

# Revolutionary Particle Shape and Size Analyzer

## APPAS – Alpha Powders’ Particles Analysis System

We proudly introduce a groundbreaking device for analyzing the shape and size distribution of powder materials in liquid suspension, with a particular focus on challenging polymer powders. Developed through a dedicated R&D initiative, this device redefines powder characterization capabilities, offering key functionalities and competitive advantages for a fraction of the cost.

### ➤ Key Capabilities and Features:

- Comprehensive Particle Analysis: Provides precise measurement and reporting of all fundamental size distribution parameters (e.g., Feret min/max diameter, Equivalent Spherical Diameter - ESD), and most importantly, advanced shape analysis (roundness, circularity, aspect ratio).
- Detailed Visualization: Generates shape maps and histograms of shape parameters vs. diameter, offering a complete image of the material's characteristics, crucial for production optimization and 3D printing.
- High Level of Automation: Includes automatic suspension preparation, dosing, measurement, and report generation, significantly streamlining workflows and minimizing operator bias.

### ➤ Why Our Device? Competitive Edge over Traditional Methods:

- Shape Analysis: Unlike methods such as laser diffraction (LS) which focus on equivalent diameter, our device delivers critical shape information, essential for understanding powder behavior in applications like SLS 3D printing.
- Automation: High automation of sample preparation and measurement distinguishes this system from manually operated alternatives, reducing error and increasing throughput.
- Minute sample needed: Measurement precision has been validated against laser diffraction (LD), meeting the  $D50_S/D50_{LD} \geq 0.9$  criterion with high repeatability for samples less than 10 mg.

The device has been successfully tested with various polymer powders, including those used in SLS 3D printing. **Please contact us for a price quotation.**

We believe our innovative device, offering a unique combination of advanced shape analysis, high automation, and verified accuracy, is an attractive solution for the powder materials and 3D printing sectors. This product is technologically market-ready.

We invite you to discuss distribution partnership opportunities.

Sincerely,  
Alpha Powders Team

