

Registration form

Please register as soon as possible for this annual course as spaces are limited to a maximum of 15.

Early Bird Registration
on or before 23.03.26

After 23.03.26

Registration Fee (CPACT members) **£1050 + VAT** ☐ **£1450 + VAT** ☐

Registration Fee (non-members) **£1490 + VAT** ☐ **£1875+ VAT** ☐

The above fees include tea/coffee breaks, lunches and dinner on the evening of Wednesday 24th June. Extensive course notes are also included. Fees are refundable only up to eight weeks before the event. Substitution may be made at any time.

Accommodation

The following hotels are conveniently located close to Clairet Scientific (approx 15 minutes by taxi):

Mercure Northampton Hotel, Silver Street, Northampton, NN1 2TA
Hotel Ibis Northampton Centre, Sol Central, Mare Fair, NN1 1SR
Delta hotels by Marriott Northampton, Eagle Drive, Northampton, NN4 7HW

METHOD OF PAYMENT

☐ Pay via credit/debit card (Invoice will be sent to you with the link to pay)

☐ Pay via BACS (Please provide a Purchase Order number)

TitleName

Job Title

Department.....

Organisation

Address

.....Postcode

Telephone Fax

e-mail

Dietary/Special Requirements

Please return completed form to: Natalie Kerr, CPACT, c/o Pure and Applied Chemistry Department, University of Strathclyde, Thomas Graham Building, 295 Cathedral Street, Glasgow G1 1XL
Email: admin@cpact.com Tel: +44 141 548 4836 Fax: +44 141 548 4713

Course Certificate

Course certificates will be available on request.

Location

Centrally located, Northampton has direct rail links to London Euston, Birmingham and Birmingham International Airport. The Mercure and Ibis hotels are ten minutes walk from the station. By road, access is via the M1 from the South or North and the A14 from the East.



**CENTRE FOR PROCESS ANALYTICS
AND CONTROL TECHNOLOGY**

PROCESS SPECTROSCOPY COURSE

**Tuesday 23rd - Thursday 25th
June 2026**

**Clairet Scientific,
Northampton**

**CLAIRET
SCIENTIFIC
LIMITED**

Introduction

Process Analysis is an integral part of process optimisation, process control and performance monitoring. Rapid analytical measurements are increasingly required in industry to monitor progress of a reaction, know when the end-point of a process has been reached, check reaction kinetics, detect impurities or control blending, granulation, etc. All these activities and many more require timely qualitative and quantitative information. This can often be provided through at-line, on-line, in-line or non-invasive application of molecular spectroscopy techniques.

This annual course provides an introduction to molecular spectroscopy through a series of presentations and practical exercises/demonstrations on process spectroscopy techniques, including NIR, MIR, UV-visible, Raman spectrometries. Developments in complementary process analysis procedures based on light induced fluorescence spectrometry, NMR spectroscopy and acoustic measurements will also be described. Emphasis will be given to the practical application of spectroscopy to process analysis.

Who should attend?

This annual course is designed for end-users who wish to expand their knowledge of spectroscopic techniques for Process Analysis. Since the course assumes no prior knowledge it is also suitable for new members of PAT implementation teams or end-users who would like to explore why and how to apply spectroscopy on-line and understand the various techniques which are available.

Demonstrations

The following topics will be covered during the course:

- NIR at-line and in-line analysis
- MIR in-line analysis
- Raman in-line and non-invasive analysis
- UV-visible in-line analysis
- Non-invasive reflectance NIR spectrometry
- Multivariate calibration model building

Additional one-to-one or company specific training, project discussions or sample measurements are available immediately after the course by arrangement with Clairet Scientific.

Course Leaders

Dr John Andrews, Clairet Scientific
Dr Paul Dallin, Clairet Scientific
Prof David Littlejohn, University of Strathclyde
Prof Alison Nordon, University of Strathclyde
Dr Andrew Parrott, University of Strathclyde

Provisional Programme

DAY 1 - Tuesday 23 June 2026

Morning session	Welcome Introduction to process analysis and sampling issues Introduction to molecular absorption spectroscopy and process measurement modes
	Lunch
Afternoon session	Applications of UV-visible spectrometry in process analysis Introduction to Light Induced Fluorescence Break Terahertz Practical demonstrations with instruments: UV-visible spectrometry, intrinsically safe operation of instruments and miniature NIR sensors

DAY 2 - Wednesday 24 June 2026

Morning session	Introduction to Raman spectrometry Applications of Raman spectrometry in process analysis Break Applications of MIR and NIR spectrometry in process analysis Process NMR spectrometry Acoustics
	Lunch and group discussion
Afternoon session	Practical demonstrations with instruments: MIR spectrometry, NIR spectrometry, Raman spectrometry
	Course dinner

DAY 3 - Thursday 25 June 2026

Morning session	Strategies for selection of process analysis techniques Design of experiments Data pre-processing procedures Break Regression analysis procedures for multivariate calibration Group exercise on process analysis problems Lunch
Afternoon session	Practical demonstrations: Design of experiments, Multivariate calibration model building for NIR spectrometry and Advanced Raman spectrometry
	Round up of course and final questions