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**The morphology and various densities of spray dried mannitol**

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**Abstract**

This work describes characteristic parameters (size, shape, morphology, bulk and effective particle density) of mannitol carriers intended for pulmonary drug delivery which had been prepared at spray drying outlet temperatures of 67 °C (M67), 84 °C (M84) and 102 °C (M102).

Scanning electron microscopy (SEM) images showed clear differences in surface roughness and shape of the spray dried products. At low outlet temperatures spherical, rough particles were obtained whereas higher drying temperatures resulted in particles with multiple surface indentations and a smoother surface. It was possible to analyse surface roughness with confocal-scanning

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