

MICROMAC BORON

ON LINE ANALYZER FOR
BORON MONITORING IN WATER

MICROMAC BORON is a microprocessor controlled On Line analyzer specifically designed for automatic Boron monitoring on several types of water matrices.

✓ ROBUST AND RELIABLE

Designed for industrial and Environmental On Line applications ensures the highest level of robustness in the electronics, mechanics and hydraulics components. Complete separation between electronics and hydraulics plus a simple and robust LFA* hydraulics allows easy maintenance and long terms reliable operations.

**LFA: Loop Flow Analysis patent pending*

✓ EASY TO INSTALL

The analyzer is delivered after a long and successful series of factory tests ready for installation and setup; it is provided with complete set of spares for start up. To start monitoring is enough to connect reagents, sample line, waste line and power supply.

✓ AUTOMATIC CALIBRATION

When the Calibration Time interval expires the analyzer performs a Calibration Cycle, storing and checking the new calibrant O. D. If new O.D. exceeds selected limits, an alarm contacts is closed.

✓ SAMPLE DILUTION

Sample can be analyzed as it is or after automatic dilution. Automatic dilution is factory adjusted for high range applications.

✓ MEASURING INTERVAL

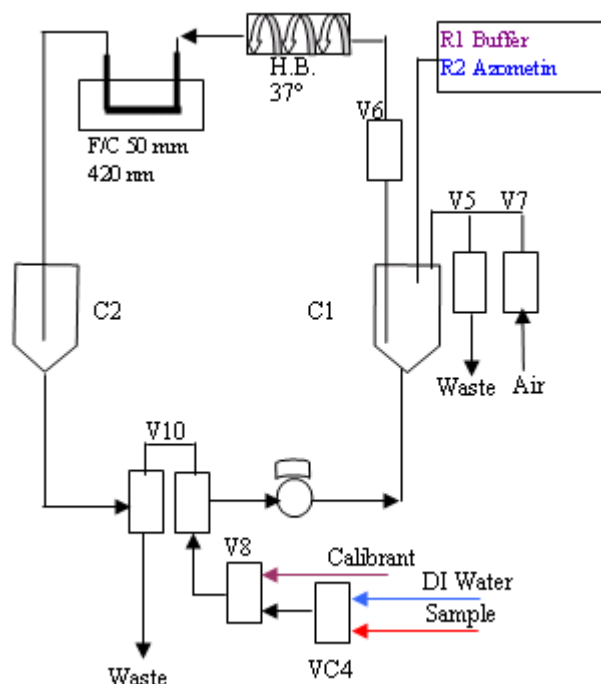
User selectable; between two measurements the analyzer remains in stand by mode, without reagents consumption.

✓ FEATURES AND BENEFITS

- Fully automatic operation
- Long autonomy; low maintenance, low operating cost
- Low reagents consumption; short preparation time; low disposable costs
- Easy operation; plug in analyzer, no special training is required
- Electronics and hydraulics completely separated
- Serial interface for local o remote PC connection (option)

Boron measuring principle and hydraulic diagram

In this method the sample, after proper filtration, is pumped inside the LFA reactor and mixed with an acetic buffer; the buffered solution then it is mixed with Azomethyne H and a specific reducing agent. After a suitable reaction time the colored complex is measured at 430 nm. The sample concentration is calculated against the calibration factor stored in the analyzer.



Technical Specifications

MEASURING PRINCIPLE: Colorimetric, azomethyne H

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: cyclic

MEASURING INTERVAL: programmable

MEASURING TIME: About 35 minutes

MEASURING RANGE: 0 – 2 up to 50 ppm B; other ranges available on request

DETECTION LIMIT: typically better 4% of the full scale, calculated as for EPA p. 136 appendix B

REPEATABILITY: better than 5% ; SD% of 7 replicates at 50% of the full scale

ACCURACY: better than 5% , average of 7 replicates at 20% of the full scale

OUTPUT SIGNAL: 4-20 mA

INPUT SIGNALS: n. 1 Analysis, n. 1 calibration; digital contacts

ALARMS: n. 1 High Limit, n. 1 General, n. 1 Calibration; potential free contacts

SAMPLE AND WASTE DELIVERY: pressure free;

SAMPLE TEMPERATURE: 10 °C - 30 °C

REAGENTS REPLACEMENT: 3/4 weeks depending on the operating temperature

PROTECTION: IP55

HARDWARE: PC104 industrial standard, Integrated keyboard and graphics display, RS232 option

POWER SUPPLY: 12 V DC external power supply included; 8W Standby; 15W (mean) analysis

WEIGHT: 33 Kg without reagents;

DIMENSION: 800x420x280 mm (hxwxd)

Subject to change without notice



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