Powder Technology and Solid Formulation
– Protect and preserve

Making a cup of hot chocolate or repainting your room? Two examples of how important the design of the powder is for a well-functioning product. YKI helps companies design the surface chemistry of particles to achieve a good end product.

How can I protect my sensitive product?

Based on fundamental understanding of surface and colloid chemistry involved in drying technologies, we can assist in finding a suitable formulation, drying process or microencapsulation technology to protect your solid or liquid product in powder form.

How can I control the properties of my powder?

Surface chemistry is a key factor in particle technology and powder performance. Through our extensive instrument park and scientific excellence we can help you to be on top of the issues.

This is how we make it happen

Formulation
Selection of suitable excipients/matrix materials for your product and application.
Drying technologies
In house technologies include spray-drying, freeze-drying and spray-freeze drying, providing different p article structures.

Microencapsulation
Based on spray-drying, we have developed different microencapsulation systems: In-situ coating and aqueous two-phase systems.

Characterisation
Microstructure: Scanning electron, transmission electron, confocal Raman and atomic force microscopy.

Surface chemistry: X-ray photoelectron and time-of-flight secondary ion mass spectroscopy.

Material properties: Differential scanning calorimetry, thermal gravimetric analysis, X-ray diffraction.

Wetting properties: Contact angle on tablets, compacts and larger granules and magnetic resonance imaging.

Release profiles: Release equipment, nuclear magnetic resonance and imaging.

Particle-surface interactions: Colloid probe atomic force microscopy (interaction forces, friction, adhesion).