

Instrumentation Methods

The instrumentation methods of chemical analysis are divided into various categories according to the property of the samples. Many of the methods can be used for both qualitative and quantitative analyses. The categories of instrumentation methods are as follows:

Spectroscopy

Atomic Absorption Spectroscopy
UV-Visible Spectrophotometer
Fourier Transform Infrared Spectroscopy (FTIR)

Mass Spectrometry

Gas Chromatography Mass Spectrometry (GCMS)

Thermal Analysis

Bomb Calorimeter
Thermogravimetry Analysis (TGA)
Thermal Conductivity (DFX)
Differential Scanning Calorimeter (DSC)
TPD/TPO/TPR Analysis

Separation

Gel Permeation Chromatography (GPC)
Gas Chromatography (GC-FID/TCD) Analysis
Gas Chromatography (GC-TCD) Analysis
High-Performance Liquid Chromatography (HPLC)
High-Performance Liquid Chromatography with Fluorescence Detector (HPLC-FLD)
High-Performance Liquid Chromatography for Sugar Analysis (HPLC-sugar)

Microscopy Analysis

Atomic Force Microscopy (AFM)
Dark Field Microscopy
Scanning Electron Microscopy (SEM)

Particle Analysis

Surface Analyzer
Coulter Porometer
Particle Size Analyzer
Zeta Potential

Electrochemical Analysis

Quartz Crystal Microbalance

Elemental Analysis

CHNS Elemental Analyzer

Polarimetry Analysis

Automatic Polarimeter

Wet Chemical Analysis

Viscometer
Density Meter

Other Analysis

Total Organic Carbon Analysis (TOC)
Titrino Plus Water Content

Service Application Procedures

1 Customers may contact the respective officer for further information on the testing services before sending samples for analysis.

2 Customers should provide information as follows:
a) Name and position (staff, student, researcher)
b) Details of company (name, address and tel/fax no.)
c) Quantity and type of analysis
d) Sample description (sample category and sample type)

3 The sample should be properly labelled with sufficient quantity and their testing condition for analysis.

4 Full payment should be made upon submission of the samples. Modes of payment includes purchase order, bank draft, cheque or cash deposit to be made payable to **USAINS BIOMICS LABORATORY TESTING SERVICES SDN. BHD.**

Policies

- Lead time testing is 4 weeks according to samples queue
- The data/results will be issued after payment is made
- Services will be charged according to the rate agreed by the University

Inquiry

Further inquiry may be addressed to:
School of Chemical Engineering,
Universiti Sains Malaysia,
Engineering Campus,
14300 Nibong Tebal, Pulau Pinang.

Contact Person

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Analytical Testing Services



Introduction

The School of Chemical Engineering was established in May 1992, in the engineering campus, Nibong Tebal. The School is equipped with modern laboratories with the latest equipment to be used for student's training, research and technical services.

Testing Facilities in School of Chemical Engineering

School of chemical Engineering offers a comprehensive scientific and technical laboratory testing services to government agencies and private companies.

The Analytical Laboratory is equipped with many analytical equipment for a wide range of analyses for industries need. The equipment are modern and sophisticated.

List of Testing Services