# SYSTEA- EASYCHEM PRO

# AUTOMATIC WATER ANALYZER

**Random access** automatic analyzer with 60 positions samples tray including blank, controls and calibrants cups.

✓ Reaction tray with up to 80 temperature controlled and reusable reaction cuvettes.

✓ Cooled reagents tray with capacity up to 18 reagents bottles

✓ Five steps washing station for reaction cuvettes.

✓ Colorimetric detector with 9 position filter wheel for automatic wavelength selection

✓ STAT position option: sample addiction during analysis

✓ Pre or post run sample autodilution

✓ Samples throughput: 120/140 test per hour
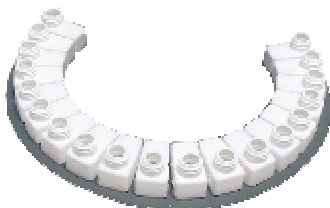
## ADVANTAGE AND BENEFITS:

❑ **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** allow to check and reprocess the results file, including or deleting data treatment.

## 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 operator can include in the work list QC  cup (up to five levels), Gain correction cups, Drift correction cups and Carry over correction cups.

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 for calibration, Gain/Drift and Carry over correction. 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.

| Applications | Parameters | |
|---|---|---|
| ❑ Surface Water | ✓ Ammonia | ✓ Alkalinity |
| ❑ Potable Water | ✓ Nitrite | ✓ Hardness |
| ❑ Waste Water | ✓ Nitrate+Nitrite, | ✓ Calcium |
| | ✓ Orthophopsphate | ✓ Chloride |
| | ✓ Silicate | ✓ Iron |

## Technical Data

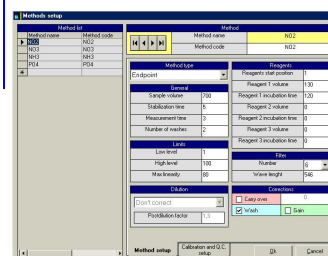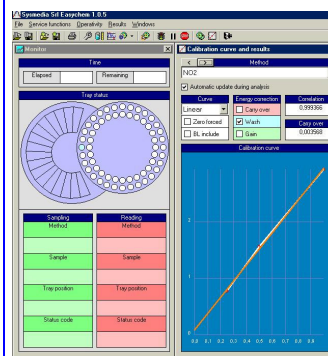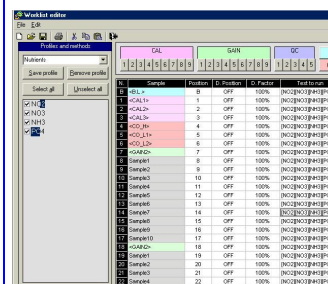| | |
|---|---|
| *Reading methods:* | End point: mono o bichromatic; Differential: two reagents; Differential: sample blank; Kinetic: mono or double reagent |
| *Samples Tray:* | 60 positions for samples, blank, standards and controls |
| *Reagents Tray:* | 18 positions, cooled by Peltier |
| *Dispensing/Dilution:* | 400 microliters syringe with 0.3 μl resolution; Zero automatic setting; Accuracy +/- 0.5% form 2 to 350 microliters |
| *Reaction Plate:* | 80 reaction microcuvettes, reusable after wash and quality check, with incubation temperature programmable +/- 0.1 °C. |
| *Colorimeter:* | Halogen lamp with extended UV emission; 8 interferential filters +/- 2 nm; Automatic zero setting for all the wavelengths ; Accuracy +/- 1% from 0 to 2.5 O.D.; Linearity better than 0.5%; Noise <+/- 2m Abs. At 340 nm 2.5 O.D. |
| *Trough put:* | - 120/140 test/hour depending on the method combinations |
| *Calibrations:* | From 1 up to 16  standards, or against stored factor; Linear regression,  Polynomial |

**Subject to change without notice**

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