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# BALANCE & THERMOMETER CALIBRATION (Competency Training)

#### PROGRAMME OVERVIEW:

This balance and 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. It is the combination of balance calibration module and thermometer calibration module. Balance calibration procedure is according to EURAMET-cg18 and thermometer is adopted from EURAMET-cg8, ASTM E644-06 and ASTM E564-02. This module include 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) Acquire basic knowledge in using balance and thermometer
- 2) Perform calibration independently
- 3) Perform necessary calculations include uncertainty estimation based on ISO Guide [according to the model given only]
- 4) Able to generate ISO quality management system accepted calibration report

E002 Calibration Training

## **CONTENT:**

- 1) Principle of metrology and ISO requirement on calibration
- 2) Understand the equipment and its uses

#### 2.1 Balance

- ✓ Type of standard weights
- ✓ Care and maintenance
- ✓ Environment

Method: EURAMET CG18

#### 2.2 Thermometer

- ✓ Liquid in glass thermometer
- ✓ Electronic thermometer
- ✓ Care and maintenance
- ✓ Mending of broken column
- ✓ Environment

Method: ASTM E563 Ice Point

ASTM E220 Thermometer Calibration

- 3) Calibration instruction of Balance & Thermometer
  - > Pre calibration inspection
  - > Step by step data collection with respect to metrology characteristics of balance and thermometer.
  - > Practice of at least 2 models, step by step guiding on calibration procedure
- 4) Uncertainty calculation and presenting calibration result
  - Compare with standards
  - > Work example
- 5) Conclusion and Q & A sessions

### METHODOLOGY:

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

# **CERTIFICATE:**

Participants are required to complete a project usually at the end of training or within 2 weeks of completion of the training

- ✓ Certificate of competency achieves score points above 70 %
- ✓ Certificate of attendance score points below 70 % or no submission of project

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REGISTRATION FORM (E002):				
	PUBLIC TRAINING		<del>-</del>	
CANCELLA  1. Ascendent To cancel, postputraining date:	: RM 3,000 Per Pax : Refer to Training Calendar : Ascendent Training Room : 3 Days : 9:00 AM - 5:00 PM : Ascendent Technology Sdn Bhd : Claimable  IN-HOUSE TRAINING : RM 6,000 Per Day : 3 Days : 9:00 AM - 5:00 PM : SBL - Khas : 5 - 25 Candidates  ITION / POSTPONEMENT POLICY echnology Sdn.Bhd. reserves the right to one or make any changes to the venue and so due to unavoidable circumstances.	Participant Designation NRIC Mobile No. Email	:	
<ol> <li>Reservation can be made by telephone or email, but will only be confirmed upon the received of completed registration form and payment.</li> <li>Please do not make any travel arrangements until you have received written confirmation for your registration from us.</li> <li>No cancellation is allowed but a candidate replacement can be arranged.</li> <li>For confirm cancellation: 7 days notice prior to commencement will subjected to RM250 service charge. If less than 7 days notice, there will be no refund.</li> <li>Confirm postponement for in-house training less than 14 days notice prior to commencement will subjected to 50% service charge on total invoice.</li> </ol>		Designation: NRIC: Mobile No.: Email:  PAYMENT DETAILS  All cheques should be crossed and made payable to: ASCENDENT TECHNOLOGY SDN BHD Bank A/C No. Maybank 5127-6360-6820.  Admittance will be permitted upon receipt of full payment 2 weeks before the course is conducted.  Training certificate will be awarded upon received of full payment		
	FOR HR	DEPARTMENT		
Company Name:		Contact Person: Mr / Ms:		
Address:		Designation:  Department:  Email:  Mobile No:  Signature:  Company Stamp:		
Training Date:				
Telephone:				
Type of Industr	y:			
	Tel: 603-6156 0813 / 2813   HP Email: sales@ascendent.com.r		2-719 4813 / 012-375 ascendent.com.my	2813 Page 3/3

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