Unlocking Semi-Solid Materials

Advanced Characterization Techniques & Applications

Tuesday, March 3, 2026

09:00 a.m.	**Welcome & Introduction** ▪ Overview of seminar objectives ▪ Fundamentals of semi-solids and viscous materials
	Fundamentals of Semi-Solids and Viscous Materials ▪ Key parameters: density, viscosity, rheology and consistency ▪ Impact on flowability, packing, and process performance
	Rheological Characterization of Semi-Solids ▪ Principles of rotational and oscillatory rheology ▪ Practical examples linking rheology to processing and application conditions
10:30 a.m.	**Coffee Break**
10:50 a.m.	**Gas Pycnometry for Density** ▪ Principles of gas pycnometery ▪ Case studies: impact of density on formulation stability and performance
	Penetrometry for Consistency and Texture ▪ Principles of penetrometer testing ▪ Measuring firmness, spreadability, and structural strength
12:30 p.m.	**Lunch**
02:00 p.m.	**Hands-On Experiments in 3 Groups:** 1. Gas Pycnometry – Density Measurement 2. Rheometer – Flow & Viscoelastic Properties 3. Penetrometer – Consistency & Texture
04:00 p.m.	**Coffee Break**
04:15 p.m.	**Hands-On Experiments: Group Debrief & Discussion**
	Closing Remarks ▪ Summarize key takeaways ▪ Feedback session
05:00 p.m.	**End of the Seminar**