

Temperature Hand-Helds

≥ 0.05 °C

THERMOMETER, THERMOCOUPLE & PT 100 CALIBRATION

(Competency Training)

PROGRAMME OVERVIEW:

Portable solution

This thermometer calibration training module is designed to meet ISO quality management system requirement include ISO 9001, ISO14001, ISO/IATF 16949, ISO 22000, ISO/IEC 17025, GMP, HACCP and other quality management systems. The calibration procedure is adopted from ASTM E644-06 and ASTM E564-02 through comparison technique. This module includes the evaluation of measurement uncertainty base on ISO Guide to the expression of uncertainty in measurement (GUM).

TARGET GROUP:

Quality Managers, Technical Managers, Laboratory Managers, Supervisors, Chemist, Engineer, Signatories of test reports & certificates, Laboratories Personnel.

OBJECTIVE:

At the end of the course, participants are expected to:

- 1) Able to perform calibration of various types of thermometers.
- Understand differences between various types of thermometer for example liquid in glass thermometer, thermocouple, and resistance thermometer PT100
- 3) Perform calibration independently
- 4) Perform necessary calculations include uncertainty estimation based on ISO Guide [according to the model given only]
- 5) Able to generate ISO quality management system accepted calibration report

<u>CONTENT:</u>

- 1. Principle of metrology and ISO requirement on calibration.
- 2. Understand the equipment and its use
 - Differences between various principles of thermoelectricity and resistance thermometry
 - Various types of thermocouples for example types K, N, T, S, J, R and their applications
 - ✓ Understand resistance thermometer for example PT100 and its input terminal
- 3. Care and Maintenance
 - Environmental Condition
 - ✓ Other Important Items
- 4. Calibration
 - ✓ Step by step procedure based on CSIRO technical paper no. 4
 - ✓ Hands on practice
- 5. Estimate uncertainty of test base on ISO Guide.
- 6. Calculation and Interpretation
- 7. Form and formula
- 8. Work example

METHODOLOGY :

Lectures, discussion, demonstration, hands-on practice and practical exercises

CERTIFICATE :

Candidate is required to complete an assessment either on day 2 or within 2 weeks after the training is conducted.

- ✓ Certificate of competency achieves score point 70% and above
- Certificate of attendance achieves score point below 70% or no submission of assessment

REMARK:

- 1) Candidate is advisable to bring tumb drive or notebook.
- 2) Candidate need to bring along their scientific calculator for assessment
- Candidate is required to complete the assessment during training or must submitting the completed assessment within 2 weeks after the training is completed.
- 4) Certificate will be issued based on score point in the assessment.
- 5) The original marked assessment paper will return to customer together with certificate.
- 6) Candidate with poor score is advisable to re-seat for training and assessment.

| CONTACT US FOR MORE DETAILS | |
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