

GAUGE STABILITY STUDY REPORT

(By Variable Control Chart – $\bar{X}$ & R Method)

Date of Study :

Department / Location :	Type of Instrument / Gauge :
Specification :	Identification No. :
Part No. :	Calibration Status : Valid / Expired
Part Name:	Least Count :
Environmental Condition : Temp: ____ °C, Humidity: ____ %	Measurement Range :
Name(s) of Appraisers :	Frequency of Study :
Acceptance Criteria : $\pm$ _____ (as per specification)	No. of Appraisers :

Observation Data

 Inpaspages.com

Sr. No.	Date	Shift / Operator	Obs-1	Obs-2	Obs-3	Obs-4	Obs-5	Average ($\bar{X}$)	Range (R)	Remarks
1	01/09/2025	A	10.02	10.05	10.01	–	–	10.03	0.04	Stable
2	02/09/2025	B	10.04	10.03	10.06	–	–	10.04	0.03	Stable
3	03/09/2025	A	10.01	10.05	10	–	–	10.02	0.05	Stable
4	04/09/2025	C	10.06	10.04	10.07	–	–	10.06	0.03	Stable
5	05/09/2025	A	10.03	10.05	10.04	–	–	10.04	0.02	Stable

Statistical Analysis

Parameter	Formula	Value
Overall Average ($\bar{X}$)	$\Sigma(\bar{X}) / n$	10.04
Overall Range (R)	$\Sigma(R) / n$	0.034
UCL ($\bar{X}$)	$\bar{X} + A2 \times R$	10.075
LCL ($\bar{X}$)	$\bar{X} - A2 \times R$	10.005
UCL (R)	$R \times D4$	0.088
LCL (R)	$R \times D3$	0

For Subgroup Size 3

A2 = 1.023, D3 = 0, D4 = 2.575

For Subgroup Size 5

A2 = 0.577, D3 = 0, D4 = 2.115

 Result: **ACCEPTED** (Stable)

 Gauge performance within control limits.

 No significant drift or instability observed.

Prepared By

Name & Sign

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