



HYPERLAB BASIC TECHNICAL DATASHEET rev Feb 2022



STEROGLOSS S.r.l.

apparecchi in vetro soffiato
forniture per laboratori chimici

Cap. Soc. € 103.000,00 i.v.
Strada Romano di Sopra, 2/C - 06132 - S. Martino in Campo - Perugia
Tel. 075.609091 (r.a.) Fax 075.6090950
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R.I. / C.F. / P. IVA 01870870548 - VAT IT 01870870548 R.E.A. N. 164737



	Physical characteristics
SIZE / WEIGHT	Height: 49 cm (19.3 in) Depth: 60 cm (23.6 in) Width: 62 cm (24.4 in) Weight: 32 kg (70.5 lbs)
POWER SUPPLY	240 / 100 Vac, 50 / 60 Hz, single phase with ground Independent on-off switch for refrigerated reagent plate Fuse compartment / fuses: 2 Amp @ 230 Vac, 4 Amp @ 115 Vac Power consumption: less than 200 VA (external PC excluded) Ground resistance: less than 0.1 Ohm Leakage current: less than 2.5 mA
SAMPLING ARM	1 sampling needle, 65 mm needle stroke Capacitive liquid level detector
DILUTER SYRINGE	Long life plunger Syringe capacity, 368 µl Syringe resolution, 0.14 µl
HYDRAULIC SYSTEM	6 self-priming peristaltic pumps (life 1000 hrs) with replaceable neoprene cassette (life 500 hrs) 2 vacuum pumps Pinch valve Manifold Containers*: Water, 5l; Waste, 5l (no level sensor) * equipped with level sensor and safety connections
WASH STATION	Needles: 4 dispensing, 5 aspiration, 1 cleaning (8 step washing sequence for each cuvette)
REAGENTS TRAY	Cooled 3 removable racks 27 bottles of 24 ml (up to 648 ml total)
SAMPLES TRAY	Removable tray, 46 numbered positions, 30 tubes of 12 x 56 mm / 20 cups (3,5 ml type)
CUVETTE ROTOR REACTION CELLS	80 washable BIONEX® cuvettes which allow up to 30 000 tests per rotor Optical path 6 mm, 210 - 350 µl reaction volume 100W heating resistance, temperature sensor, safety thermostat
OPTICAL GROUP	1 halogen lamp (6 V, 10 W) with extended UV emission 2 focusing lenses, optical glass 10-position filter disk: 8



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positions provided with interference filters of 340, 420, 520, 546, 578, 620, 650, 700 nm wavelengths, 1 free position and 1 solid position for dark reading Direct reading reaction cuvettes, 6mm optical path ± 2 nm on peak wavelength, band pass of ± 10 nm

PHOTOAMPLIFIER	Photoelectric detector Signal amplifier Response range, 340 nm to 900 nm Photometric range, 0 to 2.5 Abs Linearity, $\pm 0.5\%$ full scale Precision: 0.5 CV% (0.050 to 1.500 Abs) Stability: daily reader offset, less than 1% drift per day
CONTROL	Real-time multitasking microprocessor based control Easy access to the electronics
EXTERNAL COMPUTER	(Minimum requirements) Intel Pentium IV family with 2 GHz, 20 Gb HD, 512 Mb ram, CD/R 17" monitor, 1280 x 1024 resolution Keyboard and mouse USB port Windows® 7 with .NET framework 4.0

	Operation features
PIPETTING	Volume: sample, 2 - 300 μ l; reagent, 5-350 μ l Precision: 1.5 CV% at 2 μ l; 1 CV% at 4 μ l Mixing by sample needle upon dispensation
REACTION	Reaction volume, 210 - 350 μ l
SAMPLE DILUTION	In-needle dilution if allowed by method's sample volumes Automatic pre-dilution in a reaction cuvette, up to 1:100
TEMPERATURE CONTROL TYPES OF TESTS TEST RUNS	Reagent refrigeration, circa 12 °C below room temperature Reaction cells, heating unit can be set from room temperature up to 42 °C ± 0.2 °C (108 °F ± 0.5 °F) Endpoint, Bichromatic endpoint, Differential endpoint, Differential endpoint sample blank, Fixed Time, Kinetic Random / Urgent



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MEASUREMENT RATES	150 tests/hour Maximum incubation + reading time: 660 seconds Typical precision, endpoint 2.0 CV% / kinetic 2.0 CV% Carry-over, lower than 15 parts per million
START-UP	The start-up procedure is run daily: self-test, reader offset of optics, wash and check of all cuvettes
CALIBRATION	Reagent blank subtraction, 1 to 8 standards per test method Linear: factor, linear, linear regression (standard's repetitions) Non linear (3 interpolation types): cubic-spline, poly-linear and logit-log four parameters Free standard / control positions on all the sample plate Results can be recalculated when changing factor or curve
MAINTENANCE	Procedures programmed by component life counters
PRINTING REPORTS	Single test, complete sample, work sheet, method and QCs Automatic sample reports upon test completion if requested
NEEDLE WASHING	Sampling needle washed internally and externally with system solution after every solution

	Connections
POWER	Standard VDE removable power cord
EXTERNAL PC	USB port
HOST/ LIS	Ethernet LAN (samples, work list, results) Standard ASTM ASCII protocol



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	Database
WORKLIST/ SAMPLES	For each worklist: unlimited number of samples, unlimited number of tests, up to 99 sheets of tests per worklist. Sample-patient ID codes
TEST METHODS	Unlimited number of methods in PC memory 50 active methods
QUALITY CONTROL	Three-level controls per test, one month monitoring Reagent/calibrator/control lot monitoring, Exclusion of failing results from graphic and statistics
ERROR LOG	Automatically stored at run-time, can be viewed or printed Powerful on-line monitoring



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APPENDIX 1
HYPERLAB BASIC METHODS PERFORMANCES

METHOD	Conc.	CV% ≤
Acetic acid	1.0 g/l	0,8
Citric acid	2.0 g/l	1.2
D-Gluconic acid	2.0 g/l	1.0
D-Lactic acid	0.6 g/l	2.0
L-Lactic acid	0.6 g/l	2.0
L-Malic acid	1.0 g/l	0,6
Pyruvic acid	0.6 g/l	1,5
Tartaric acid	5.0 g/l	0,5
Acetaldehyde	100 mg/l	1,5
Anthocyanins	500 mg/l	0.4
α-Amino Nitr.	150 mg/l	1,5
Ammonia Nitr.	50 mg/l	1,5
Calcium	100 mg/l	1,9
Catechins	25 mg/l	0,5
Chlorides	1.0 g/l	1.0
Iron	20 mg/l	1,5
Glycerol	10 g/l	1,5
Glucose/Fructose	2.0 g/l	0,5
Glucose/Fructose (grape juice and must)	250 g/l	1,5
Magnesium	100 mg/l	1.0
Total Polyphenols	4000 mg/l	1,8
Potassium	1500 mg/l	1,5
Copper	2.0 g/l	2.0
Free SO ₂	20 mg/l	1.0
Total SO ₂	150 mg/l	1.0

ATTENTION: It should be noted that the determination on multiparametric instruments derives from different factors including “the instrument”, “the method”, “the reagents / samples” and the number of analyses. The CV% of an analysis cycle must be taken into consideration while referring to the value of the standard and the linearity of the method.

STEROGLASS Srl

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