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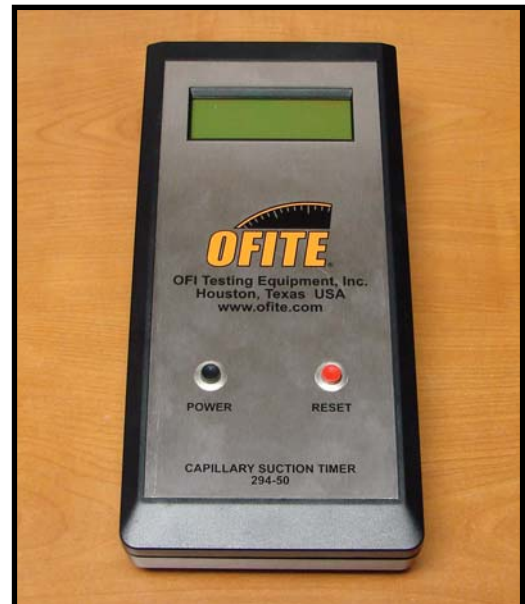
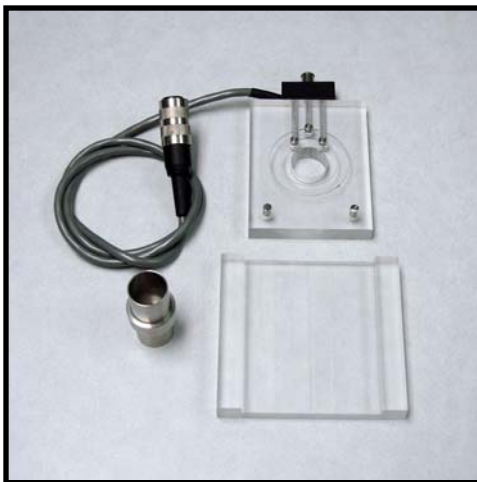
# OFITE Capillary Suction Timer

## Introduction:

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.

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 a 7-digit LCD counter indicating to tenths of a second.



## Features/Specifications:

**Power Requirements** - 9-Volt Battery

**Digital** - readouts have higher accuracy

**LCD Display** - makes measurements easy to read

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