

MICROMAC C MP2 TMn/TFe ON LINE ANALYZER FOR TOTAL MANGANESE AND TOTAL IRON MONITORING IN WATER



MICROMAC C MP2 TMn/TFe is a microprocessor controlled On Line analyzer specifically designed for automatic Total Manganese and Total Iron 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

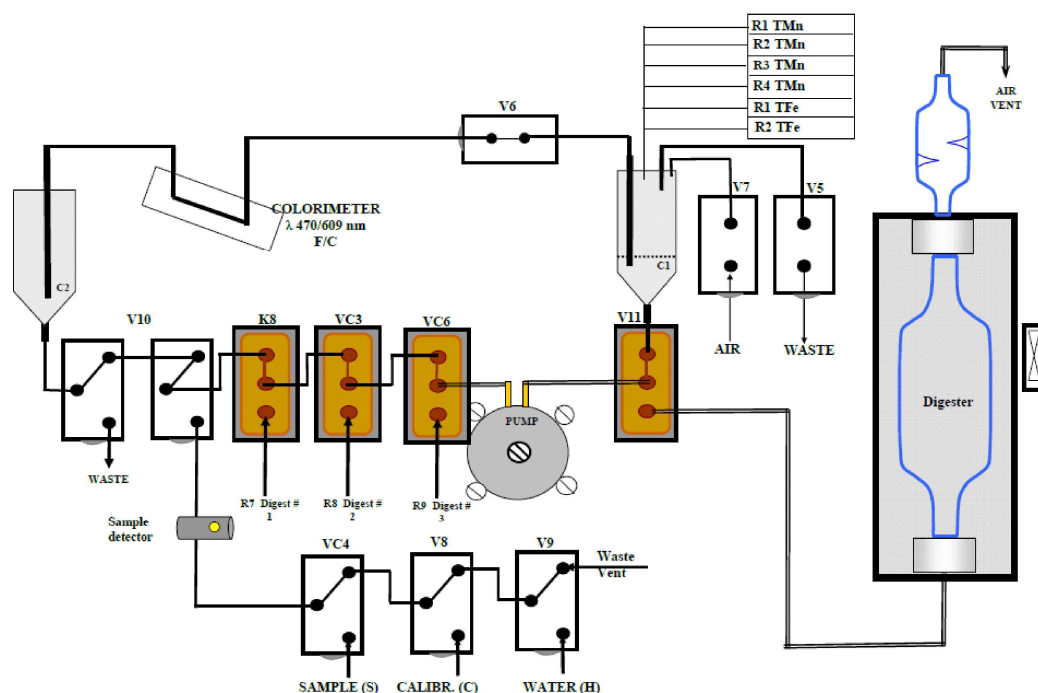
User selectable; between two measurements the analyzer remains in stand by mode, without reagents consumption.

✓ 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 Mn and Total Fe measuring principle and hydraulic diagram



Total Manganese: after proper filtration, the sample is mixed with the necessary digestion solution and heated. 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 470nm.

Total Iron: after proper filtration, the sample is mixed with the necessary digestion solution and heated. After the correction of the pH with a proper buffer addition, the iron is detected by the formation of violet complex between iron and TPTZ, that is measured at 609nm

Technical Specifications

MEASURING PRINCIPLE: HT digestion, colorimetric reaction specific for Mn and Fe

COLORIMETER: dual beam, silicon detector

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

MEASURING TIME: 60-70 minutes depending on the range

MEASURING RANGE: TMn: 0-0.5/5/10 ppm Mn, TFe: 0-0.5/2/5/10ppm Fe²⁺; other ranges available on request

DETECTION LIMIT: typically better 5% 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: n. 2 set of 4-20 mA ; **INPUT SIGNALS:** n. 1 Analysis, n. 1 calibration; digital contacts

ALARMS: n. 2 High Limit, n. 1 General, n. 2 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(hxwxwd)

Subject to change without notice



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