

Customer Case Study

Dissolution Control

Morphology-Driven QC Ensures Consistent Dissolution, Detecting Issues up to **95%** Faster

Crystal Shape Insights

Predictive Dissolution

Rapid QC

Consistent Quality

The Challenge

A pharmaceutical producer of a crystalline API faced inconsistencies in dissolution times between batches. Although laser diffraction showed identical particle size distributions, some batches dissolved more slowly than others, potentially affecting drug performance and consistency.

The Approach

The ParticleTech Analyzer was introduced to capture detailed crystal morphology beyond conventional size metrics. Using real-time shape and size data, the team developed a predictive model linking crystal elongation, and therefore surface area per unit volume, to the actual measured dissolution rates.

The Implementation

Crystallization samples are now routinely analyzed with the ParticleTech Analyzer in just two minutes. The measured morphology data are compared with the predictive dissolution model, enabling immediate confirmation that each batch meets dissolution requirements before formulation.

The Result

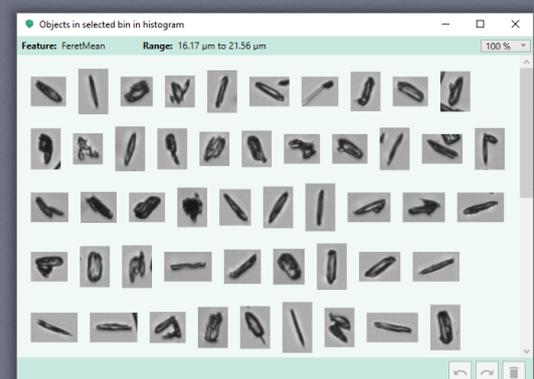
The customer gained a fast, reliable method to verify dissolution behavior and ensure consistent API performance. What was previously undetected by laser diffraction is now captured in just two minutes through simple, yet highly valuable, shape & morphology analysis.



ParticleTech Analyzer



Crystal Size and Shape



Detailed 2D-size distribution