

MICROMAC MP3 NO₃/Cr⁶⁺/NO₂ON LINE ANALYZER FOR
NITRATE EX. CHROMIUM AND NITRITE
MONITORING IN WATER

MICROMAC MP2 CR⁶⁺ AND NO₂ is a microprocessor controlled On Line analyzer specifically designed for automatic Chromium 6⁺ 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)

Measuring principle and hydraulic diagram

NITRATE :

The sample after filtration, is measured at 220nm, contribution of organic matter is compensated at 275nm. The sample absorbance is correlated to the Nitrate concentration against a calibration factor stored in the analyzer

EXVALENT CHROMIUM:

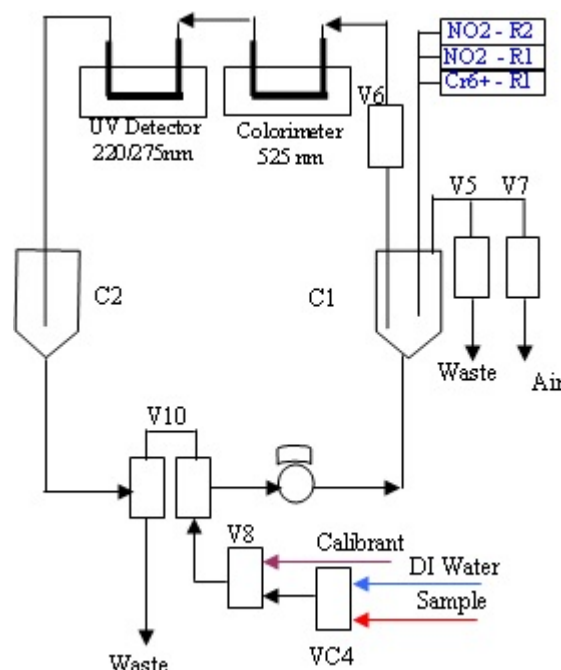
The sample, after proper filtration, reacts with diphenylcarbazide in an acid medium. After mixing and reaction time the formed reddish purple colour is measured colorimetrically at 525 nm.

The sample concentration is calculated against the calibration factor stored in the analyzer.

NITRITE:

The sample after proper filtration 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: Nitrate direct measure at 220/275nm; Cr^{6+} : Diphenylcarbazide, NO_2 : SAA & NED, colorimetrics

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: cyclic

MEASURING INTERVAL: programmable

MEASURING TIME: about 6 minutes, depending on the range

MEASURING RANGE: : 0-5 up to 50ppm N- NO_3 , 0-0.2 up to 10 ppm Cr^{6+} ; 0-0.2 up to 20 ppm N- NO_2 other ranges available.

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

REPEATABILITY: better than 5% as SD% measured at 50% of the range

ACCURACY: better than 10% average accuracy measured at 3 levels, 10%, 50%, 75%

OUTPUT SIGNAL: 4-20 mA, separated per each method

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

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

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; 10 W (mean) analysis

WEIGHT: 33 Kg without reagents;

DIMENSION: 800x420x280 mm (hwxwd)

Subject to change without notice



SYSTEA S.p.A.

HEADQUARTER AND MANUFACTURING FACILITY:
VIA PADUNI, 2A - 03012 ANAGNI (FR) ITALY
TEL: +39 0775-776058 FAX +39 0775-772204

A member of Consorzio NDI

Web Site: <http://www.systea.it> Email: info@systea.it

Document ID: MicC_MP2 C6+_NO2-01-E