

Esperimento di Millikan simulazione Geogebra

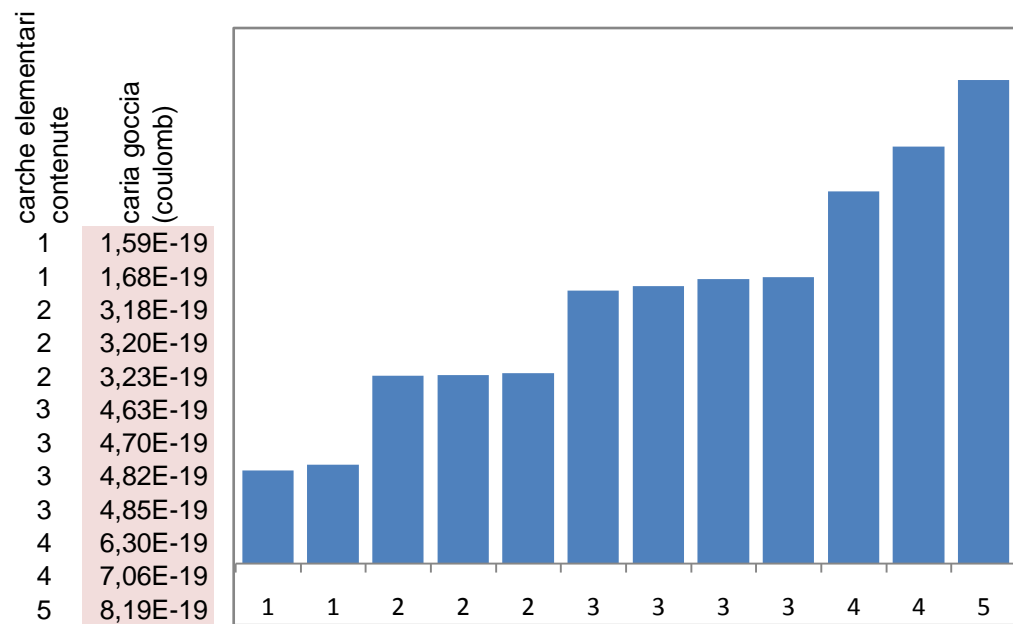
$$q = \frac{9\pi d(v_d + v_s)}{U} \sqrt{\frac{2\eta^3 v_d}{\rho g}}$$

ρ Densità Olio 875
 η Viscosità à aria 1,81E-05
 g accelerazione e gravità 9,80149
 d piatti condensat 5,0E-03
 dt distanza traguardi 2,00E-03

goccia	Tdiscesa (sec)	Tsalita (sec)	Vd (m/s)	Vs (m/s)	U (volt)	q_goccia (coulomb)	numero cariche elementari	carica elementare (coulomb)
1	28,9	30	6,92E-05	6,67E-05	400	4,70E-19	3	1,57E-19
2	20,03	22,3	9,99E-05	8,97E-05	990	3,18E-19	2	1,59E-19
3	30,1	14,1	6,64E-05	1,42E-04	610	4,63E-19	3	1,54E-19
4	29,4	12,1	6,80E-05	1,65E-04	1000	3,20E-19	2	1,60E-19
5	22,13	22,67	9,04E-05	8,82E-05	400	7,06E-19	4	1,76E-19
6	19,7	17,6	1,02E-04	1,14E-04	440	8,19E-19	5	1,64E-19
7	26,9	26	7,43E-05	7,69E-05	450	4,82E-19	3	1,61E-19
8	20,17	8,34	9,92E-05	2,40E-04	890	6,30E-19	4	1,58E-19
9	17,05	32,27	1,17E-04	6,20E-05	1000	3,23E-19	2	1,61E-19
10	23,75	9,18	8,42E-05	2,18E-04	950	4,85E-19	3	1,62E-19
11	27,38	51,84	7,30E-05	3,86E-05	1000	1,59E-19	1	1,59E-19
12	26,09	51,74	7,67E-05	3,87E-05	1000	1,68E-19	1	1,68E-19

minimo
1,59E-19

valore medio
1,61E-19
dev std
5,9E-21



Questo grafico ci fornisce una prima conferma della natura "corpuscolare" della carica elettrica