

Case study:

Application:

The use of inhalers is common and enables a easy and quick absorption of the active body.

For a good function of the inhaler typical characteristics are required to this product specified particle size & form and good dispersibility.

Requirements

Producing a dry powder inhaler consisting of antibiotics with a particle size $d_{50} = 2-3 \mu\text{m}$ with hydroxypropylcellulose (HPC) solution as binder. The final granules should have a particle size of $30-40 \mu\text{m}$.

Solution

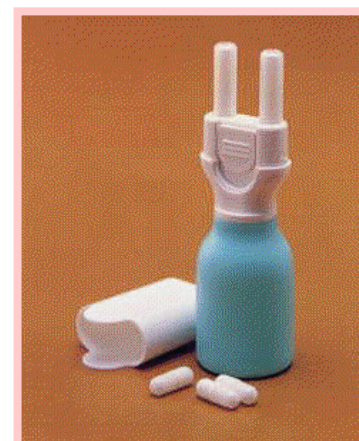
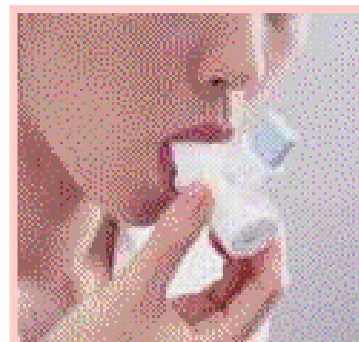
For producing a high qualified Dry powder inhaler systems with can produce batches from 100 to 500 liters are available. This systems comprises following sections

- liquid preparation and dosing unit
- Agglomaster with liquid spray device, pulse jet and integrated filter
- classifying screen and crusher for the oversize
- airheater, incl. blower
- controls with PLC and PC with a SCADA system

The Agglomaster has striking advantages,

- good binding property of the granulates
- all operations in one machine
- optimum flow- and dosing properties
- small particle size range of the granulates

Dry Powder Inhaler



Typical processing of a Dry powder inhaler in a Hosokawa Agglomaster

