x 40 mL / R2 1 x 50 mL	Jendrassik Grof Modified
	G11FRU001	Fructosamin	R1 6 x 30 mL	NBT
	G11GLU001	Glucose	6 x 100 mL	GOD-POD
	G11HDL001	HDL Cholesterol	R1 1 x 60 mL / R2 1 x 20 mL	Clearance
	G11LAC001	Lactate	5 x 10 mL LYO + 1 x 55 mL BUFFER + STD 5 mL	Enzymatic LO-POD
	G11LDL001	LDL Direct Cholesterol	R1 1 x 60 mL / R2 1 x 20 mL	Clearance
	G11BIT002	T Bilirubin	R1 5 x 80 mL / R2 1 x 100 mL	Jendrassik Grof Modified
	G11BIT001	T Bilirubin	R1 5 x 40 mL / R2 1 x 50 mL	Jendrassik Grof Modified
	G11PRT002	Total Proteins	6 x 100 mL	Biuret
	G11PRT001	Total Proteins	6 x 50 mL	Biuret
	G11TRG001	Triglycerides	6 x 50 mL	GPO-PAP
	G11TRG002	Triglycerides	6 x 100 mL	GPO-PAP
	G11URE002	BUN - Urea	R1 5 x 80 mL / R2 1 x 100 mL	Urease-GLDH
	G11URE001	BUN - Urea	R1 5 x 40 mL / R2 1 x 50 mL	Urease-GLDH
	G11ACM001	Uric Acid mono	6 x 50 mL	POD-PAP
	G11ACM002	Uric Acid mono	6 x 100 mL	POD-PAP
	G11PTU001	Urinary proteins	6 x 30 mL + STD	Pyrogallol Red
	G11PTU002	Urinary proteins	6 x 50 mL+ STD	Pyrogallol Red

HITACHI COMPATIBLE REAGENTS RANGE

	Reference	Name	Packaging	Method
ELECTROLYTES	G12CAL001	Calcium ASX	9 x 70 mL	Arsenazo III
	G12CAL002	Calcium ASX	12 x 20 mL	Arsenazo III
	G12CHL001	Chloride	10 x 20 mL	Mercurious thiocyanate
	G12FER001	Iron	R1 6 x 40 mL+ R2 6 x 10 mL	Ferene
	G12FER002	Iron	R1 8 x 63 mL + R2 2 x 73 mL	Ferene
	G12MAG001	Magnesium	12 x 20 mL	Xylidiyl Blue
	G12PH001	Phosphorous	12 x 20 mL	Blue molybdate
ENZYMES	G12PAL001	ALP	R1 6 x 59 mL + R2 6 x 17 mL	DEA DGKC
	G12PAL002	ALP	R1 8 x 63 mL + R2 2 x 73 mL	DEA DGKC
	G12GPT001	ALT-GPT	R1 6 x 59 mL + R2 6 x 17 mL	Kinetic UV Optimized IFCC
	G12GPT002	ALT-GPT	R1 8 x 63 mL + R2 2 x 73 mL	Kinetic UV Optimized IFCC
	G12AMY001	Amylase	12 x 21 mL	CNPG3
	G12GOT001	AST-GOT	R1 6 x 59 mL + R2 6 x 17 mL	Kinetic UV Optimized IFCC
	G12GOT002	AST-GOT	R1 8 x 73 mL R2 2 x 73 mL	Kinetic UV Optimized IFCC
	G12CHS001	Cholinesterase	R1 6 x 40 mL + R2 6 x 12 mL	Hexacyanoferrate III
	G12CHS002	Cholinesterase	R1 6 x 20 mL + R2 3 x 11 mL	Hexacyanoferrate III
	G12CHS003	Cholinesterase	R1 8 x 63 mL + R2 2 x 73 mL	Hexacyanoferrate III
	G12CKM001	CK MB	R1 x 40 mL + R2 1 x 10 mL	Enzymatic
	G12CPK001	CK NAC	R1 6 x 40 mL + R2 6 x 12 mL	Kinetic UV Optimized IFCC
	G12CPK002	CK NAC	R1 6 x 20 mL + R2 3 x 11 mL	Kinetic UV Optimized IFCC
	G12CPK003	CK NAC	R1 8 x 73 mL R2 2 x 73 mL	Kinetic UV Optimized IFCC
	G12GGT001	G-GT	R1 6 x 59 mL + R2 6 x 17 mL	SZASZ
	G12GGT002	G-GT	R1 8 x 73 mL R2 2 x 73 mL	SZASZ
	G12LDH001	LDH	R1 6 x 40 mL + R2 6 x 12 mL	Kinetic Optimized SCE
	G12LDH002	LDH	R1 6 x 20 mL + R2 3 x 11 mL	Kinetic Optimized SCE
	G12LIP001	Lipase	R1 1 x 40 mL + R2 1 x 8 mL + STD 1 x 1 mL	Colorimetric
SPECIFIC PROTEINS	G12ASL001	ASO	R1 1 x 56 mL + R2 1 x 19 mL + STD 1 mL	Turbidimetric
	G12BMI001	β2 Microglobin	R1 1 x 45 mL + R2 1 x 5 mL + CAL 1 x 1 mL	Turbidimetric
	G12CC3001	C3	R1 1 x 40 mL +R2 1 x 10 mL	Turbidimetric
	G12CC4001	C4	R1 1 x 40 mL +R2 1 x 10 mL	Turbidimetric
	G12CRP001	CRP	R1 2 x 56 mL + R2 2 x 19 mL + STD 1mL	Turbidimetric
	G12CRP002	CRP	R1 1 x 56 mL + R2 1 x 19 mL + CAL 1 mL	Turbidimetric
	G12FIN001	Ferritin	R1 2 x 50 mL + R2 3 x 7 mL	Turbidimetric
	G12IGA001	IgA	R1 1 x 40 mL +R2 1 x 10 mL	Turbidimetric
	G12IGE001	IgE	R1 1 x 40 mL +R2 1 x 10 mL	Turbidimetric
	G12IGG001	IgG	R1 1 x 40 mL +R2 1 x 10 mL	Turbidimetric
	G12IGM001	IgM	R1 1 x 40 mL +R2 1 x 10 mL	Turbidimetric
	G12LPA001	LP (A)	R1 1 x 20 mL + R2 1 x 4 mL	Turbidimetric
	G12MIC001	MicroAlbumin	R1 1 x 40 mL + R2 1 x 10 mL + CAL 1 x 1 mL	Turbidimetric
	G12RHF001	RF	R1 1 x 56 mL + R2 1 x 19 mL + CAL 1 mL	Turbidimetric
	G12RHF002	RF	R1 2 x 56 mL + R2 2 x 19 mL + CAL 1mL	Turbidimetric
	G12TRF001	Transferrin	R1 1 x 40 mL +R2 1 x 10 mL	Turbidimetric
SUBSTRATS	G12ALB001	Albumin	12 x 21 mL	BCG Bromocresol
	G12BIA001	Bile acids	R1 1 x 28 mL + R2 1 x 12 mL + CAL 1 x 2 mL	Enzymatic
	G12CHO001	Cholesterol	9 x 70 mL	CHOD-PAP
	G12CRE001	Creatinine	R1 6 x 20 mL R2 6 x 20 mL	JAFFÉ

More Hitachi compatible reagents

	Reference	Name	Packaging	Method
SUBSTRATS	G12CRE002	Creatinine	R1 4 x 70 mL + R2 4 x 70 mL	JAFFÉ
	G12BID001	D Bilirubin	R1 6 x 40 mL + R2 6 x 10 mL	Jendrassik Grof Modified
	G12BID002	D Bilirubin	R1 8 x 63 mL + R2 2 x 73 mL	Jendrassik Grof Modified
	G12FRU001	Fructosamin	10 x 21 mL	NBT
	G12GLU001	Glucose	9 x 70 mL	GOD-POD
	G12HDL001	HDL Cholesterol	R1 2 x 60 mL + R2 2 x 22 mL	Clearance
	G12HDL002	HDL Cholesterol	R1 3 x 68 mL + R2 2 x 39 mL	Clearance
	G12LAC001	Lactate	R1 3 x 10 mL + R2 3 x 10 (LYO)	Enzymatic LO-POD
	G12LDL001	LDL Direct Cholesterol	R1 1 x 30 mL + R2 1 x 11 mL	Clearance
	G12LDL002	LDL Direct Cholesterol	R1 1 x 59 mL + R2 1 x 22 mL	Clearance
	G12BIT001	T Bilirubin	R1 6 x 40 mL + R2 6 x 10 mL	Jendrassik Grof Modified
	G12BIT002	T Bilirubin	R1 8 x 63 mL + R2 2 x 73 mL	Jendrassik Grof Modified
	G12PRT001	Total Proteins	9 x 70 mL	Biuret
	G12TRG001	Trygliceride s	9 x 70 mL	GPO-PAP
	G12URE001	BUN - Urea	R1 6 x 59 mL + R2 6 x 17 mL	Urease-GLDH
	G12URE002	BUN - Urea	R1 8 x 63 mL + R2 2 x 73 mL	Urease-GLDH
	G12ACM001	Uric Acid	R1 6 x 59 mL + R2 6 x 17 mL	POD-PAP
	G12PTU001	Urinary proteins	R1 12 x 20 mL + STD 5 mL	Pyrogallol Red

CONTROLS & CALIBRATORS

	Reference	Name	Packaging	Use
CALIBRATORS	G13CAL001	Multical	6 x 3 mL	Substrates & electrolytes
	G13CAL002	HDL LDL calibrator	3 x 1 mL	HDL & LDL cholesterol
	G13CAL003	CK MB calibrator	1 x 2 mL	CK MB
	G13CAL004	Microalbumin calibrator	1 x 1 mL	Microalbumin
	G13CAL006	APO A1 & B calibrator	1 x 1 mL	APO
	G13CAL007	LP(a) calibrator	1 x 2 mL	LP(a)
	G13CAL008	Ferritin calibrator	4 x 1 mL	Ferritin
	G13CAL010	Fructosamine calibrator	1 x 1 mL	Fructosamine
	G13CAL011	IgE calibrator	1 x 2 mL	IgE
	G13CAL013	Serum proteins calibrator	1 x 2 mL	Serum proteins
CONTROLS	G13CTL001	Multitrol normal	6 x 5 mL	Substrates & electrolytes
	G13CTL002	Multitrol patho	6 x 5 mL	Substrates & electrolytes
	G13CTL003	CK MB control	1 x 2 mL	CK MB
	G13CTL004	Microalbumin control	1 x 2 mL	Microalbumin
	G13CTL005	Urinary proteins control	2 x 10 mL	Urinary proteins
	G13CTL006	ASO CRP RF control N	6 x 1 mL	ASO CRP
	G13CTL007	ASO CRP RF control H LYO	6 x 1 mL	ASO CRP
	G13CTL008	Lipidic control set	3 x 3 mL	HDL & LDL Cholesterol
	G13CTL010	Frunctosamine control	2 x 1 mL	Fructosamine
	G13CTL011	IgE control	1 x 2 mL	IgE control
	G13CTL012	Ferritin control set	2 x 3 mL	Ferritin control set
	G13CTL013	Serum proteins control	1 x 2 mL	Serum proteins control
	G13CTL016	LP(A) control	1 x 2 mL	LP(A) control

IMMUNOLOGY

IMMUNOLOGY

1. IRE 96 & IW 96

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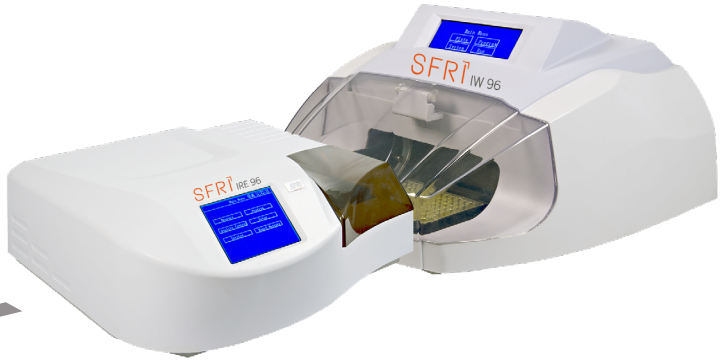
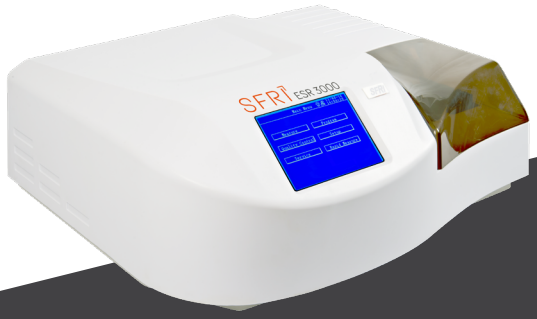


IRE 96 & IW 96

Elisa Reader and Washer

COMPLEMENTARY INSTRUMENTS

FULLY PROGRAMMABLE & CUSTOMIZABLE



SIMPLE & USER-FRIENDLY

- high performance
- high capacity software
- quick & precise results
- easy maintenance
- results interpretation

IRE 96	
Principle	Absorbance technology with semiconductor photodiode
Plate type	96-well plate with U, V or flat bottom
Measuring System	8-channel manifold - Monochromatic and bichromatic
Optics	Spectral range: 400 - 750 nm 4 built-in filters: 405 nm, 450 nm, 492 nm and 630 nm Filter wheel can hold up to 8 filters Tungsten halogen light source: 12 V/ 20 W Optical linearity: ‹ 2.5%
Shaking	3 speed linear shaking (low, medium, high)
Reading range	0.001-3.500 ABS
Measurement	Range: 0.001-2.500 ABS Precision: ± 1%; ± 0.001 ABS Speed: 12 s (monochromatic) or 30 s (bichromatic) per 96-well plate
Repeatability	CV ‹ 1%
Memory storage	42 user-programmable protocols - 2,500 results per day available at any time
Quality control	2 QC files
Calibration	Up to 8 points
Input / output	Parallel printer interface - RS232 port for mono-directional LIS
Printout	Optional external printer
Display	5.7" LCD touch screen - Mono-color display
Operating environment	Temperature 10°C - 40°C - Humidity 15% - 85%
Power requirements	A.C. 110/220 V ± 10%; 50 – 60 Hz
Dimensions & weight	480(W) x 200(H) x 440(D) mm - 9.6 kg

IW 96	
Plate type	96-well plate with U, V or flat bottom
Manifold	8-channel or 12-channel
Liquid dispensing	Volume 50 - 450 µl in 5 µl increments Precision ‹ 5% at 3000 µl
Washing, soaking & shaking	N° of wash cycles 1-9 Wash modes Row or plate Residual volume ‹ 2 µl for U and V bottom plates ‹ 3 µl for flat bottom plates Aspiration strength Programmable simple or double Soaking & shaking time 0 - 99 seconds
Liquid containers	4 bottles vol. 3.5 L 2 washing solutions, 1 distilled water, 1 waste with volume sensor probe
Memory storage	40 user-programmable wash protocols 9 wash cycles; 2 wash buffers 8 different plate types can be programmed
Display	LCD touch screen - Mono-color display
Language	English
Operating environment	Temperature 10°C - 40°C - Humidity ≤ 80%
Power requirements	A.C. 110/220 V ±10%; 50 – 60 Hz
Dimensions & weight	410(W) x 230(H) x 410(D) mm - 7.5 kg

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