



# **Training on Estimation & Evaluation of Measurement Uncertainty As per NABL-141**

**Course Duration: Two Day**

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## **INTRODUCTION**

Laboratory accreditation is gaining importance as the quality, reliability of the test result are increasingly demanded by the customers, ISO has introduced the lab accreditation standard , 17025:2005 for the General

Testing Laboratory and 15189:2007 for Medical (Pathology) testing Laboratory for accreditation, and the large numbers of lab both from government and private organization are going for accreditation. Approximately 2000 laboratories are accredited till now in India. In central India around 25 labs are accredited and many more labs are interested in getting accreditation. **Calculation of Measurement of Uncertainty is one of the requirements which laboratory has to fulfill for all its measurements.**

## **OBJECTIVES**

- Understand Measurement Uncertainty Terminology
- Understand the requirements of ISO/IEC – 17025:2005 w.r.t. Measurement Uncertainty.
- Accreditation Bodies, Regional Body's and ILAC policy on reporting Measurement
- Uncertainty by test and calibration laboratories.
- Understand the methodology of evaluation and expression of Measurement Uncertainty.
- **Evaluate & Express Measurement Uncertainty using Live examples from Laboratories.**

## **COURSE CONTENT**

- Based upon ISO Guide 98-3
- Terminology used in Uncertainty Calculations
- The basic process from specification of the measurement model through to evaluation of the
- Final figure of measurement uncertainty
- Practical approach to calculation of measurement uncertainty
- Reporting Methodology : ILAC, APLAC and Accreditation Body's Policy on evaluation and reporting of Measurement Uncertainty

## **PROGRAM DETAILS:**

The program will be conducted by experience and experts from the field and will have hands on exercises on planning and calculations of Measurement Uncertainty

**Methodology:**

- Training course deploys accelerated learning techniques through:
- Class Room Interactions
- Individual / Group Exercises
- Practical Exercises

**BENEFITS:**

On completion of the course the participants will be able to:

- Understand the terminology required for evaluating uncertainty in measurements.
- Evaluate and report measurement uncertainty.

The theory of statistics, as required for the estimation of Type A uncertainties, is developed as a tool at the concepts level so as to provide a thorough grounding in the essential aspects of uncertainty as laid down in the Guide to the Expression of Uncertainty of Measurement.

**CERTIFICATE**

**Participants qualifying written examination shall be awarded certificate of successful completion of the course.**

**WHO SHOULD ATTEND**

- ✓ The Owners, In charges, HODs, technicians and laboratory personnel from various testing labs, particularly technical manager of the lab.
- ✓ Students from Engineering, Management, and Science Streams.
- ✓ Any other individual interested in knowing the Measurement of Uncertainty Calculations.

**NOTE: Participants should bring Laptop or Calculator for the training program as they will be required to do Uncertainty Calculations.**

## About us

Shreyas Quality Management System is a Consultancy Development Centre(CDC), Govt. of India Accredited, and IMS(ISO9001QMS,14001EMS & OHSAS18001) certified Training & Consultancy Organization focused on organizational performance improvement through the globally accepted tools such as ISO 9001, ISO14001 EMS, ISO5001EnMS,TS16949,NABL ISO 17025,ISO15189,ISO 27001 ISMS, OHSAS 18001, SIX SIGMA, 5 S/Kaizen, TQM, quality costs, design of experiments(DOE) etc. It has helped many organizations both from manufacturing and service sectors to analyze and improve their performance through well-established systems. It has team members possessing a wide spectrum of professional qualifications, experience and expertise which could effectively and efficiently address improvement issues which are of importance to your business / organization. It has provided consultancy to more than 200 organizations both from manufacturing and service organizations for quality improvement.

### Organised by-

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  - ISO 9001QMS; ISO 14001 EMS, QS 9000, OHSAS 18001, ISO 27001 ISMS, ISO 5001 EnMS
  - ISO 17025/15189 (NABL Accreditation), NABH, HACCP, SEI-CMM,
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