

MICROMAC AMMONIA

ON LINE ANALYZER FOR AMMONIA MONITORING IN WATER



MICROMAC AMMONIA is a microprocessor controlled On Line analyzer specifically designed for automatic ammonia 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 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

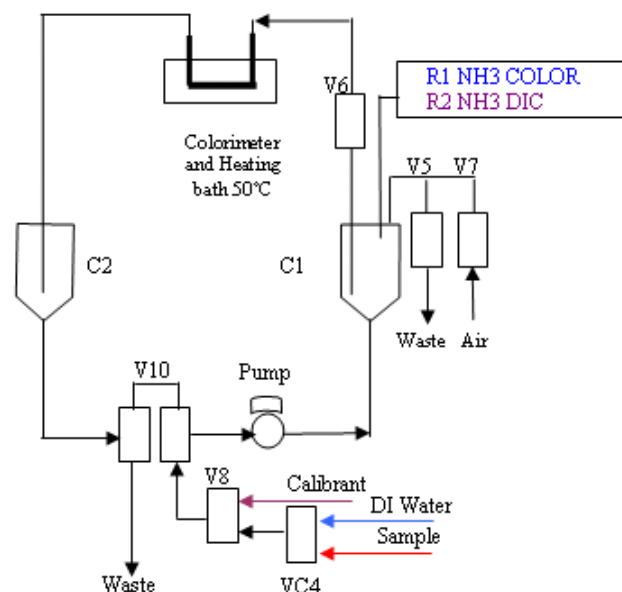
User selectable; between two measurements the analyzer remains in stand by mode, without reagents consumption.

✓ 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)

Ammonia measuring principle and hydraulic diagram

The sample after proper filtration is pumped inside the LFA reactor, where the analyzer measures and stores the sample blank value. The microprocessor starts the reagents injection sequence, adding first the complexing reagent, to avoid precipitation of calcium and magnesium hydroxides. After a proper mixing time, the analyzer dispenses two more reagents required for the colorimetric reaction. After a further mixing step, the analyzer stops the reaction product inside the heated flow cell where the reaction takes place. Absorbance reading is taken at 630/660 nm, when the reaction reaches the end point and the concentration is calculated against the calibration factor stored in the analyzer.



Technical Specifications

MEASURING PRINCIPLE: Colorimetric, salicylate or phenate method (depending on the local standard), , phenate method using 3 reagents also available for seawater

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: cyclic

MEASURING INTERVAL: programmable

MEASURING TIME: 10 minutes

MEASURING RANGE: 0-5/1/2/5/10/20/40/100mg/L N-NH₃, other ranges available on request

DETECTION LIMIT: 0.003mg/L, 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% , average of 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;

REAGENTS CHANGE: 30 days

SAMPLE TEMPERATURE: 10 °C - 30 °C

PROTECTION: IP55

HARDWARE: PC104 industrial standard, Integrated keyboard and graphics display, RS232 option

POWER SUPPLY: 12 V DC external power supply from local power to 12 V DC included

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

Subject to change without notice



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