

Lab 04 Micrometer Caliper

| coins | No | Zero $\pm c$ | main ruler a mm | round ruler b | $v =$ $U(c-b)$ | $x_i = a + \frac{b}{100} - \frac{c}{100}$ | a.m. $t_i =$ $\Sigma x_i / 3$ | a.m. $\Sigma t_i / 9$ | d_i mm | $s = \sqrt{\frac{\sum_{i=1}^n d_i^2}{N-1}}$ | error = $\frac{s}{\sqrt{N}}$ mm | |
|-------|----|-----------------|----------------------------|-----------------------|-------------------|---|-------------------------------------|--------------------------|-------------|---|------------------------------------|--|
| 1 | 1 | 5.0 | 7 | 37.4 | | $7 + \frac{37.4}{100} - \frac{5.0}{100}$ | | | | | | |
| | 2 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | |
| 2 | 1 | | | | | | | | | | | |
| | 2 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | |
| 3 | 1 | | | | | | | | | | | |
| | 2 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | |
| 4 | 1 | | | | | | | | | | | |
| | 2 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | |
| 5 | 1 | | | | | | | | | | | |
| | 2 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | |
| 6 | 1 | | | | | | | | | | | |
| | 2 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | |
| 7 | 1 | | | | | | | | | | | |
| | 2 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | |
| 8 | 1 | | | | | | | | | | | |
| | 2 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | |
| 9 | 1 | | | | | | | | | | | |
| | 2 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | |
| | | | | | | | | | | observation a.m.±error(mm) | | |

$$\chi_{\max} = \underline{\hspace{2cm}} \text{ mm} , \quad \chi_{\min} = \underline{\hspace{2cm}} \text{ mm}$$

$$S = \chi_{\max} - \chi_{\min} = \underline{\hspace{2cm}} \text{ mm} , \quad \frac{S}{5} = \underline{\hspace{2cm}} \text{ mm}$$

| No | group | count(正) | count |
|----|---|----------|-------|
| 1 | $\chi_{\min} + 0.0S \sim \chi_{\min} + 0.2S :$ mm ~ mm | | |
| 2 | $\chi_{\min} + 0.2S \sim \chi_{\min} + 0.4S :$ mm ~ mm | | |
| 3 | $\chi_{\min} + 0.4S \sim \chi_{\min} + 0.6S$ mm ~ mm | | |
| 4 | $\chi_{\min} + 0.6S \sim \chi_{\min} + 0.8S :$ mm ~ mm | | |
| 5 | $\chi_{\min} + 0.8S \sim \chi_{\min} + 1.0S :$ mm ~ mm | | |

Count



