

MICROMAC ALKALINITY

ON LINE ANALYZER FOR ALKALINITY MONITORING IN WATER



MICROMAC ALKALINITY is a microprocessor controlled On Line analyzer specifically designed for automatic alkalinity 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

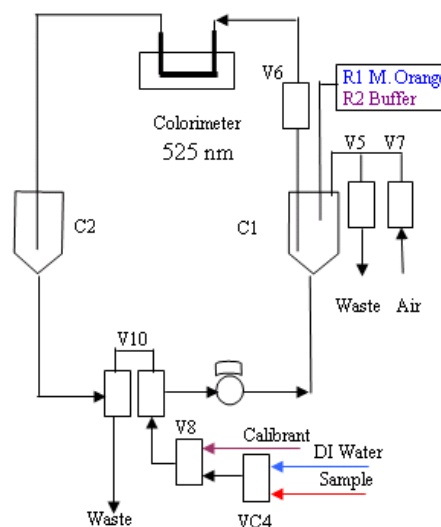
- Fully automatic operation
- Long autonomy; low maintenance, low operating cost
- Low reagents consumption; short preparation time; low disposable costs
- Easy operation; plug in analyzer, no special training is required
- Electronics and hydraulics completely separated
- Serial interface for local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

Alkalinity measuring principle and hydraulic diagram

This automated procedure for methyl orange alkalinity is an adaptation of the technique outlined in "Standard Methods".

In this procedure, one side of the color transition range of the methyl orange indicator is extended by the use of a buffer, the pH of which is at the initial transition point. In this way, slight changes in alkalinity will result in only gradual change of the acid base titration.

Free available residual chlorine interferes but the addition of minimal amount of sodium thiosulfate eliminates the interference without significant loss of accuracy. Salts of weak inorganic and organic acids may contribute to alkalinity. The color absorbance is measured at 525 nm.



Technical Specifications

MEASURING PRINCIPLE: Methyl orange Alkalinity as for EPA 310.2

COLORIMETER: dual beam, silicon detector

MEASUREMENT TYPE: cyclic

MEASURING INTERVAL: programmable

MEASURING TIME: 10-18 minutes, depending on the range

MEASURING RANGE: 0-100 mg/l up to 20g/L Ca CO₃, other ranges available on request

DETECTION LIMIT: better 5% of the full scale, as for EPA p. 136 appendix B; range 0-100ppm

REPEATABILITY: better than 5% ; SD% of 7 replicates at 50%; range 0-100ppm

ACCURACY: 5% , average of 7 replicates at 50%; range 0-100ppm

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 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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