Food Structural and Physical Characterisation Road Map

The success of your food product is dependent on it meeting the desired sensory, textural and structural properties and on using an efficient manufacturing process. Our multidisciplinary expertise and extensive portfolio of robust physical and microscopy methods will help you to navigate your development and production challenges every step of the way:

1. Ingredient Characterisation
   - Quantitative Particle Size and Morphology Analysis
   - Specific Surface Area
   - Moisture Analysis
   - Bulk and Tapped Density
   - Thermal Properties

2. Formulation Characterisation
   - Viscosity and Rheology
   - Quantitative Particle Size and Morphology Analysis
   - Powder Flow
   - Texture Analysis
   - 2D and 3D Microstructural Characterisation – including ingredient distribution
   - Emulsion and Colloidal Stability

3. Process Optimisation and Scale-up
   - Quantitative Particle Size and Morphology Analysis
   - Specific Surface Area
   - Flow Characterisation

4. Shelf Life Assessment
   - Moisture and Water Activity
   - Emulsion and Colloidal Stability
   - 2D and 3D Microstructural Characterisation (Micro CT scanning)
   - Quantitative Analysis of Structure over Shelf Life

5. Product Quality Testing
   - Rapid Method Calibration by NIR
   - Moisture Analysis
   - Quantitative Particle Size and Morphology Analysis
   - Techniques to measure product specifications and key consumer drivers

Troubleshooting and Contamination Identification
- Foreign Body Analysis
- Consultancy
- Non-destructive 3D Characterisation
- Emergency Response Service (24/7)

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