

## AutoCalcimeter Model 442

### Description

The AutoCalcimeter determines the amount of calcium carbonate ( $\text{CaCO}_3$  or calcite) and calcium magnesium carbonate ( $\text{CaMg}(\text{CO}_3)_2$  or dolomite) in alkaline earth carbonate samples - such as oil well cores or drill cuttings. Calcite or dolomite buildup in drilling fluids and water treatment process causes scaling problems, and data from the Fann AutoCalcimeter can help determine the most optimal chemical treatment.

This instrument is in compliance with ASTM D 4373-84: Standard Test Method for Calcium Carbonate Content in Soils.

### Advantages

- Automatic and accurate dispensing of HCl when test begins
- Automatic stirring of sample with acid, by built-in stirring mechanism
- Automatic recording of pressure readings and elapsed time internally and on USB flash drive
- Automatic calcite and dolomite percentage reporting, with all calculations performed internally
- Real-time clock stamps date and time
- Data communication port for integration to computer



### Application

Samples containing calcite and dolomite are reacted with 1 Normal HCl to measure the released  $\text{CO}_2$  in a sealed reaction cell. A calibration curve (determined using a pure calcium carbonate reagent) is used to relate the pressure to the weight of the calcium carbonate in the sample. Several weights of the sample are utilized, to ensure the most accurate curve, and pressures for the curve are measured and stored automatically when running the appropriate calibration sample size.

## Recording and Interpreting Test Data

With a USB flash drive connected, the AutoCalcimeter will record the test data onto the USB drive in .csv file format. If the Flash drive is not present the data is still recorded in the internal memory. The AutoCalcimeter records the last 20 tests; this data can be downloaded using the transfer button on the keypad.

Test data can be interpreted using calibration curves for the pressure of calcite and dolomite. This material is provided in the included instruction manual.



## Specifications

Attribute	Value
Dimensions (WxDxH)	16 in x 9 in x 9.5 in
Weight	15 lb
Power Supply	100 to 240 VAC, 50-60Hz, 75 Watts
Ports	Power, RS485 serial, USB
Data Communication	USB

## Ordering Information

Part No. 102452754 - AutoCalcimeter

Includes plastic carrying case, mortar and pestle, pocket digital Weighing scale, CaCO<sub>3</sub> compound, HCl, and instruction manual.

*Fann Instrument Company offers a complete line of equipment, materials, and supplies for analyzing various drilling fluids and oil well cements in accordance with API Specifications and API Recommended Practices.*