



PROFESSIONAL DEVELOPMENT COURSE

Applications of the Basic Statistical Tools for the Testing Laboratories

*Institute of Materials Research and Engineering (IMRE), A*STAR
Lecture Room SR2, 6th Floor*

**Friday, 24 February 2012
9.00 am to 5.00 pm**

This newly designed course will review the important part of statistical analysis in the interpretation of chemical laboratory data for quality control, method validation, estimations of measurement uncertainty, design of experiments and scientific research purposes. Mastering the fundamentals of data treatments through statistical tools will help in solving many data analysis problems. With a combination of lectures and class exercises, this workshop will provide participants essential basic statistical techniques that can be put into immediate use in their workplace, in a QC routine or a research laboratory.

Participants will learn how to recognize and reduce different types of measurement of errors, carrying out significant testing, identifying outlying data, confidence limits, performing the one-way ANOVA (analysis of variances), detection limits and much more. For those who are attending are to bring along their scientific calculators or laptop computers with MS Excel® spreadsheet.

This one-day workshop is ideal for all chemical testing personnel looking to improve their ability to apply statistical tools in the routine chemical analysis.

Laboratory managers, R&D managers, scientists, chemists, technicians, and others who need to understand and analyze collated data sets are encouraged to attend.

Course Outline

- Types of measurement errors and their estimation
- Accuracy & precision; repeatability & reproducibility
- Propagation law of random errors
- Basic concept of measurement uncertainty
- Use of outlier tests
- Central Limit Theorem; estimating the confidence interval of population mean with the Student *t*-distribution
- Significant (hypothesis) testing : *F*- and *t*- tests
- Introducing one-way ANOVA (analysis of variances)
- Linear regression curve and its uncertainty estimation
- Defining and estimating the limits of detection: IDL, MDL, LOQ

For more information, please contact:
SNIC Secretariat

c/o 1 Liang Seah Street, #02-12 Liang Seah Place Singapore 189022
Tel: (65) 6336 2328 Fax: (65) 6336 2583 Email: snic@cma.sg



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About The Trainer

Mr Yeoh Guan Huah, was the Managing Director of ALS Technichem Group of Laboratories in Singapore for 28 years before being relocated to ALS Hong Kong and Shanghai in 2006.

Mr Yeoh has a B.Sc. (Hons) and M.Sc in chemistry and is a Chartered Chemist of the Royal Society of Chemistry in the UK. He is also an active member in ISO/TC69 on Applications on Statistical Methods, a Convenor of its ad hoc Committee 1, and is a trainer of SAC-SINGLAS. In SNIC, Mr Yeoh has served in the council as the vice president for many years.



Mr Yeoh, conducts regular public courses and workshops on topics related to laboratory quality management, estimation of measurement uncertainty, method validation techniques and applications of basic statistics, etc. in Singapore, Malaysia and Hong Kong since 2000.

Course Details

Date : Friday, 24 February 2012

Time : 9.00 am to 5.00 pm (Registration starts at 8.30 pm)

**Coffee breaks and lunch will be provided*

Registration Fees

SGD 300.00 (SNIC Member)

SGD 350.00 (Non-SNIC Member)

Registration fees are subject to prevailing GST;

SNIC reserves the right to cancel, postpone or make changes to the course due to unforeseen circumstances

**Please note that registrations are on a first-come-first-serve basis.*

***Please note that any cancellation from the participant will not be refunded.*

To Register: [CLICK HERE](#)

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