

## E/M By Milikan's Oil Drop Method



**Product Categories:** [E/M Apparatus & Valve Experiments](#), [E/M Apparatus & Valve Experiments](#), [Electronics](#), [Engineering Equipment](#)

**Product Page:**

<https://www.labappara.com/product/e-m-by-milikans-oil-drop-method/>

### Product Description

#### E/M By Milikan's Oil Drop Method

Millikans oil Drop Apparatus is used to measure the Elementary Electric Charge. To achieve this, tiny charged droplets of oil are finely sprayed into two metal electrodes placed horizontally. Heavier drops tend to fall downwards fastly due to their thermal velocity but the lighter ones remain almost steady inside the metal electrode condenser chamber. An adjustable electric voltage is applied between the metal electrode plates which creates an electric field inside the condenser chamber. By adjusting the electric voltage, drops can be moved upwards or downwards according to their charge.

In the original design of Millikans oil drop apparatus, it was not easy to locate the oil drops in the condenser because the setting was critical. Therefore, keeping this thing into consideration, we made some improvements in the original design of this instrument, hence, making it user and student friendly.

With just minor settings, Millikans Oil Drop Apparatus is capable of producing bright

and large number of oil drops can be seen in the condenser enabling the students to perform the experiment with great accuracy and comfort.

### **Technical Specifications**

Stable triangular base that supports the main steel pillar on which lamp house, condenser, microscope and atomizer system is mounted.

Lamp house encloses a 12 Volt SMD LED and a condenser lens to focus the bright light on the oil drops. It can be adjusted in the horizontal plain by a slow motion screw.

Condenser plates are made of brass mounted at the top of the central pillar insulated from the rest of the apparatus. Top plate has a small hole through which sprayed oil drops enter into the condenser chamber, separated by a distance of approx 6 to 7mm. and are also provided with terminals for power supply connections.

Oil used by the automiser is Mustard Oil.

Power supply has AC 300 Volt HT and AC 10 Volts LT.