CLAIRITY™

ImageProVision™
IMAGE ANALYTICS. REIMAGINED.



CLAIRITY™ PARTICLE

Smart Particle Characterization for Regulated Environments

AI-enabled solution for particle sizing, morphology analysis, and classification - engineered for R&D, QC, and method development across pharmaceutical and life science workflows.

More Than Images. Insights That Drive Decisions.

www.imageprovision.com

Core Capabilities & Applications

Comprehensive Particle Analysis, particulate matter analysis. Precise. Reproducible. Scalable.

CLAIRITY™ PARTICLE delivers accurate, semi-automated particle characterization - supporting diverse dosage forms (i.e. powder, semi - solid, cream, ointments, gel, suspensions, injectable, ophthalmic) and complex sample types. Whether you're working with visible, sub-visible, or nano-sized particles, the system ensures traceable and reproducible outcomes.

Key Capabilities

01 Particle Size, Shape & Morphology Profiling

Quantify parameters like length, width, circularity, solidity,Spherecity, Surface area,Texture,Feret diameters, and area for precise material evaluation.

02 Semi-Automated Particulate Matter Assessment

Supports particle counting in injectable and suspension-based samples following global pharmacopeial guidelines. Manual validation is enhanced through 21 CFR Part 11 Application, overlays, and interactive image processing.

03 Multi-Class Component Differentiation

Distinguish APIs, excipients, agglomerates, and foreign matter using intelligent AI-based classification.

04 Low-Contrast & Transparent Particle Enhancement

Improve visibility and boundary detection for faint or translucent particleses - sential in emulsions, gels, and nano formulations.

Applications Include

- API particle analysis in R&D and QC
- Excipient and blend characterization
- Globule size distribution in creams, emulsions, and ointments
- Foreign matter examination in complaint investigations
- Particle size and shape analysis in deformulation studies
- PLM Based Identification of Asbestos in Talc

Technology, Compliance & Lab Integration

Engineered for Compliance, Built for Scientists

CLAIRITY™ PARTICLE offers a secure and scalable infrastructure tailored for regulated workflows and collaborative research environments.

Key Features

21 CFR Part 11-Ready Architecture

Full compliance with regulatory frameworks through e-signatures, audit trails, controlled access, and data integrity protocols.

High-Throughput Workflow Support

Batch processing tools reduce turnaround time for QC and method development teams.

Semi-Automated Imaging Workflow

Easily integrates with optical and digital microscopes for consistent image acquisition and repeatable results.

Detailed Reporting & LIMS Integration

Generate customizable, audit - ready reports with measurement overlays, metadata, and export formats compatible with most laboratory systems.

Compatible With

Compound Microscope (BF, DF, FL) SEM, and Digital Microscopy Systems

Used In

- Pharmaceuticals
- Biologics
- Cosmetics
- Academia
- Materials Science
- Forensics
- Chemicals
- Food & Beverage

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Why CLAIRITY™ PARTICLE - Outcomes & Value

Delivering Value Across Your Lab Ecosystem

01 **Reproducible Measurements**
Minimize analyst dependency with guided workflows and parameter templates.

02 **AI-Guided Insights**
Achieve consistent differentiation between particle types - even in complex or multimodal samples.

03 **Optimized for R&D and QC**
Supports deformulation, method validation, raw material testing, and batch release workflows.

04 **Flexible, Scalable, Modular**
Designed to adapt - from a single-user R&D lab to a multi-site GMP operation.

05 **Pharmacopeia-Ready Reports**
Align with USP <776>, <788>, <789>, <790>, <1776> and other global standards for particle and globule size distribution.

Transform how your team sees, measures, and interprets particle data - confidently and compliantly.

Statistics

Type	Particle	Agglomerate	Total
Min Length (µm)	2.361	9.846	2.361
Max Length (µm)	113.002	44.747	113.002
Average Length (µm)	12.455	26.664	12.637
Standard Deviation	13.206	14.077	13.3
Aspect Ratio	0.642	0.621	0.642
Count	540	7	547
Percentage	98.72	1.28	100
Median	6.887	24.293	7.003

D10 D50 D90 Values

Type	Particle	Agglomerate	Total
D10	3.274	9.846	3.274
D50	6.884	24.293	7.003
D90	29.675	44.747	29.859
Span	3.835	1.437	3.796

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