MICROMAC TOTAL P

ON LINE ANALYZER FOR WATER AND WASTEWATER TOTAL PHOSPHOROUS MONITORING

MICROMAC TOTAL PHOSPHOROUS is a microprocessor controlled On Line analyzer specifically designed for automatic Total phosphorus 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 reagent, sample line, waste line and power supply.

✓ AUTOMATIC CALIBRATION

When the Calibration Time interval expires the analyzer perform a Calibration Cycle, storing and checking the new calibrant O. D. If new O.D. exceed 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 remain in stand by mode, without reagents consumption.

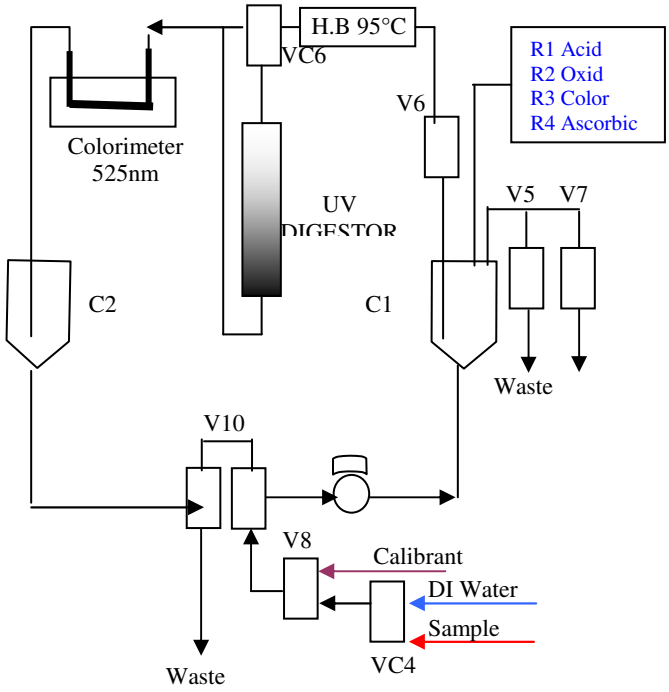
FEATURES AND BENEFITS

- 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).

SYSTEA

Measuring principle and Hydraulics diagram

The sample after filtration, when required, is pumped inside the LFA reactor, where the acidic reagents R1 is injected; after mixing the sample is heated at 95°C to convert all inorganic forms of phosphorus to orthophosphate. Next step include injection of the oxidation reagent R2 and the UV digestion to convert all residual organic forms of phosphorous to orthophosphate. Then microprocessor start the reagents addition sequence, to develop the P-PO4 color reaction adding as first the color reagents then the ascorbic acid to develop a blue color, that after a further mixing step and reaction time, is measured at 660 or 880 nm. The sample concentration is calculated against the calibration factor stored in the analyzer.



Technical Specifications

MEASURING PRINCIPLE: Colorimetric, Acidic high T°&UV digestion, molybdate/ascorbic acid reaction
COLORIMETER: dual beam, silicon detector
MEASUREMENT TYPE: cyclic
MEASURING INTERVAL: programmable
MEASURING TIME: 45 minutes
MEASURING RANGE: 0-1/3/5/10/20/50/100/200 ppm P, other ranges available on request
DETECTION LIMIT: typically better 3% of the full scale, calculated as for EPA p. 136 appendix B
REPEATABILITY: better than 3%
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 from local power to 12 V DC included
WEIGHT: 33 Kg without reagents; **DIMENSION**: 800x450x300 mm(hxwxd)

Subject to change without notice

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