

Do more with your MORPHOLOGI G3 or G3-ID

Measure suspended samples with the Morphologi G3 and G3-ID automated imaging systems



PARTICLE SIZE



PARTICLE SHAPE



CHEMICAL IDENTIFICATION

Key Benefits

- Flexible – range of sample presentation plates for morphological and chemical analysis
- Versatile - measure dry, suspended and wet-filtered samples
- Simple - software-selectable accessories for easy SOP-driven analysis.

The characterization of particles in suspension is a subject of interest for a variety of applications. For example, in pharmaceutical products the presence of inherent, extrinsic or intrinsic particles may affect the efficacy or possibly the safety of the drug. In the automotive industry, the presence of particulate contamination in hydraulic fluid power systems interferes with lubrication and causes wear to components. Many standards specify microscopy analysis for the enumeration of foreign particles in suspensions, and define particulate count limits for a given volume of sample.



Malvern's range of sample presentation accessories for the Morphologi G3 and G3-ID expands the capabilities of these systems beyond the characterization of dry sample dispersions. Each accessory fits directly into the Morphologi G3's automated stage and is easily selectable in the software.

Accessories to use when characterizing particles in suspension

There are a number of options for analyzing suspended samples:

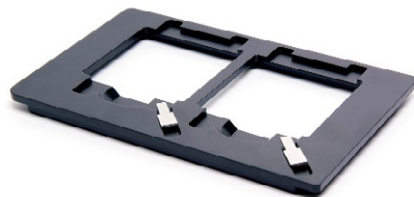
The thin-path wet cell is designed for both morphological and chemical characterization† of up to 100 μL of sample. This accessory is ideal for applications such as the identification of subvisible particles in therapeutics (described by guidance in USP <787> and USP <788>), especially when a traditional membrane filtering approach may risk changing particles of interest, such as protein aggregates



The wet dispersion cell allows between 2 μL and 6 μL of sample to be analyzed. This is particularly useful for characterizing larger particles or where volumetric particle count is important



'Sandwiching' a few μL of a suspension of smaller particles between a microscope slide and a cover slip is a traditional method of sample preparation for microscopy. Samples are presented in this form to the Morphologi G3 or Morphologi G3-ID using either the 2-slide or 4-slide holder. Slides suitable for chemical identification applications are available



The twin 35 mm petri dish holder provides an alternative means of measuring suspended particles that may be at risk of being deformed when dispersed into a cell



† sample-dependent

Particles captured on a membrane filter

Methods which are used to detect and characterize particles in suspension often rely on filtering the sample in order to capture particles on a membrane filter. Dedicated filter holders (25 mm or 47 mm diameter) and also the 2-slide holder (see above) allow samples on filter membranes to be presented directly to the Morphologi G3 or G3-ID† for analysis



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