



DRILLING FLUIDS EQUIPMENT

For over 30 years OFI Testing Equipment (OFITE) has provided instruments and reagents for testing drilling fluids, well cements, completion fluids, and wastewater. In addition to these product lines we also offer a range of instruments for core analysis. From our manufacturing facility in Houston, TX we provide customers all over the world with quality products and exceptional service.

Our drilling fluids product line includes innovative designs such as the Model 900 Viscometer, which showcases our ability to develop new technology to meet customer and industry demands. We also offer Retorts, Aging Cells, Roller Ovens, Mud Balances, Filter Presses, and all other instruments required to evaluate drilling fluid properties according to API Recommended Practice 13B-1 and 13B-2.

As an independent manufacturer and supplier, OFITE has one priority, our customers.



Capillary Suction Timer

The capillary suction time test was developed to study the filterability of sewage sludge and evaluate the effects of pre-treatment chemicals and process conditions of sewage treatment. It has been widely used to study the colloidal properties of clay suspensions. The petroleum industry uses the Capillary Suction Timer to characterize shales and to optimize the electrolyte concentration in drilling fluids for minimizing its effect on shale formations.



Industry Uses

Wastewater Treatment

- Mechanical dewatering of thickened slurries from sedimentation basins and filter backwash
- Conditioning of surface and subterranean water in potable water
- Clarification of filter backwash water and thickening of hydroxide slurries from sedimentation basins

Sewage Plants

- Dewatering of raw sludge, digested sludge, and waste-activated sludge on drying beds, rotary vacuum filters, vacuum belt filters, decanter centrifuges, and plate/frame filter presses
- Thickening of biological sludge prior to addition of primary sludge
- Thickening of sludge in Dissolved Air Flotation (DAF) systems
- Improving separation efficiency in mechanical pre-clarification processes



Industry Uses

Petroleum Industry

- Borehole stabilization to determine the best electrolyte and polymer to use for maximum shale swelling inhibition
- Evaluating colloidal shale properties to study the reduction of permeability of the formation around the wellbore
- Evaluating the effects of soluble salts and polymers on cuttings

Features

- Digital - readouts have higher accuracy
- LCD Display - makes measurements easy to read

Technical Specifications and Requirements

- # 294-50 Capillary Suction Timer

Specifications

- Power Requirements - 9-Volt Battery
- Size: 10" x 4.75" x 2" (25 x 12 x 5 cm)
- Weight: 1 lb 8 oz (.68 kg)

Intro

The Capillary Suction Timer (CST) principle was developed at the Water Pollution Research Laboratory in Stevenage, England, for studying the filterability of sewage sludge and for evaluating the effects of pretreatment chemicals and process conditions of sewage treatment. It has been widely used to study the colloidal properties of clay suspensions. The petroleum industry uses the CST to characterize shales and to optimize the electrolyte concentration in drilling fluids for minimizing its effect on shale formations.

CST studies of filtration characteristics of aqueous systems utilize the capillary suction pressure of a porous paper to affect filtration. When a suspension is filtered under the influence of this suction pressure, the rate at which filtrate spreads away from the suspension is controlled predominately by the filterability of the suspension. The CST automatically measures the time for the filtrate to advance between radially separated electrodes when a fixed area of special filter paper is exposed to the suspension.

Description

The CST consists of two separate components - the acrylic filtration unit with the electrodes and a timer. The method is rapid and easy to use. A sample of the aqueous system to be tested is placed in the sample cylinder and the suction pressure of the filter paper beneath the sample draws out the filtrate. The filtrate progresses radially in an essentially elliptical pattern with the timer starting when the liquid reaches the first pair of electrodes. When the liquid reaches the third electrode, the timing ceases, and an audible signal is sounded. The CST reading is indicated on an LCD counter indicating to tenths of a second.

Components

- #147-02 Battery, 9-Volt, Alkaline
- #294-01 Standard CST Paper; Whatman #17; Chromatography Grade; Package of 100
- #294-50-002 Sample Holder
- #294-50-021 Upper Block Assembly
- #294-50-011 Lower Block
- #294-50-012 Electrode
- #294-50-015 Power Supply, 12-Volt
- #294-50-017 Adapter Set for Power Supply, 4-Plug Wall Clip (US, UK, European, and Australian)

Optional:

- #294-05 Special CST Paper; Recommended for very viscous or slow filtering systems; Package of 300

