

MICROMAC MP2 NITRATE/NITRITE

ON LINE ANALYZER FOR NITRATE & NITRITE MONITORING IN WATER



MICROMAC C MP2 NITRATE/NITRITE is a microprocessor controlled On Line analyzer specifically designed for sequential Nitrate and Nitrite monitoring on several types of water matrix.

✓ 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 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)

Measuring principle and hydraulic diagram

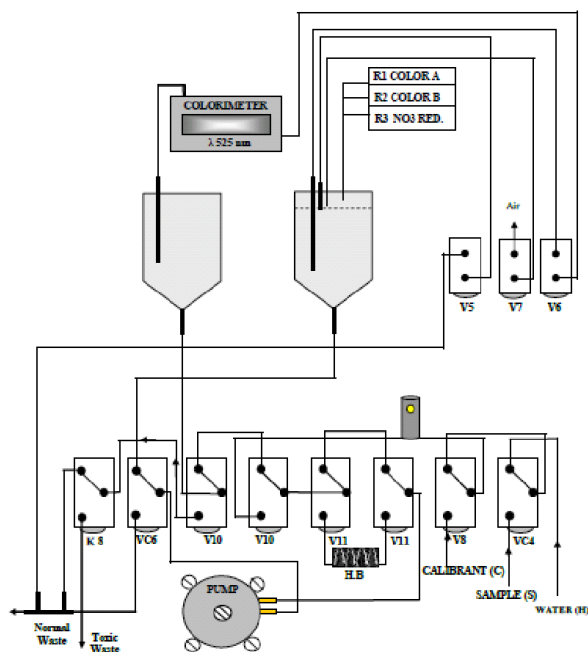
NITRATE+NITRITE:

This method is based on the reduction of NO_x sample by Vanadium chloride in acid solution.

The sample is first added with the color reagents to color the NO₂ fraction of the sample then added with VCl₃. Then the complex is trapped in the heating bath at about 60°C to convert all NO_x species present in the sample to NO₂. The pink colored compound is moved in the flow cell measured at 525 nm. The sample concentration is calculated against the calibration factor stored in the analyzer.

NITRITE:

The sample reacts with NED and SAA in acidic medium. After mixing and reaction time the formed reddish purple colour is measured colorimetrically at 525 nm. The sample concentration is calculated against the calibration factor stored in the analyzer.



Technical Specifications

MEASURING PRINCIPLE: Colorimetric; **NO_x:** VCl₃ reduction to NO₂, NED+SAA.; **NO₂:** NED+SAA.

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: Sequential

MEASURING INTERVAL: Programmable

MEASURING TIME: 40-45 minutes depending on the range

MEASURING RANGE: N-NO_x: 0-5/10/20/50/100/200mg/L; N-NO₂: 0- 1/2/5/10mg/L. Alternative ranges available

DETECTION LIMIT: typically better 3-5% of the full scale, calculated as for EPA p. 136 appendix B

REPEATABILITY (SD%)/ACCURACY: better than 5% % (7 replicates at 50% of the range)

OUTPUT SIGNAL: n. 2 set of 4-20 mA **INPUT SIGNALS:** 1 Analysis, n. 1 calibration; digital contacts

ALARMS: n. 2 sets of: 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; 14W Standby; 50-60 W (mean) analysis

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

Subject to change without notice

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