Elementary charge and Millikan experiment 5.1.01-00

What you can learn about ...

- ➔ Electric field
- ➔ Viscosity
- ➔ Stokes' law
- ➔ Droplet method
- ➔ Electron charge

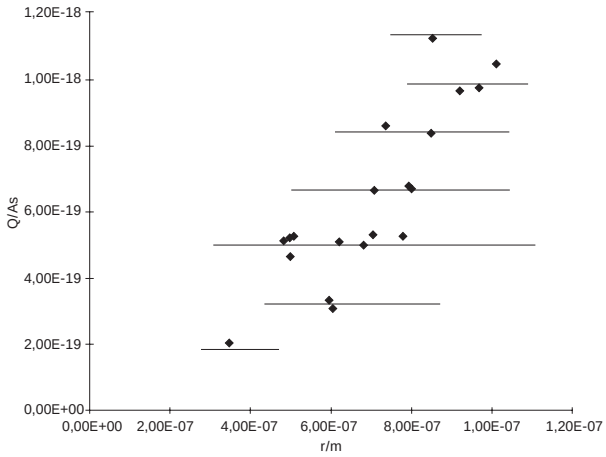
Principle:

Charged oil droplets subjected to an electric field and to gravity between the plates of a capacitor are accelerated by application of a voltage. The elementary charge is determined from the velocities in the direction of gravity and in the opposite direction.

What you need:

Millikan apparatus	09070.00	1
Multi-range meter, 0.24...600 VCD	07021.01	1
Power supply, regulated, 0...600 V-	13672.93	1
Object micrometer 1mm i.100 parts	62171.19	1
Stopwatch, 15 minutes	03076.01	2
Cover glasses, 18 x 18 mm, pack of 50 pcs.	64685.00	1
Commutator switch	06034.03	1
Tripod base -PASS-	02002.55	1
Stand tube	02060.00	1
Connecting cable, 4 mm plug, 32 A, black, *l* = 25 cm	07360.05	1
Connecting cable, 4 mm plug, 32 A, red, *l* = 75 cm	07362.01	2
Connecting cable, 4 mm plug, 32 A, blue, *l* = 75 cm	07362.04	2
Connecting cable, 4 mm plug, 32 A, black, *l* = 75 cm	07362.05	3
Optional accessories:		
Radioactive source, Am-241, 74 kBq	09047.51	1
Circular level	02122.00	1
FlexCam Scientific Pro II	88030.93	1
TV set		

Complete Equipment Set, Manual on CD-ROM included
Elementary charge and Millikan experiment P2510100



Measurements on various droplets for determining the elementary charge by the Millikan method.

Tasks:

1. Measurement of the rise and fall times of oil droplets with various charges at different voltages.
2. Determination of the radii and the charge of the droplets.