

Inhalation

Lactohale[®] 300

A unique ability to optimise performance using lactose fines



Lactohale[®] 300 is a very fine, micronised lactose with a D50 below 5 microns. LH300 can be utilised within a Dry powder inhalation formulation to improve the drug deposition. Improved deposition can be obtained in several ways by the introduction of fines. In addition, by blending Lactohale[®] 300 with selected coarse lactose grades a specific lactose blend can be developed to achieve your target product profile.

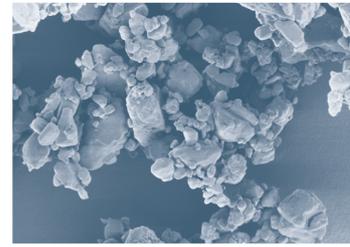
ASK AN EXPERT

dfepharma.com/inhalation



Lactohale® 300

Benefits



Improved drug deposition

Adding fines to the DPI formulation...

... stimulates drug to occupy the lower energy sites on the surface of the lactose carrier resulting in lower drug-carrier adhesion and improved deposition whereas lactose fines will occupy high energy "active sites".

Lucas et al. (1998) Pharmaceutical Research 15: 562 - 569.

... supports the formation of drug-fines agglomerates.

The agglomerates are exposed to higher drag forces compared to individual drug particles therefore promoting increased detachment from the carrier.

Lucas et al. (1998) Pharmaceutical Research 15: 562 - 569.

Louey et al. (2002) Pharmaceutical Research 19: 1524 - 1531.

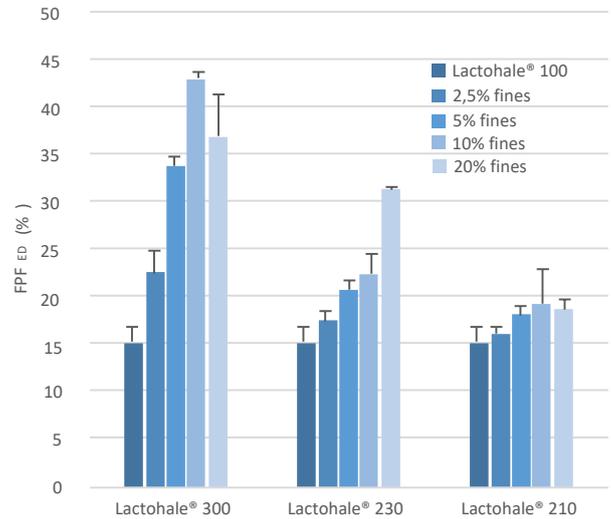
... shelters the drug from high press on forces during mixing, resulting in reduced adhesion between the drug and carrier and thus improved deposition.

Dickhoff et al. (2006) International Journal of Pharmaceutics 327: 17-25.

... increases the tensile strength of a bulk powder, as a result the minimum fluidization energy is also increased. The consequence is the formation of larger agglomerates during initial fracture of the bulk powder, which in turn are more easily dispersed leading to an increased fine particle fraction.

Shur et al. (2008) Pharmaceutical Research 25: 1631 - 1640.

Improved drug delivery to the lungs



Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4113622/>

Facts

Typical product data

Complies with Ph. Eur., USP-NF, JP

Lactose monohydrate monograph

Particle size distribution

Method: Sympatec

- D 50 ≤ 5 µm
- D 90 ≤ 10 µm
- Tapped density = 520 g/l
- Bulk density = 260 g/l

Packaging

Cardboard box NL

Weight of product 12,5 kg

Re-test date 12 months

