

Dusting Potential and Particle Size Distribution of Sacox® 120 microGranulate

Objective

To evaluate the dusting potential and particle size distribution of Sacox® 120 microgranulate.

Trial description

Measured parameters

- Particle Size Distribution
 - Particle Size Distribution was determined by Laser Diffraction (Sympatec, Germany).
- Dusting Potential
 - The dusting potential was determined by the Stauber-Heubach method (IFF, Braunschweig-Thune, Germany) and is related to 1m³ of air that is drawn through a dust-generating drum.

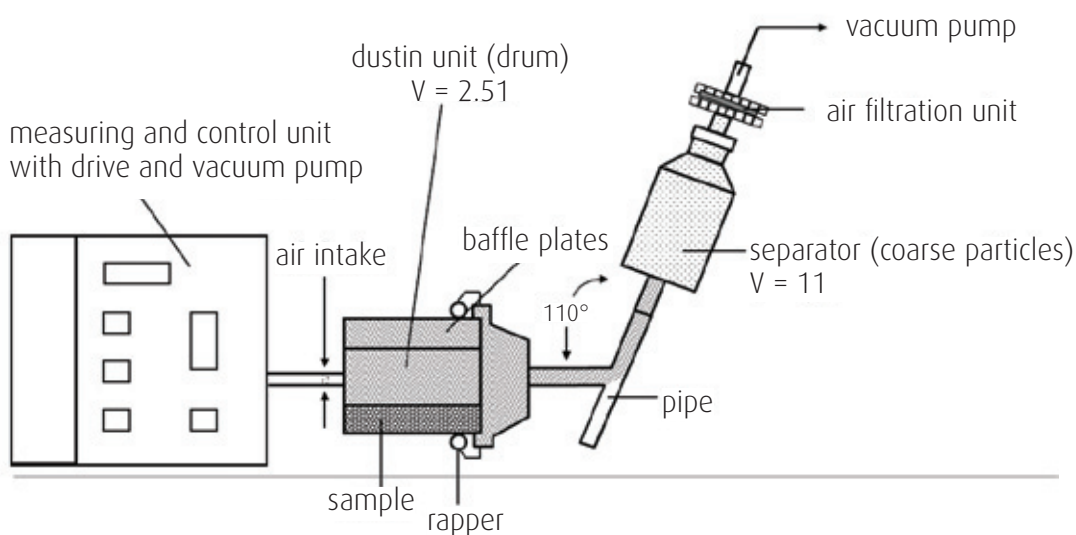


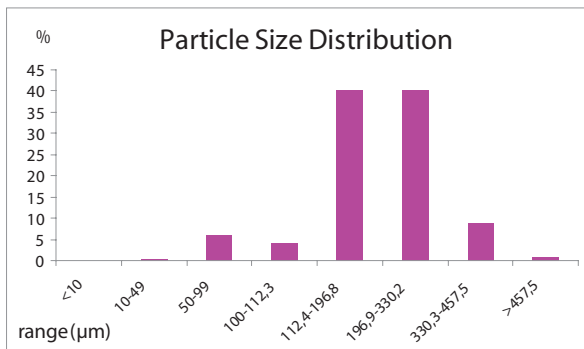
Figure 1: Stauber-Heubach test facility

- **The dust index SR** is expressed as the amount (in milligram) of dust per 100 g product.

Results

1. Particle Size Distribution

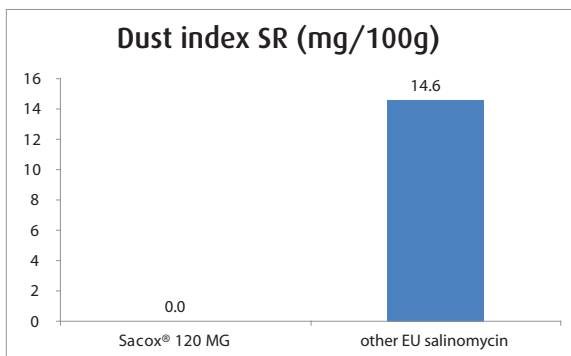
- The mean particle size is 196.9 μm .
- Only 0.15 % of particles is smaller than 50 μm .



particle size range (μm)	%
<10	0
10-49	0.15
50-99	5.96
100-112.3	3.89
112.4-196.8	40
196.9-330.2	40
330.3-457.5	9
>457.5	1

2. Dusting Potential

- The average value of the examined Sacox® 120 microgranulate shows a dusting potential of **0.000 g/m³**.
- The dust index SR of Sacox® 120 is **0.0 mg/100 g**.
- Another European salinomycin, analysed with the same method, shows a dusting potential of **0.3650 g/m³**.
- The dust index SR of the other European salinomycin is **14.6 mg per 100 g**.



	Sacox® 120	other EU salinomycin
g per 0.02 m3 (batch 1)	0.0000	0.0088
g per 0.02 m3 (batch 2)	0.0000	0.0060
g per 0.02 m3 (batch 3)	0.0000	0.0062
g per 0.02 m3 (batch 4)	0.0000	0.0082
dusting potential g/m3	0.0000	0.3650
dust index SR (mg/100g)	0.0	14.6

Conclusion

- Sacox® 120 microgranulate shows:
 - a uniform microgranule with an optimal mean particle size of approximately 200 μm
 - a very low percentage of particles <50 μm
 - a dust index of 0.0 mg/100 g (= no dust)
- The use of Sacox® 120 microgranulate leads to **minimal product loss**, optimal **mixing uniformity** and **high safety** levels in feed mill operations.