



DFE
pharma

Lactose Inhalation lactose for design

Create your own blend
to optimize your formulation

Inhalation lactose for design refers to a range of lactose monohydrate grades. These selected grades allow you to optimize the ratio of coarse and fine lactose fitting your formulation need. Lactohale[®] 206, Lactohale[®] 210, Lactohale[®] 220, Lactohale[®] 230 and Lactohale[®] 300 are specifically of interest for formulators who are in early stage of development or for those who want to explore the design space of their formulation.

Ask an



EXPERT

dfepharma.com/inhalation

Inhalation Blend products

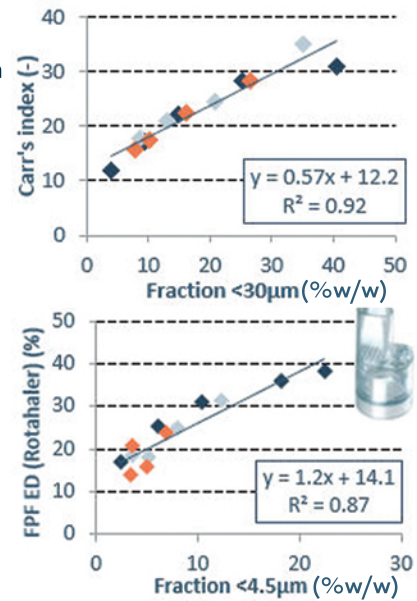
Benefits

Quality by Design approach to Dry Powder Inhalation formulation

The particle size distribution of inhalation grade lactose is typically chosen based on different requirements like the drug deposition, the flow in the device and the flow for the filling platform. The desired particle size distribution can be designed by mixing coarser and finer grades of lactose.

Lactohale® 206 is a coarse milled alpha lactose monohydrate grade where the fine lactose particles have been removed. The coarse milled lactose grade could be used as a basic lactose grade in applications where a good flow is required. Mixing this coarse grade with fine lactose provides formulators a means to optimize flow and deposition of a Dry Powder Inhalation blend.

Different types of fines are available for this optimization, being Lactohale® 210, Lactohale® 220, Lactohale® 230 and Lactohale® 300. Adding very fine lactose grades typically has a significant impact on the drug deposition. Adding coarser fines, like Lactohale® 210, mainly has an impact on the powder cohesiveness, with limited impact on deposition.



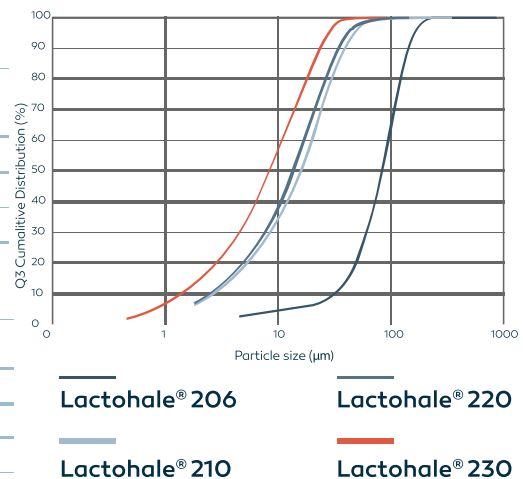
Facts

Typical product data

Complies with Ph.Eur., USP-NF and JP
Lactose monohydrate monograph

	Typical values		
	Poured density (g/L)	Tapped density (g/L)	Carr's Index (%)
Lactohale® 206	720	870	17
Lactohale® 210	400	680	>25
Lactohale® 220	370	660	>25
Lactohale® 230	310	500	>25

	Particle Size Distribution specification (Sympatec)		
	D10 (µm)	D50 (µm)	D90 (µm)
Lactohale® 206	33	83	154
Lactohale® 210	3	15	41
Lactohale® 220	2	13	34
Lactohale® 230	1	8	23



Packaging

	Cardboard box Alu +PE liner			
	Lactohale® 206	Lactohale® 210	Lactohale® 220	Lactohale® 230
Weight of product	20 kg	15kg	15kg	10kg
Shelf life	3 years	3 years	3 years	3 years

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