



## Customer Case Study

# Instant Powders

Fluid Bed Drying and Mixing Optimization: **90%**  
Faster Process Development for Instant Powders

Particle Size  
Distribution

Friability  
Assessment

Agglomeration  
Efficiency

Dissolution  
Characteristics

## The Challenge

A contract manufacturer developing new fluid bed drying processes needed to quickly identify conditions producing particles with an ideal size, minimal dust, high surface area for rapid dissolution, and strong mechanical integrity. Traditional sieve analysis and manual dissolution tests were slow and insensitive, extending process development from days to weeks.

## The Approach

The customer integrated the ParticleTech Analyzer to gain real-time insights into particle size, fines content, and agglomerate breakage. This allowed them to directly link drying temperature, spray rate, and atomization to key powder characteristics, accelerating process optimization and improving product quality.

## The Implementation

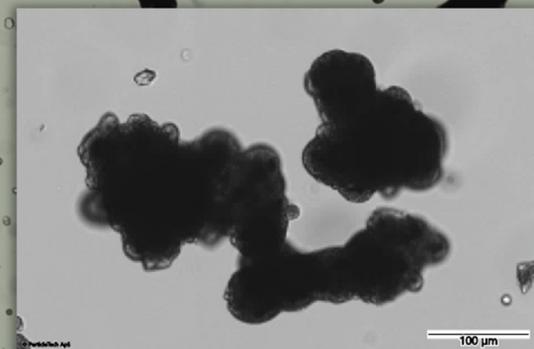
With the ParticleTech Analyzer, the team can now test multiple parameter combinations and instantly assess particle size distribution, dustiness, and strength - providing a comprehensive view of powder quality, including friability and dissolution performance.

## The Result

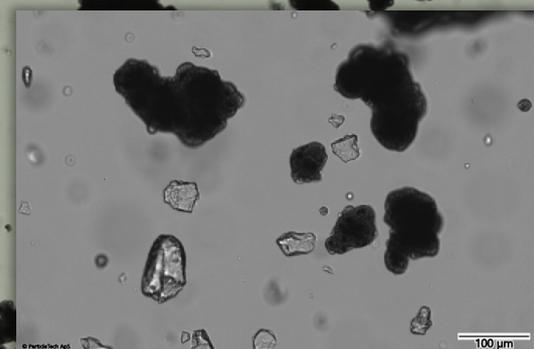
Process development time has been cut from weeks to hours. The team can now optimize processes faster, improve efficiency, and deliver better powder quality, enhancing dissolution and customer satisfaction. The analyzer is also used to optimize other production processes, such as dry blending.



ParticleTech Analyzer



Fragile vs. Robust Particles



Dry Blending of Ingredients