TESTING TEMPERATURE CONTROLLED ENCLOSURES

This one day course is for people involved in routine performance testing of temperature-controlled enclosures (oven, furnace, refrigerator and fluid bath). It incorporates an extensive overview and comparison of AS2853 and IEC 60068-3-5 requirements, and it also includes an overview of the medical refrigeration equipment temperature mapping requirement to AS3864.2

Course Objectives

The course provides participants with the knowledge and skills to:

- understand measurement traceability concepts
- understand the fundamental principles of enclosure testing
- identify and minimise various sources of error that arise during oven measurements

Course Outline

The topics covered include:

- temperature measurement traceability
- thermocouple basics and selection criteria
- test requirements to Australian standard 2853 and to International standard IEC 60068-3-5:2018
- workshop – data assessment to AS 2853 and IEC 60068-3-5
- measurement uncertainty estimation workshop (incl. IEC 60068-3-11)
- other standards
- test documentation requirements
- temperature measurement uncertainty analysis[1]

[1]*Participants with limited experience in estimating measurement uncertainty would benefit from first attending the one-day Introduction to Estimating Measurement Uncertainty course.*

Past attendees have said…

"Now I have a better understanding of the topic I can provide a better quality service"

"The uncertainty calculations explained and the formulas provided were most valuable"

Course Details

Dates / Venue

Available dates and venues are on our website

Fee / Inclusions

Check the NMI website for the current price.

All classes include a copy of Monograph 5: Thermocouples in temperature measurement.

Face-to-face classes include lunch and refreshments.

Time

The course will start at 9 am and will finish by 5 pm.

Online course version delivered in 2 sessions: 9 am – 12 pm and 1pm – 4 pm

Related courses

Course name	Duration	Dates
Introduction to Estimating Measurement Uncertainty	1-day	See NMI website
Temperature measurement	3-days	See NMI website
Humidity measurement	1-day	See NMI website

In-house Options

Training may be carried out at your premises for groups of 6 or more on a fee for service basis. Consultancies provide advice regarding specific measurement issues or training in advanced measurement techniques. More information is found on our website.

Contact us

Phone (02) 8467 3796, or send an email to training@measurement.gov.au. For more information about NMI and our services, visit our website at www.industry.gov.au/client-services/training-and-assessment.

Normative references

[1] **AS 2853-1986** Enclosures – Temperature-controlled – Performance testing and grading

[2] **IEC 60068-3-5:2018** Environmental testing - Part 3-5: Supporting documentation and guidance - Confirmation of the performance of temperature chambers

[3] **IEC 60068-3-11:2018** Environmental testing - Part 3-11: Supporting documentation and guidance - Calculation of uncertainty of conditions in climatic test chambers

[4] **AS3864.1-2012** Medical refrigeration equipment - For the storage of blood and blood products, Part 1: Manufacturing requirements

[5] **AS 3864.2-2012** Medical refrigeration equipment - For the storage of blood and blood products, Part 2: User-related requirements for care, maintenance, performance verification and calibration