

MICROMAC MANGANESE TOTAL ON LINE ANALYZER FOR TOTAL MANGANESE MONITORING IN WATER



MICROMAC TOTAL MANGANESE is a microprocessor controlled On Line analyzer specifically designed for automatic Total Manganese monitoring on several types of water matrix.

✓ ROBUST AND RELIABLE

Designed for industrial and Environmental On Line applications Micromac C 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

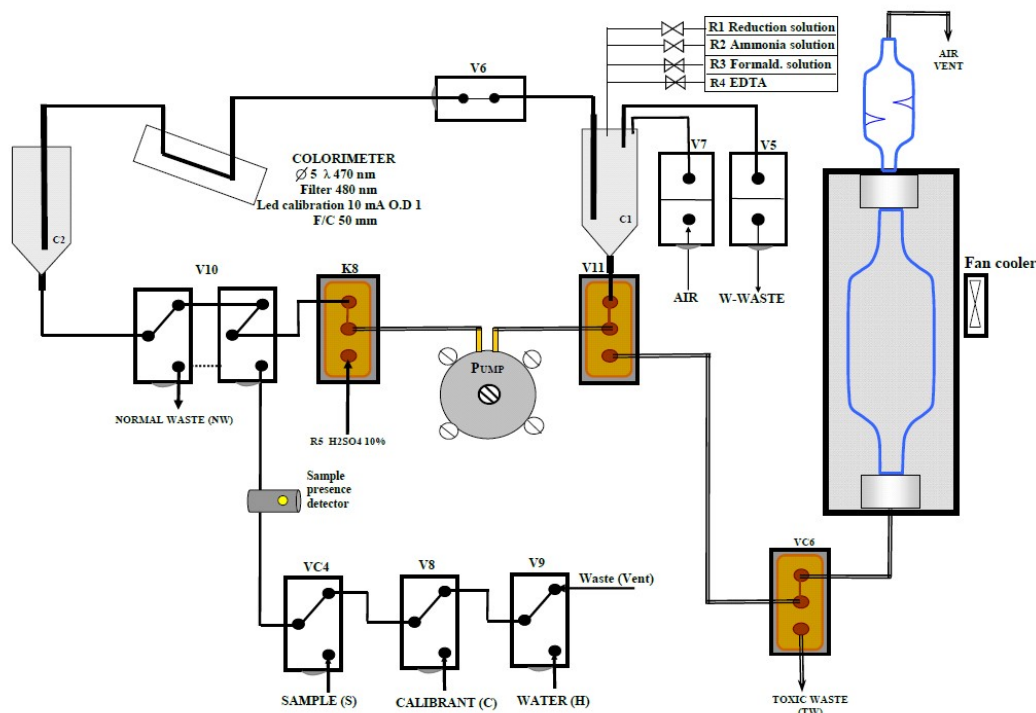
User selectable; between two measurements the analyzer remains in stand by mode, without reagents consumption.

✓ FEATURES AND BENEFITS

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



Total Manganese measuring principle and hydraulic diagram



After proper filtration, the sample is mixed with sulfuric acid and digested at 95 °C. The manganese ions are then measured by the formaldoxime method, where manganese (II) is oxidized to form a colored permanganate ion. The colored complex is measured at 480 nm.

Technical Specifications

MEASURING PRINCIPLE: Colorimetric, Formaldoxime method, combined UV + HT digestion

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: cyclic; **MEASURING INTERVAL:** programmable

MEASURING TIME: ≤ 30 minutes depending on the range

MEASURING RANGE: 0-0.2/2/5/10 ppm Mn, 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 5%; SD% of 7 replicates at 50% of the full scale

ACCURACY: better than 5% 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; 4W Standby; 50 W (mean) analysis

WEIGHT: 33 Kg without reagents; **DIMENSION:** 800x420x280 mm(hxwx d)

Subject to change without notice



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