

MICROMAC CYANIDE FREE

ON LINE ANALYZER FOR CYANIDE FREE MONITORING IN WATER



MICROMAC CYANIDE FREE is a microprocessor controlled On Line analyzer specifically designed for automatic Cyanide Free 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

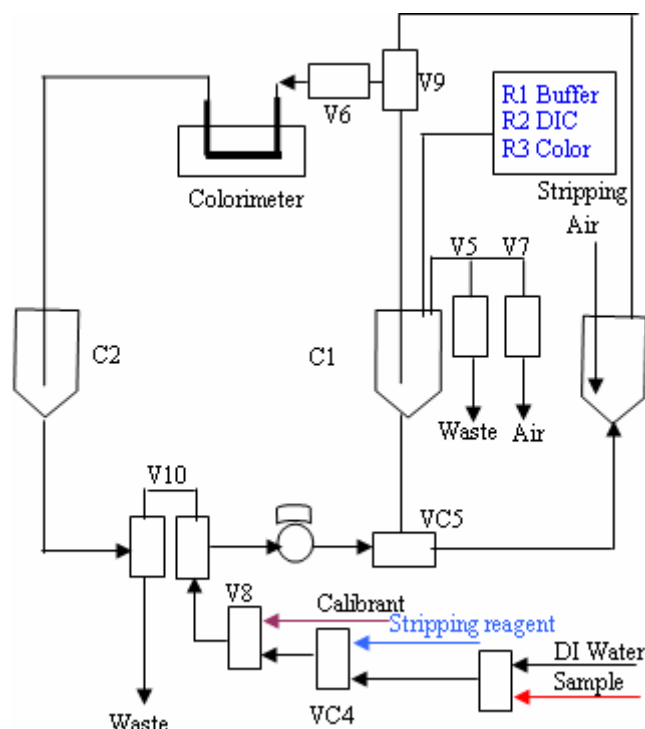
User selectable; between two measurements the analyzer remains in stand by mode, without reagents consumption.

✓ 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)

Cyanide Free (air stripping) measuring principle and hydraulic diagram

The sample after proper filtration is pumped in the LFA reactor, where it is mixed with a Buffer solution at pH 3.8, to release the cyanides present in the sample. The formed HCN is separated from the liquid mixture by stripping-distillation, using air as a carrier stream. The HCN is trapped in a slight alkaline solution and mixed with Buffer to reach pH 5.2. The cyanides reacts to cyanogen chloride, by chlorine available from DCI or CAT, which subsequently reacts with pyridine and barbituric acid to yield a reddish-violet colored complex. The increase of absorbance is measured at 570 to 590 nm. The sample concentration is calculated against the calibration factor stored in the analyzer.



Technical Specifications

MEASURING PRINCIPLE: Colorimetric, air stripping/pyridine, barbituric acid

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: cyclic

MEASURING INTERVAL: programmable

MEASURING TIME: About 15 minutes, depending on the range

MEASURING RANGE: 5 - 200 µg /L as CN, 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; 8W Standby; 20 W (mean) analysis

WEIGHT: 33 Kg without reagents;

DIMENSION: 800x450x300 mm (hwxwd)

Subject to change without notice



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Document ID: MicC_Cyanide Free-02-E