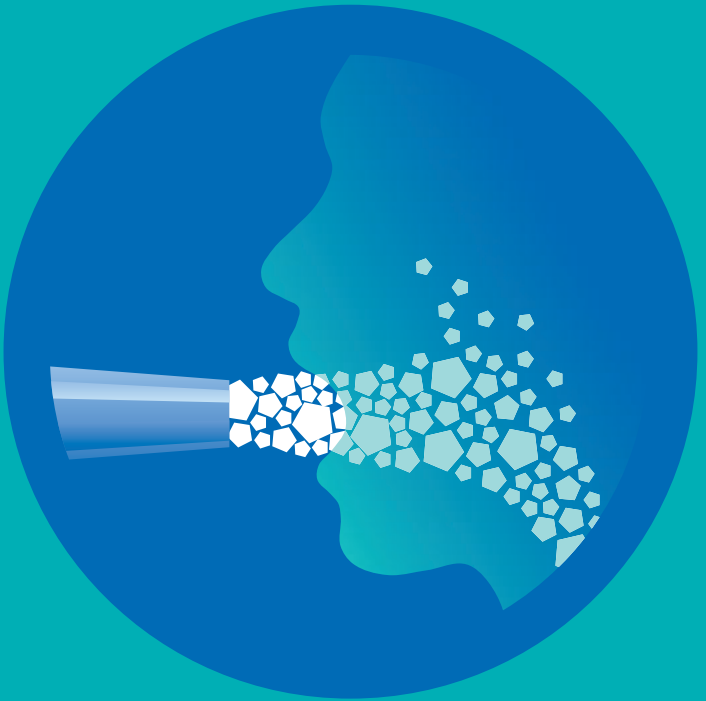




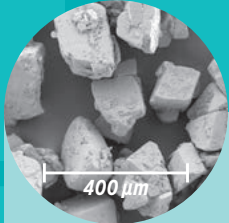
MEGGLE's alpha-lactose monohydrate qualities for dry powder inhalation



Step by step to the right
lactose product

MEGGLE has it: The right lactose product for dry powder inhalation

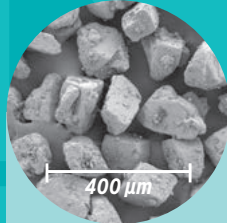
InhaLac® sieved



InhaLac® 70

Particle size distribution

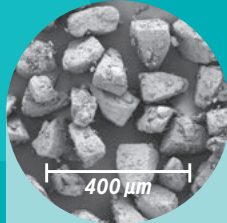
X ₁₀	110 – 160 µm
X ₅₀	180 – 250 µm
X ₉₀	270 – 340 µm



InhaLac® 120

Particle size distribution

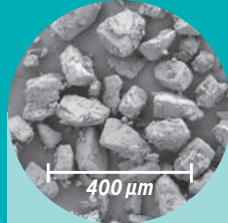
X ₁₀	70 – 105 µm
X ₅₀	110 – 155 µm
X ₉₀	160 – 215 µm



InhaLac® 160

Particle size distribution

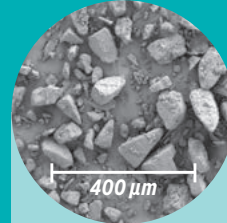
X ₁₀	55 – 85 µm
X ₅₀	90 – 120 µm
X ₉₀	125 – 165 µm



InhaLac® 230

Particle size distribution

X ₁₀	30 – 60 µm
X ₅₀	70 – 110 µm
X ₉₀	110 – 150 µm

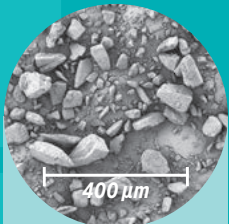


InhaLac® 251

Particle size distribution

X ₁₀	7 – 22 µm
X ₅₀	40 – 70 µm
X ₉₀	80 – 120 µm

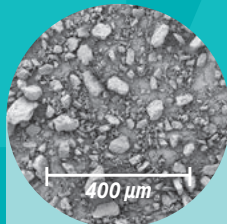
InhaLac® milled



InhaLac® 140

Particle size distribution

X ₁₀	3 – 7 µm
X ₅₀	37 – 61 µm
X ₉₀	120 – 190 µm



InhaLac® 150

Particle size distribution

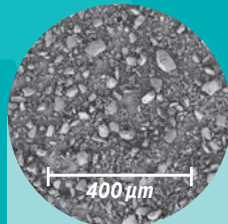
X ₁₀	1 – 5 µm
X ₅₀	18 – 30 µm
X ₉₀	65 – 95 µm



InhaLac® 180

Particle size distribution

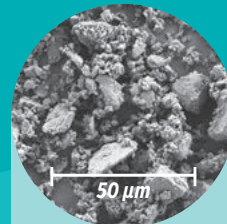
X ₁₀	5 – 15 µm
X ₅₀	50 – 100 µm
X ₉₀	120 – 160 µm



InhaLac® 300

Particle size distribution

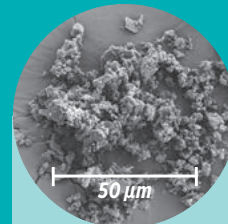
X ₁₀	2.0 – 3.5 µm
X ₅₀	14 – 19 µm
X ₉₀	40 – 56 µm



InhaLac® 400

Particle size distribution

X ₁₀	0.8 – 1.6 µm
X ₅₀	4 – 11 µm
X ₉₀	15 – 35 µm



InhaLac® 500

Particle size distribution

X ₅₀	≤ 5 µm
X ₉₀	≤ 10 µm

micronized

Decisions made easy – all features at a glance.

Our product portfolio encompasses a broad array of options with solutions for any requirement. This table outlines the product properties, shelf life, and standard package sizes, helping you decide on the perfect solution for your formulation needs – from MEGGLE, of course.

BENEFITS

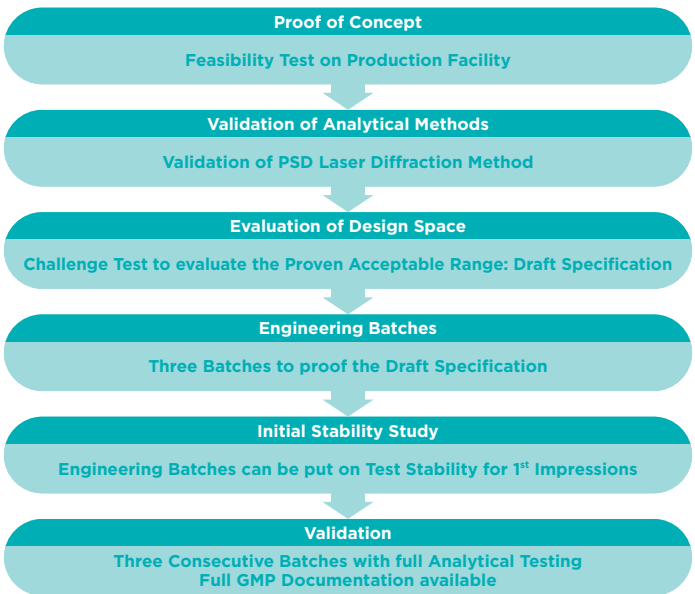
InhaLac®

- A broad spectrum of particle size distributions
- High storage stability
- Highly controlled and homogenous powder characteristics
- Highest microbial quality including low endotoxins

MEGGLE's dry powder inhaler – InhaLac®												
Product category	Sieved					Milled					Micronized	
InhaLac® Type	InhaLac® 70	InhaLac® 120	InhaLac® 160	InhaLac® 230	InhaLac® 251	InhaLac® 140	InhaLac® 150	InhaLac® 180	InhaLac® 300	InhaLac® 400	InhaLac® 500	
PSD typical laser diffraction												
x ₁₀ (µm)	135	88	73	45	13	6	3	9	2.5	1.2	–	
x ₅₀ (µm)	215	132	108	97	49	49	24	65	16	7.7	3.1	
x ₉₀ (µm)	301	175	144	144	91	159	76	143	48	27.9	7.9	
Span (µm)	0.8	0.7	0.7	1	1.6	3.1	3	2.1	2.8	3.5	2.4	
x fines < 15 µm (%)	0	3	3	5	11	22	37	5.9	47	79	99	
Typical powder technological values												
BET surface (m ² /g)	0.13	0.15	0.12	0.16	0.33	0.38	1.27	0.43	1.69	1.74	5.3	
Density bulk (g/ml)	0.60	0.72	0.70	0.70	0.64	0.60	0.49	0.62	0.43	0.33	0.24	
Density tapped (g/ml)	0.71	0.83	0.84	0.85	0.88	0.92	0.80	0.92	0.72	0.53	0.37	
Hausner ratio	1.18	1.15	1.19	1.21	1.38	1.53	1.63	1.50	1.67	1.61	1.54	
Carr's index (%)	15	13	16	18	27	35	39	33	40	38	35	
Packaging unit												
Carton box (kg)	25					24		20	25	20	15	6
Retest (Months)						24						18

Tailormade InhaLac[®] from MEGGLE – the benchmark for dry powder inhalers

To provide best support and to be able to fully meet your specific inhalative lactose needs, MEGGLE offers the development of tailor-made product solutions including further individual physico-chemical product parameters. As the development of a new customized product is a challenging task, we developed a well structured process plan:



Inhalation products portfolio:

For more information on our entire InhaLac[®] portfolio, please contact info.excipients@meggle.com

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