



Quality Control



4Deep *inwater imaging*

Holographic microscopes. Deeper insights.

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Quality Control

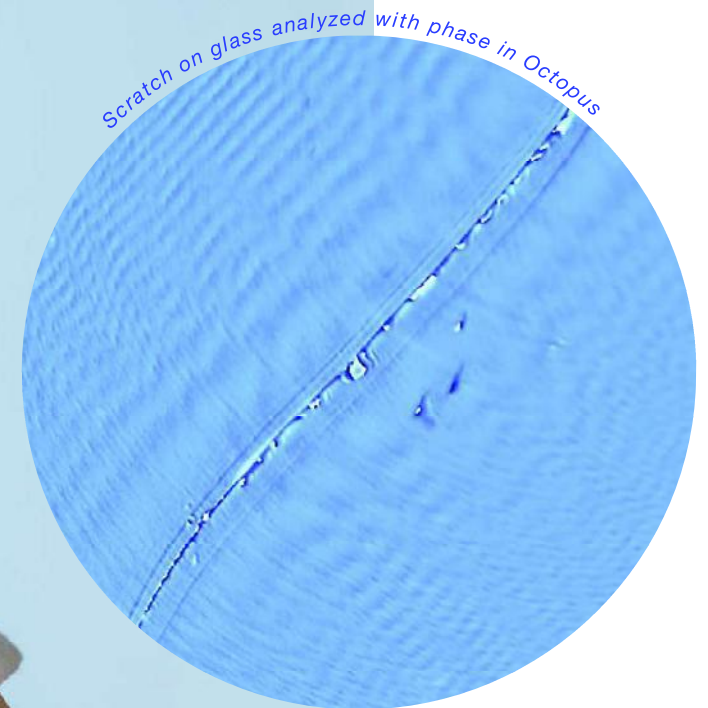
Reliable verification of surface and fluid purity at the micron level is time consuming and costly for the user.

Our system provides users with an advanced approach to verify the cleanliness of surfaces and fluids in the quality control process.

Benefits

Additional functionality outside of quality control analysis, including object classification via morphological characterization and phase information

No need to incubate or dye samples



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Desktop Microscope

The Desktop requires no focusing, as focusing is done after holograms are collected.

The microscope has a depth of field much greater than traditional microscopes, leading to larger sample volumes per hologram.

Octopus Software

Octopus captures and saves holograms, which allows the user to analyze the data as many times as necessary. Octopus can verify the presence or absence of particular cells, species or imperfections on materials. For more quantitative data, such as particle size distribution, Swordfish can be used.



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Filter Breaches

In many applications, membrane filters are used (beverages, pharmacology, etc.) and are very efficient, when correctly used. Filter breaches are common, and 4Deep's system can be used as a quality assurance measure, to determine whether a breach has occurred by quantifying the sample pre- and post-filtering.

Pharmaceuticals

When used in pharmacology, identification of foreign objects and/or cells and microorganisms is critical to verify the cleanliness for users and patients. 4Deep's system can be used to verify the sterilization of transparent surfaces, as well as injectables, such as IV fluid.

Manufacturing: Glass

When manufacturing optical systems, inspections of glass interfaces for imperfections are a critical step in the quality control process. This is of particular importance when inspecting lenses intended for use at the submicron range, as scratches and dirt at that level can physically dominate the intended sample, making the lens useless.

Manufacturing: Edges

In addition to inspecting transparent surfaces, the edges of equipment, such as needles, can be inspected for cleanliness (ex: oils and dust) and imperfections.

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