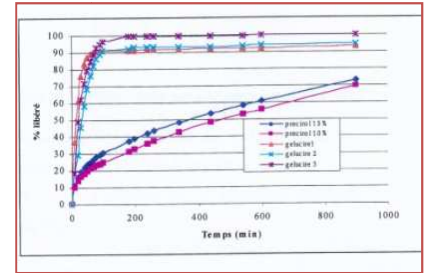
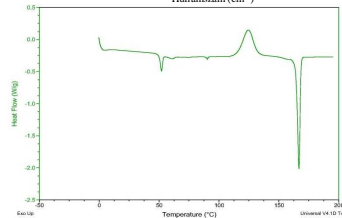
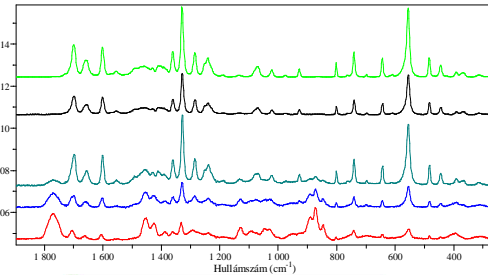
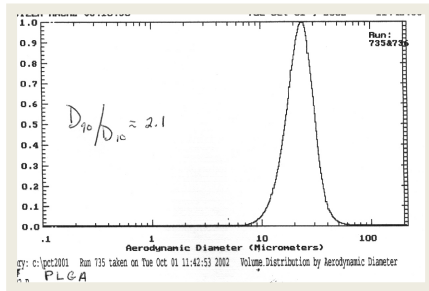


# API & BIO molecules

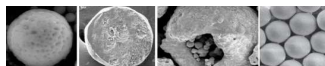
IMPROVED solubility \* bioavailability \* stability \* flow ability \*  
controlled release \* taste masking



By

Micro encapsulation, Solid Dispersions, Matrix creation, Enteric coating



Sample	Equipment	Process
		<p><b>Micro Encapsulation of powders</b></p> <p>Drug product powder (<math>&gt; 30\mu\text{m}</math>) is made by Spray Drying a solution and is coated in a Fluid Bed process. Powder can as well be encapsulated in a one step spray drying process of a drug &amp; coating polymer solution, resulting in a solid dispersion of the drug into the coating polymer (<math>2-80\mu\text{m}</math>). The drug could as well be encapsulated with the polymer in a Spray Drying process by using a tri-fluid atomizing technique. The coating is used for controlled or prolonged release of the drug product</p>
Sample	Equipment	Process
		<p><b>Spray Drying to engineer particles to size and shape</b></p> <p>Spray Drying is a perfect process to engineer particles to size (<math>2-100\mu\text{m}</math>), improve solubility, flowability, controlled release, stabilisation,.... By atomising polymer solutions with drug product a solid dispersion is obtained to improve solubility. Using different atomising techniques and process conditions, particles are sized from <math>2-100\mu\text{m}</math> depending on the final drug application; inhalation, OSD,....By using multiple atomising nozzles, particles can be encapsulated for release requirements. Biomolecules can be dried with a stabilizing carrier, allowing nano sizing after resuspending the particles</p>



Sample	Equipment	Process
		<p><b>Enteric coating of capsules</b></p> <p>In order to speed up the pre-clinical development of enteric OSD applications, the drug product with excipients is filled as a powder in a hard gelatine capsule that is first film coated to seal the capsule and in the second step enteric coated. Both process steps are made in the same perforated drum technology.</p>

## FEASIBILITY Development & CLINICAL production

- Scale-up studies
- Scaling down production problems
- Particle engineering to size, morphology, stability and release
- Controlled release & Taste masking
- Drying kinetics development
- Process & Technology training sessions

