

Technical Data

Technology	Direct Reading
Samples/reagents preheating	Yes
Sample capacity and number of reagents	a) Samples 60 positions dedicated to samples/Reagents 27 positions x 18mL each, including stock & diluents b) Samples 70 positions dedicated to samples/Reagents 17 positions x 18mL each, including stock & diluents c) Samples 75 positions dedicated to samples/Reagents 12 positions x 18mL each, including stock & diluents
Test hour	Up to 200 (Single reagent)/120-150 (dual reagent)
Dosing syringe (sample & reagents)	368 microliters syringe with 0.14 µl resolution; Zero automatic setting; Accuracy +/- 0.5% from 2 to 350 µL
Stock solutions on reagent tray	Yes, working calibrants and QC diluted from stocks
Diluents position	On refrigerated reagent tray,
Refrigerated reagent tray	Yes standard
Reagent & Sample level sensor	Yes
Number of reaction cuvettes	80 reaction microcuvettes reusable after washing and QC check, incubation temperature programmable +/- 0.1 °C.
Optical path length (mm)	6.0mm
Reaction plate temperature	37° to 50°C adjustable +/-0.1°C
Incubator type	Thermoelectric
Flow cell type	Bionex ® washable, wash station included
Main Detector	Colorimetric, temperature controlled; halogen lamp extended UV emission; automated zero settings; accuracy +/- 1% from 0 to 2.5 O.D.; linearity better than 0.5%; noise < +/- 2m Abs. At 340 nm 2.5 O.D..
Detector techn./Numb. of Wavelengths	Interferential Filters/ 9+blank
Reading methods	End point: mono or bichromatic; End Point differential (Sample blank correction); Kinetic
Communication & software	USB port; Software compatible Windows XP, 7.0, 8.0 & 10
Sample analysis	Work lists stored by the software with possibility to select independent list of parameters per each sample,
Sample ID	Alphanumeric
Random access to samples, calib. Etc.	Yes
Sample addition during run	Yes
Sample & reagent blanking	Yes
Working Calibrant dilution	Yes, from stock solution located in the refrigerated tray
Pre run sample dilution	Yes
Post run sample dilution	Yes, automated dilution and rerun of off scale samples
Multilevel QC & Closed loop	Up to 5 QC levels, with closed loop control (QC check & pre programmed actions in case of QC and or Spike recovery failure)
QC database and QC chart	Yes
Automated spike & recovery check	Yes
Automated calibrations; calibration fits linear, polynomial, etc.	Yes; up to 16 calibrants
Calibration correction	Yes; enable/disable calibrants change calibration fit
Calibration QC check & Calibration repeat	Yes, if correlation lower than set value option for calibration repeat
Reagent Blank OD and Top Cal OD check	Yes, if out of tolerance pre programmed actions
Results correction	Yes, correction by: dilution factor, moisture & weight
Import Work list & export results to LIMS	Yes
Possibility to use multiple diluents (soils analysis, phenols, cyanide etc.)	Yes
Size/Weight	40cmx67cmx60cm(HxDxW)/32Kg
Power Supply	110-240VAC - 50/60Hz Single phase with ground - Fuses 2.0Amp 230VAC, 4.0Amp 115VAC

Subject to change without notice

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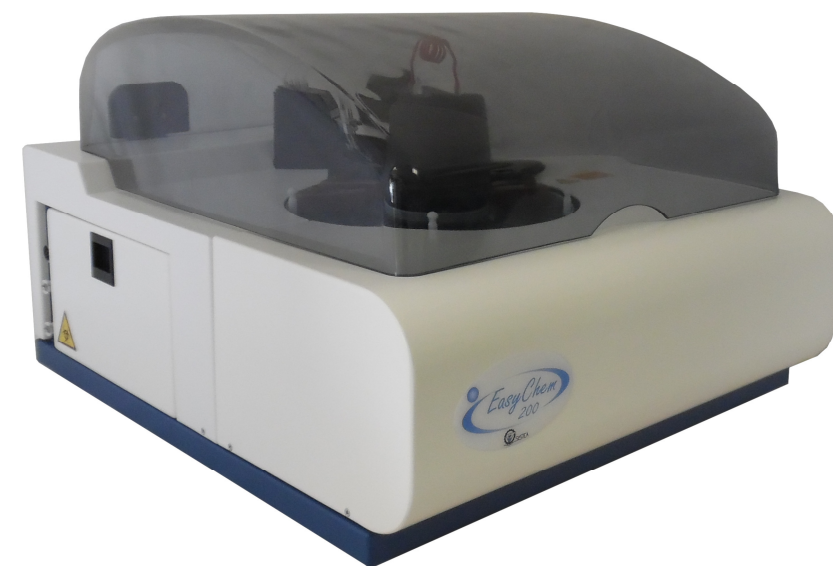
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EASYCHEM 200

DIRECT READING DISCRETE
ANALYZER FOR AUTOMATED
CHEMISTRIES



EASYCHEM 200 AUTOMATED DISCRETE ANALYZER

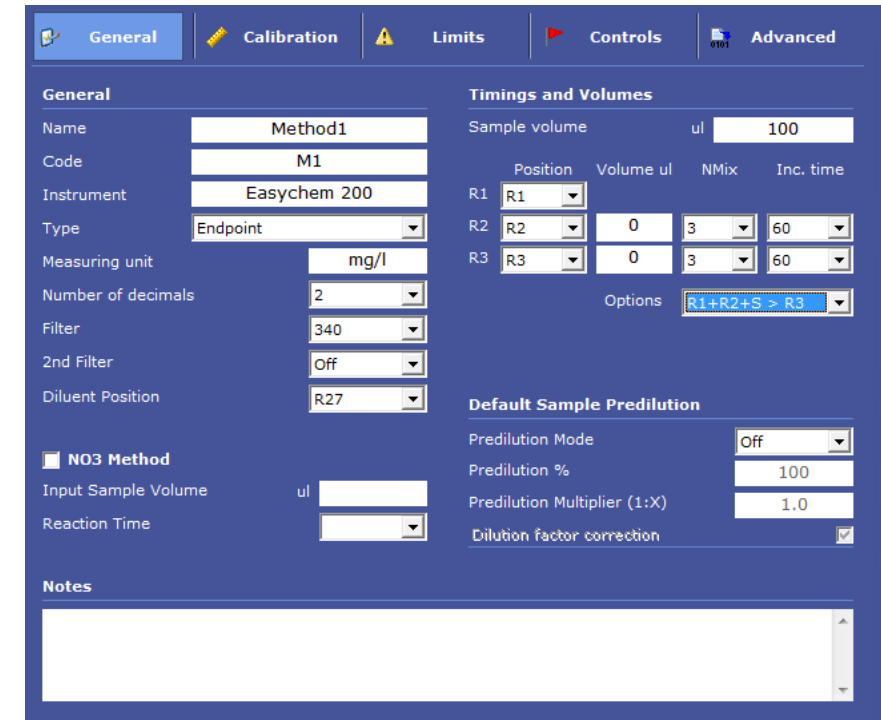
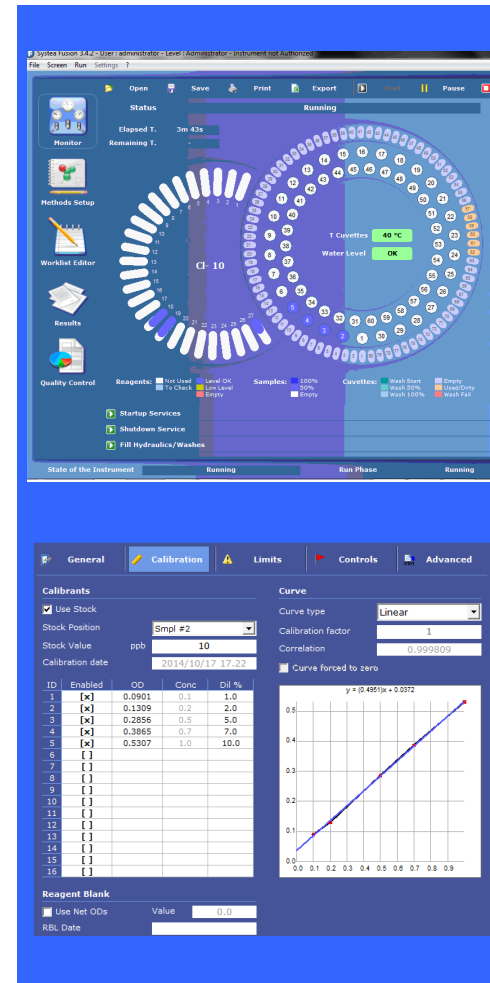
EASYCHEM OPERATION PRINCIPLE

A 'work-list' on external PC is created by the operator, containing the samples, their location, their ID code and the determinations required for each sample. Usual combinations of methods can be pre-defined as 'profiles' in the software setup.

The 'work list' includes also calibrants and QC that are automatically diluted from a stock solution in the reaction cuvette. The operator does not need to position any cups other than samples in the work list and in the sample tray.

To start analysis of the work-list or a part of it, the operator has to pass a check-and-confirmation protocol, to establish correct analysis conditions. Selected methods are confirmed, the use of auto-calibration and control samples is set, and the execution is scheduled. Reagent demand and used cuvettes are displayed. Final confirmation starts the execution.

The automatic analyzer starts the execution with a self test procedure, and displays along the execution the actual activity carried out. Analysis results will be reported on the screen just after reading and stored for later printout. Results file can be reprocessed and after reprocessing a results file must be saved with a different name. Stored results documentation for each method is headed by relevant quality data, including the operator ID.



Fully automated analyzer based on **Direct Reading Discrete analysis** technology, sample capacity from 60 up to 75 positions dedicated to samples.

- ✓ Cooled reagents tray with capacity from 12 up to 27 reagents bottles
- ✓ Temperature controlled Reaction tray containing up to 80 reaction cuvettes, washable & reusable after QC check
- ✓ Colorimetric detector including 9 position filter wheel for automatic wavelength selection
- ✓ Pre or post run sample autodilution
- ✓ Samples throughput: up to 200 test per hour

Surface, ground, drinking, waste and seawater

ALDEHYDES
ALKALINITY
ALUMINIUM
AMMONIA
CALCIUM
CHLORIDES
CHLORINE
CHROMIUM 6+

CYANIDE*
FLUORIDE*
HARDNESS
IRON
MANGANESE
NITRATE+NITRITE
NITRITE
PHENOLS*

PHOSPHATE
SILICATE
SULFATE
SULFIDE
TOTAL NITROGEN (TKN)*
TOTAL PHOSPHOROUS*
•Require external sample pre treatment

Wine reagent kit

ACETIC ACID
CITRIC ACID
D-GLUCONIC ACID
D-LACTIC ACID
L-LACTIC ACID
L-MALIC ACID
PYRUVIC ACID
TARTARIC ACID
ALDEHYDE ACETIC
ANTHOCYANS

ALFA-AMMINIC NITROGEN
AMMONIA NITROGEN
CALCIUM
CATECHINS
CHLORIDE
IRON
GLYCERIN
GLUCOSE
GLUCOSE-FRUCTOSE
REDUCED GLUTATHIONE

MAGNESIUM
TOTAL POLYFENOLS
POTASSIUM
COPPER
SUCROSE
SO2 FREE
SO2 TOTAL
SO2 TOT SAMPLE DILUENT
UREA

Soils, plants, feeds and fertilizers

AMMONIA
CALCIUM
CHLORIDE
MAGNESIUM
NITRATE+NITRITE
NITRITE

PHOSPHATE
SILICATES
SULFATE
TOTAL NITROGEN (TKN)*
TOTAL PHOSPHOROUS*
•Require external sample pre treatment

NOTE
Method list includes only the most common methods and it is under continuous development. For any method not included in the list please contact our application laboratory to check method availability

ADVANTAGES AND BENEFITS



- **Easy to use:** no specific experience or training required.
- **Flexibility:** individual parameters list selectable on each sample, pre or post run sample autodilution, working standard autodilution from a stock standard.
- **Low reagents consumption:** only a few microliters of reagents per analysis.
- **Low running costs:** nearly no consumables, low reagents and disposable costs.
- **Immediate start up:** no time waste or problems to reach hydraulic equilibrium.
- **Immediate shut down:** no washing procedure required.
- **Windows based Software:** easy to use and to learn; short training, specifically designed for chemists.
- **QC control:** up to five level of real time QC can be used, QC results are automatically stored and plotted in a quality control chart.
- **QC actions:** in case of QC out of tolerance the analyzer can stop the run or simply inform the operator leaving trace of malfunction storing the QC out of tolerance.
- **Data reprocessing** allows to check and reprocess the results file, including or deleting data treatment.