2.5.1

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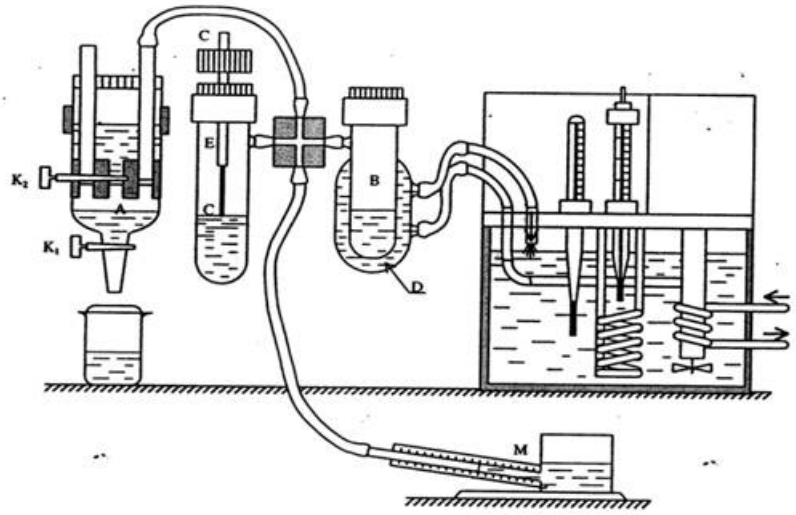

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1)

2) , .
(, 1 5)

3) (, $t = 21^\circ C$) .

h, .	38	39	38	39	39
P,	74,3	76,2	74,3	76,2	76,2

h - - , P -

$P = c \cdot h \cdot \frac{\gamma_1}{\gamma_2} \cdot K \cdot 9.81$, :

- $c = 1$
- $K = 0.2$ (,)
- $\gamma_1 = 0.8066$ / ^{3} —
- $\gamma_2 = 0.8095$ / ^{3} —

$< P >= 75.4$, $\sigma_p = \sqrt{\frac{1}{n(n-1)} \sum_{i=1}^{n} (P_i - < P >)^2} = 0.5$ $\rightarrow < P >= 75.4 \pm 0.5$

4) $(\Delta P = \frac{2\sigma}{R})$ $R = \frac{2\sigma}{< P >} = 0.59$
, : $R_m = 0.6$

5) ( ) . , .

h_1, .	101	106	107	107	108
P_1,	197.5	207.2	209.2	209.2	211.1

$< P_1 >= 206.8 \pm 2.4$

6) $l_1 = 5.7$ — .

7) , ,

h_2, .	182	182	182	182	181
P_2,	355.8	355.8	355.8	355.8	353.8

$< P_2 >= 355.4 \pm 0.4$

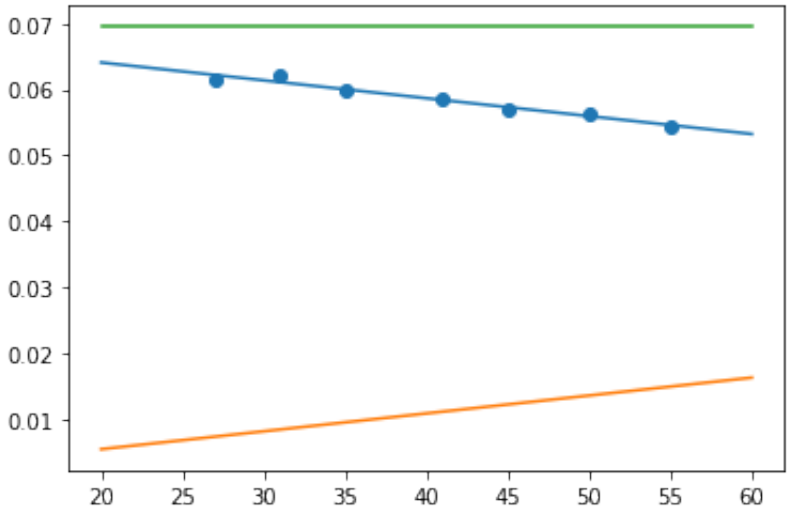
8) : $l_2 = 6.2$

9) $\Delta h = h_2 - h_1 = 1.5$. $\Delta h'$, : $\Delta h' = \frac{< P_2 > - < P_1 >}{\rho g} = 1.5$

10) $\sigma(t)$:

t°C	27	31	35	41	45	50	55
h, .	180	181	177	175	172	171	168
P_m,	351.9	353.8	346.0	342.1	336.3	334.3	328.4
ΔP,	205.0	207.0	199.2	195.3	189.4	187.4	181.6
σ, /	0.062	0.062	0.060	0.059	0.057	0.056	0.054

11) k b $\sigma = k \cdot t + b$:
$k = (-2.7 \pm 0.2) \cdot 10^{-4}$ / ° ; $b = (694 \pm 1) \cdot 10^{-4}$ /



— $\frac{U}{F} = \sigma - t \cdot \frac{d\sigma}{dt} = \sigma - kT = b$ ( )
— $\sigma = k \cdot t + b$ ( )
— $q = -t \cdot \frac{d\sigma}{dt} = -k \cdot t$

12) : -
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