

MICROMAC TOTAL AMMONIA & MONOCHLORAMINE IN WATER

ON LINE ANALYZER FOR TOTAL AMMONIA AND MONOCHLORAMINE MONITORING



MICROMAC TOTAL AMMONIA and MONOCHLORAMINE is a microprocessor controlled On Line analyzer specifically designed for automatic Total Ammonia and Monochloramine monitoring on several types of waters 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 reagents, 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

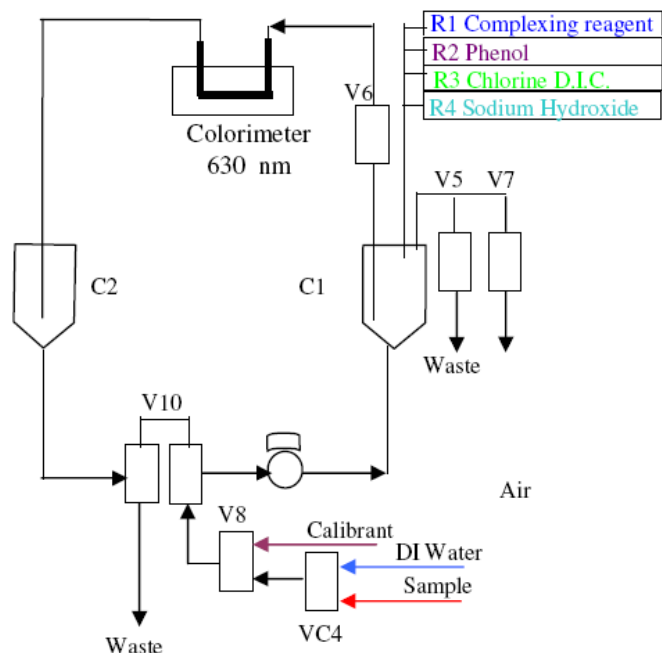
- Fully automatic operation
- Long autonomy; low maintenance, low operating cost
- Low reagents consumption; short preparation time; low disposable costs
- Easy operation; plug in analyzer, no special training is required
- Electronics and hydraulics completely separated
- Serial interface for local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

Measuring principle and Hydraulics diagram

In this automated method, the ammonia ions present in the sample react with phenol and hypochlorite (R2 and R3) in an alkaline medium following the Berthelot reaction; trisodium citrate and EDTA (R1) are added to the sample to avoid the precipitation of alkaline hydroxides, while nitroprusside acts as a catalyst. The indophenol blue is colorimetrically measured at 630 nm.

The principle for monochloramine is similar to the total ammonia method, but without the addition of DIC. The monochloroamines present in the sample react with the phenol in an alkaline medium following the Berthelot reaction; the environment is the same as for the total ammonia thanks to the addition of R4, and the color development is colorimetrically measured at 630 nm.

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



Technical Specifications

MEASURING PRINCIPLE: Colorimetric, Berthelot reaction

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: cyclic

MEASURING INTERVAL: programmable

MEASURING TIME: About 20-25 minutes, depending on the range

MEASURING RANGE: 0-2 up to 5 ppm N, other range available on request

DETECTION LIMIT: typically better 2% of the full scale, calculated as for EPA p. 136 appendix B

REPEATABILITY: better than 2%

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; 10 W (mean) analysis

WEIGHT: 33 Kg without reagents;

DIMENSION: 800x450x300 mm (hxwxh)

Subject to change without notice



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