

Paquímetro

→ \bar{d} (valor mais provável)

$$\bar{d} = \frac{\sum d_i}{n} \quad \bar{d} = \frac{16,35 + 16,40 + 16,35 + 16,40 + 16,35}{5}$$

$$\bar{d} = \frac{81,85}{5} = 16,37 \text{ mm} //$$

→ \bar{h} (valor mais provável)

$$\bar{h} = \frac{\sum d_i}{n} \quad \bar{h} = \frac{22,95 + 22,90 + 22,90 + 22,90 + 22,90}{5}$$

$$\bar{h} = \frac{114,55}{5} = 22,91 \text{ mm} //$$

→ Desvio Padrão

σ_A → incerteza do Tipo A.

DIÂMETRO

$$\sigma_A = \sqrt{\frac{\sum (d_i - \bar{d})^2}{n-1}}$$

$$n = 5$$

$$n - 1 = 4$$

$$(d_1 - \bar{d})^2 = (16,35 - 16,37)^2 = (-0,02)^2 = 0,0004$$

$$(d_2 - \bar{d})^2 = (16,40 - 16,37)^2 = (0,03)^2 = 0,0009$$

$$(d_3 - \bar{d})^2 = (16,35 - 16,37)^2 = (-0,02)^2 = 0,0004$$

$$(d_4 - \bar{d})^2 = (16,40 - 16,37)^2 = (0,03)^2 = 0,0009$$

$$(d_5 - \bar{d})^2 = (16,35 - 16,37)^2 = (-0,02)^2 = 0,0004$$

$$\sigma_A = \sqrt{\frac{0,0004 + 0,0009 + 0,0004 + 0,0009 + 0,0004}{4}}$$

$$\sigma_A = \sqrt{0,00075} = 0,027386127 \approx 0,027 \text{ mm} //$$