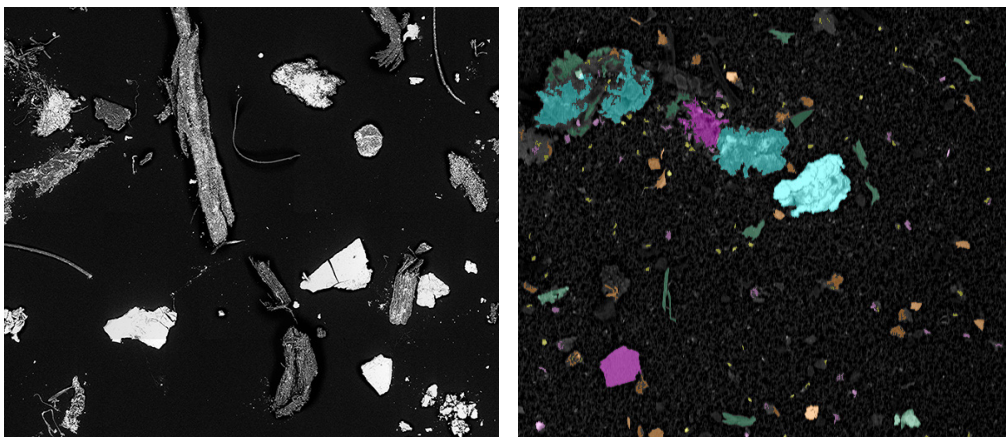


Simplify your operation and analyze particles automatically

ZEISS Smart PI

Smart Particle Investigator (SmartPI), your advanced particle analysis and classification solution, turns scanning electron microscopes (SEM) into turnkey solutions for industrial cleanliness or metal and steel applications. SmartPI incorporates all aspects of SEM control, image processing and Energy Dispersive Spectroscopy (EDS) within a single application. SmartPI carries out particle analysis and reporting automatically, allowing continuous unattended operation of the instrument and generating repeatable data from filter to filter, operator to operator, or laboratory to laboratory. SmartPI is an integrated ZEISS solution that is supported entirely by the global ZEISS service and applications team.



*Left: Gray-scale segmentation of particles by backscattered electron intensity.
Right: Energy Dispersive Spectroscopy (EDS) classification of particles.*

Highlights

Simple and quick analysis

Simply load the sample holder and initiate predefined analysis routines. Easily create or modify recipes to meet specific requirements

Intelligent particle detection

Determine the full characteristics and measurements of an individual particle which crosses multiple fields of view by using a sophisticated border particle stitching algorithm

Live progress tracking

Experience live progress tracking to view detailed progress information and live results during auto analysis to optimize your productivity and workflow

Advanced stop criteria

Apply improved stop criteria, which allow the auto-run to end the analysis when it reaches a predefined threshold to reduce overall run-time

Industrial-suited

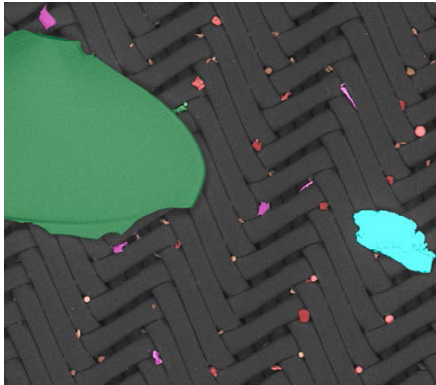
Considering current industrial cleanliness analysis requirements and usability concerns, SmartPI is developed for the typical industrial environment. The method of particle analysis is regulated by ISO 16232 and VDA 19.1 analysis norms and standards



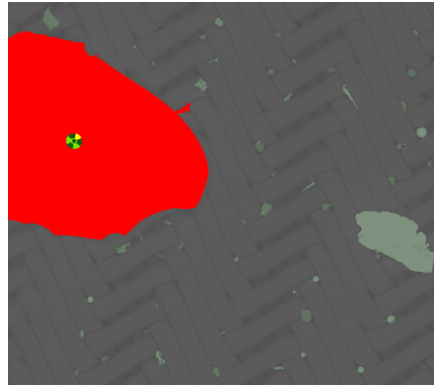
Seeing beyond

ZEISS Smart PI

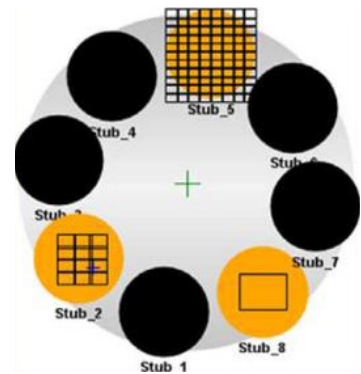
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Automated segmentation enables classification of particles by size and shape.



Identify particles in the database through EDS classification.



Samples can be analyzed differently in one sample holder.

Core applications of SmartPI

Engine wear analysis

Analyze material from magnetic plugs to assist with predictive materials of engines and record only particles of interest

Abrasive powders

Measure and record size, shape and roughness of pharmaceutical powders

Environmental particles

Monitor air quality and report size, distribution and chemistry of particles from incinerator stacks

Metallic inclusions

Gain rapid automatic measurement of metallic inclusions, essential for high-quality steels

Clean manufacturing

Avoid wear or other damages resulting from the accumulation of debris originating from the manufacturing process

Availability

- Sigma series*
- EVO series

**Technical limitations may apply.*

Other systems can be compatible with SmartPI upon request. Please contact your ZEISS representative for further information.

Upgrade your ZEISS microscope

Upgrade your ZEISS microscope with the SmartPI option and benefit from advanced image processing and diverse analysis techniques. Use the fully integrated SmartPI solution for complete automatic particle analysis and simplify your workflow significantly.

As technical requirements may apply on some systems, please contact us to learn more about Smart PI and how your processes will benefit from an upgrade:

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