



# Erbo Spraytec AG: Tailor-made powder products Process examples

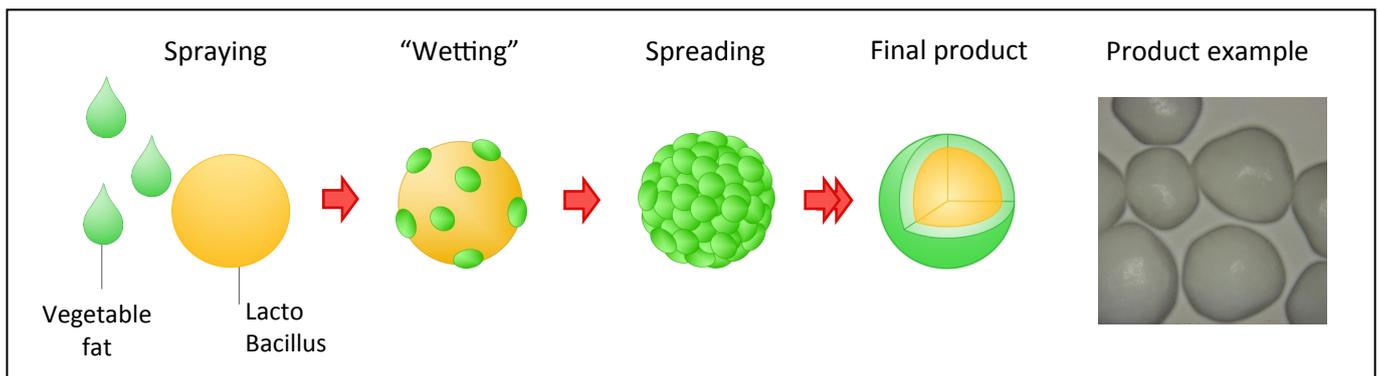
## Examples for processes with **fats and lipids**

### Hot-Melt-Coating

Description: Melted fat is sprayed on powder particles (core material) in order to coat the particles with a layer of fat

Purpose: Protection of the core material from “environmental” influences, e.g. degradation in the rumen by microorganisms, and protection for further processing

Examples: ERBO®-Methionin (rumen by-pass DL-Methionine)  
Coated lactic acid bacillus

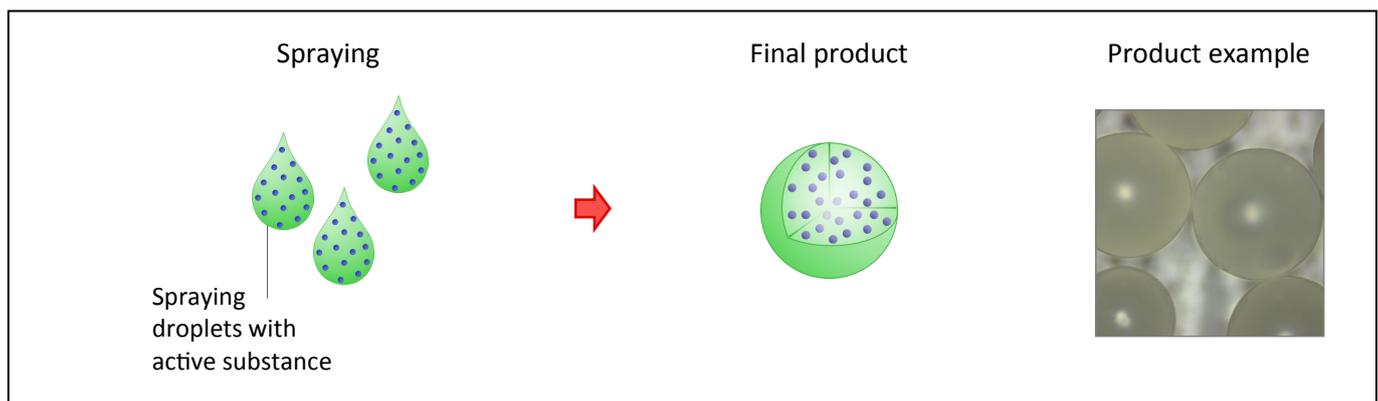


### Matrix encapsulation W/O

Description: A hydrophilic substance is dispersed and encapsulated in a fat matrix

Purpose: Protection of the active substance from “environmental” influences (e.g. reduction of hygroscopicity, degradation in the rumen by microorganisms, etc.), target release of the active substance, etc.

Examples: ERBO®-Cholin (rumen protected Choline Chloride)

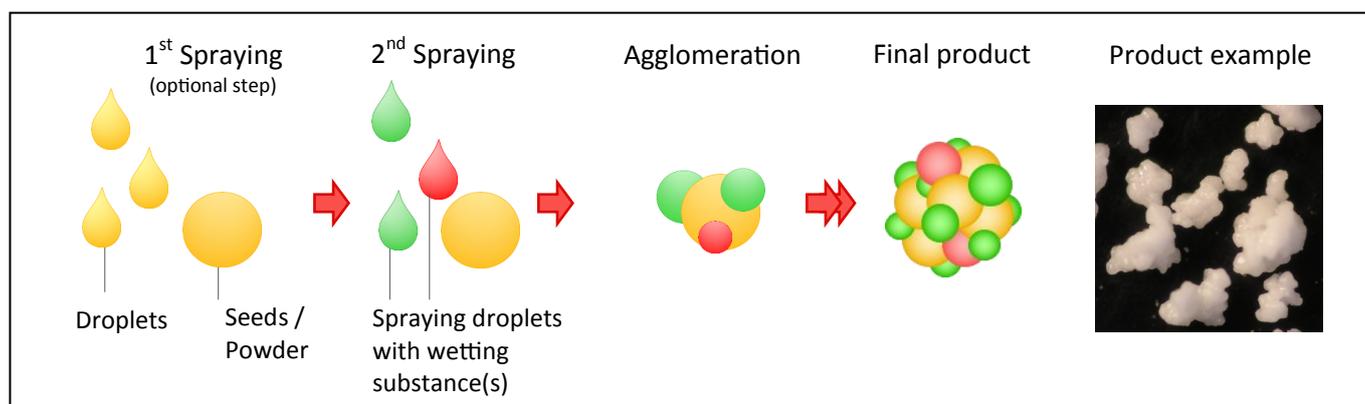


## Spray agglomeration / Instantisation

**Description:** In a first (optional) step a liquid substance is brought into a powder form, which is transformed in a second step into an agglomerated form by means of one or different wetting substance(s) that stick together several powder particles. By choosing a powder product as starting substance, the first spraying step can be skipped.

**Purpose:** Increasing the quotient of surface / volume in order to enhance solubility and at the same time avoiding the building of dust by forming bigger particle-agglomerates

**Examples:** Instant milk substitutes (e.g. calf milk replacer)



## Spray chilling

**Description:** A hydrophilic substance with a high melting point is brought into a microcrystalline powder form by spraying and chilling the droplets of the melted substance in a cold air stream

**Purpose:** Easier handling, dosing and mixing properties of a hydrophilic substance with a high melting point  
Amelioration of rumen stability and digestibility of high melting fat products for farm animals

**Examples:** ALIkon® (rumen by-pass, microcrystalline fat product)

