

®

# Capillary Suction Timer Instruction Sheet

Part No. E10280001EA

Rev. C

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## DESCRIPTION

The Capillary Suction Timer measures the capillary tendencies of a sample fluid. This is done by allowing the fluid to contact and penetrate a 1 cm or a 1.8 cm diameter area of a special thick filter paper. This sample fluid will travel outward from the circular spot and will reach the nearest electrical contact on the sensor plate. It will continue to spread until it reaches the further away electrical contact. The instrument measures the time it takes for the fluid sample to spread from the first contact to the second contact. This time is measured in 1/10 Seconds.

The Capillary Suction Timer may be operated from its self-contained 9 volt battery for field use, or from 115 Volt, 60 Hz power. The 115 Volt adapter when plugged into the instrument will operate it, however IT WILL NOT CHARGE THE BATTERIES.

The Capillary Suction Timer consists of:

- \* Instrument cabinet with controls, batteries, and connection for the test head.
- \* Voltage Adapter 115 Volt (Transformer)
- \* Test head, consisting of the Test head tray and the Test head plate with pins and cable for connection into the instrument cabinet.
- \* Filter paper
- \* Funnel

## TEST PROCEDURE

1. If the instrument is to be used on 115 Volt, AC power, plug the transformer into an AC receptacle and the jack into the back of the instrument case, marked "EXTERNAL POWER".

### CAUTION

**MAKE SURE THE TRANSFORMER AND CABLE TO THE CST ARE IN GOOD CONDITION. PLUGGING A DEFECTIVE DEVICE INTO 115 VOLTS CAN CAUSE ELECTRICAL SHOCK.**

2. Clean and dry the sensor tray and test plate.
3. Plug the sensor plate assembly into the socket on the back of the instrument, marked "TEST HEAD".

4. Place a sheet of the special filter paper on top of the sensor tray. Place the sensor plate, probe side down, on top of the filter paper, engaging the two alignment pins.
5. Select either the 1 cm. diameter funnel opening for "fast" filtering aqueous systems or the 1.8 cm diameter funnel opening for "slow" filtering systems and insert this end of the funnel into the test head. Rotate the funnel applying light downward pressure when in position to ensure even contact with the filter paper.
6. Switch on the instrument.
7. Press the RESET switch and note that the counter reads all zeros and the FINISH lamp is ~~not~~ lighted.
8. The instrument is now ready for use.
9. Place approximately 5 ml of sample into funnel using a syringe. Liquid from the sample is absorbed by the filter paper in a circular pattern of increasing diameter.
10. When the liquid front reaches the first pair of contacts the counter starts, the START lamp lights, and timing commences.
11. When the liquid front reaches the third contact, timing ceases, the counter stops, the FINISH lamp lights, and a brief audible signal is sounded.
12. Note the counter reading which is the "C.S.T." (Capillary Suction Time) in seconds and tenth of seconds, and the funnel opening used 1.0 cm or 1.8 cm.
13. Remove the funnel and filter paper. Clean and dry the test head and funnel. For further measurements proceed as from paragraph 3 above.
14. Switch to OFF after use.

## **MAINTENANCE**

Keep the test head clean and dry. Occasionally clean the probes by drawing the block carefully with a slight downward pressure over 400 grit carborundum paper laid on a flat surface.

2. Replace battery using the following procedure.

## CAUTION

### PROPER INSTALLATION IS IMPORTANT PLACE BATTERY IN THE DRAWER WITH THE TERMINALS AS SHOWN IN BOTTOM OF DRAWER.

The battery should be removed if the instrument is going to be stored for a long period or the instrument is going to be used with the battery eliminator.

Replace the battery with fresh 9volt alkaline batteries (Part No. L4409) or equal whenever the "LOW BATTERY" light flashes.

The battery is accessed from the back of the (CST). Lift and withdraw the battery drawer. Remove the bad battery. Place a new battery in the drawer, terminals to the open end, plus (+) battery terminal to left as shown in bottom of drawer. Replace drawer in the CST.

## PARTS LIST

PART NO.	DESCRIPTION
44004	Test Head Assembly
44006	Sensor Tray
44007	Funnel
60012	Voltage Adapter 115 Volt (Transformer)
L4409	9 Volt Battery
N8806	Filter Paper

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