

# Advanced Materials Characterisation for Food Product Development, modifiers and plant-based alternatives

1 May 2025

Venue: Anton Paar, Luton LU1 3LU

Join us for a FREE expert session on advanced materials characterisation in food development with Anton Paar and Brabender solutions for quality control and formulation optimisation. Learn key techniques to enhance consistency, stability and performance in food products, including food modifiers and plant-based alternatives. Gain insights into characterising plant-based meat and dairy substitutes for improved uniformity and consumer acceptance. Discover how stabilisers, emulsifiers and other functional ingredients optimise texture and sensory properties. Use Brabender instruments to assess dough rheology, elasticity, and viscosity for better processing and baking results.

## Key takeaways:

- ▶ How to optimise formulations using rheology, tribology and viscosity analysis
- ▶ The impact of particle size and density on food structure and stability
- ▶ Methods to evaluate oxidation stability and shelf-life prediction
- ▶ Best practices for plant-based product development and the role of modifiers
- ▶ Hands-on sessions to analyse food samples and interpret results
- ▶ Case studies and applications of food characterisation in diverse settings to optimise processes, enhance product quality and drive innovation

In this course you will learn about characterisation possibilities for food and the benefits from using multiple techniques.

## The methods presented include:

- ▶ Rheology & Viscosity: Texture and flow behaviour of food material
- ▶ Tribology: Understand lubrication properties for sensory evaluation and mouth feel
- ▶ Particle size & Density: Ensuring consistency in powders and emulsions
- ▶ Oxidation stability: Prediction of shelf-life
- ▶ Dough analysis: Optimising the properties of baked goods
- ▶ FTIR: Supporting food production by providing rapid, non-destructive chemical analysis

Prepare to deepen your knowledge and enhance your skills in food characterisation!

## Workshop Programme 1 May 2025

09:30 h	Welcome, Registration & Coffee
09:45 h	Session 1 – <b>Rheology &amp; Viscosity</b> Understanding texture and flow in food products
10:45 h	Laboratory practical session
11:15 h	Break
11:30 h	Session 2 – <b>Particle Size &amp; Density</b> Ensuring uniformity in powders and emulsions
12:30 h	Laboratory practical session
13:00 h	Lunch
13:30 h	Session 3 – <b>Oxidation Stability</b> Assessing shelf-life and product degradation
14:00 h	Session 4 – <b>FTIR in Food Production</b> Chemical Analysis for quality and safety
14:30 h	Break
14:45 h	Session 5 – <b>Dough Analysis</b> Enhancing baking performance through material characterisation
15:15 h	Laboratory practical session
16:00 h	Session 6 - <b>Tribology</b> Evaluating lubrication and mouthfeel in food formulations
16:30 h	End of Workshop – safe travels

## Who should attend?

This workshop is designed for scientists, engineers and technologists who want to deepen their understanding of food properties or explore the latest advancements in the field.

Places will be limited to ensure a good ratio of delegates to tutors during the workshop.

To reserve your place, please complete the following form and email to: [info.gb@anton-paar.com](mailto:info.gb@anton-paar.com)

## Meet the team



Steve Vincent is our UK Sales manager for Anton Paar measurement products including our range of viscometers. A chemist by training, he has worked for more than 30 years with market leading companies in the analytical instrument and software business.

During that time he has developed a thorough understanding of analytical chemistry techniques and issues faced in QC and R&D laboratories. He has expertise in density measurement, refractometry, electrochemistry, molecular spectroscopy. He is also our in-house expert for the pharma industry, and the data-integrity solutions we offer to address the regulatory requirements the industry faces.



Joseph Hodges is the Product Manager for Rheology & Particle Characterisation for UK & Ireland.

Joseph has 7 years' experience assisting research & manufacturing institutions, adopting physical characterisation methods on rheometers and developing their material characterisation strategies throughout the UK, US, Europe and South East Asia. In his current role he is responsible for supporting application development and technical enquiries within the UK & Ireland. Joey has a degree in Biomedical Sciences from the University of Southampton.



Cormac is an accomplished Application Engineer with over two years of experience at Anton Paar. He has spent the majority of that time developing customer solutions using a range of techniques, including laser diffraction, DLS, rheology and gas adsorption. He has a solid academic foundation from Leicester University, in engineering and applied sciences, which helps him to apply these techniques to the problem of solving application challenges. Cormac is quickly developing a strong understanding of advanced analytical techniques and their applications in battery technology.



Steve Singh – Product Manager for ASC

Steve Singh has worked in the field of analytical and synthetic chemistry for over 30 years. He joined Anton Paar in 2004 as the Product Manager for the Chemical Analysis Technology division, now called Analytical and Synthetic Chemistry (ASC). Along with ASC, Steve is also responsible for FTIR and Raman spectroscopy.



Ron Savin is an Instrumentation Engineer with experience in the water & chemical industries.

Ron has been with Anton Paar for over 20 years working across our customer base from academia to petrochemical refineries. Ron currently covers the East of England area for our laboratory instrumentation range, as well as application specialist for our viscosity and petroleum instrumentation for the UK.



Email to: [info.gb@anton-paar.com](mailto:info.gb@anton-paar.com)

Name: \_\_\_\_\_

Job Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

postcode: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

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**Anton Paar Ltd**

T: 0333 015 0080

950 Capability Green | Luton | Bedfordshire | LU1 3LU

[info.gb@anton-paar.com](mailto:info.gb@anton-paar.com) | [www.anton-paar.com](http://www.anton-paar.com)