

盛伯湛

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precision

accuracy

100kg 1g 2g 5g 10g  
1g 2g 5g 10g 20g 50g

30cm 40cm  
40cm 50cm

60kg 75kg  
150kg 200kg 300kg

JJF1181 2007

6.2.2

$d$  scale interval

6.2.3  $e$  verification scale interval

6.2.5  $n$  number of verification scale interval

$Max$   $e$   $n=Max/e$

7.7 discrimination

7.9 resolution

error of measuring instrument  
careless error

systematic error

random error

$$E_m = E_s + E_r$$

1

$E_m$

$E_s$

$E_r$

$n$

$x_i$   $x_1, x_2, x_3, \dots, x_n$

T

$$E_{m_i} = x_i - T$$

2

$E_s$

正确度 trueness

$\mu$

T

偏移 bias

$$E_s = \mu - T$$

3

$$\mu = \frac{1}{n}(x_1 + x_2 + x_3 + \dots + x_n)$$

精密度 precision

偏差 deviation

$$E_r = x_i - \mu$$

4

$\sigma$  standard deviation

$$E_r = \sqrt{\frac{1}{n-1} \sum_{i=1}^n (x_i - \mu)^2} = \sigma$$

5

准确度 accuracy

error

	$E_m$	$E_s$	$E_r$
	accuracy	trueness	precision
	$E_{m_i} = x_i - T$	$E_s = \mu - T$	$E_r = x_i - \mu$
	error	bias	deviation

	6	7	8	9	10			
	2	3	4	5	6	170	8.5	1.357
	0	4	5	8	3	170	8.5	1
	0	0	10	10	0	170	8.5	0.513
	4	5	8	3	0	150	7.5	1

high precision    high accuracy

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