Microscopy: Preparing your sample for imaging and analysis

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Abstract

A large proportion of a microscopist's time is consumed by sample preparation so the sample is in a suitable state whereby it is ready for imaging and analysis. The requirements for sample preparation vary widely depending on the intended application and the sample itself. Whether it be metal or rock, an integrated circuit, a tissue or cell culture, samples must be prepared and loaded on a support accepted by the microscope stage: slide, grid or stub.

Under a few circumstances, a sample can be loaded in its natural state, but whether the analysis is able to produce an accurate representation is debatable. In most cases, a sample preparation lab will follow a workflow, including: sampling, sample fixation, processing for imaging enhancement, sample embedding and sample loading.

Agar Scientific offers professional solutions to help the microscopist in every step of their sample preparation workflow. In addition, we manufacture and supply calibration specimens necessary to check the performance of the microscope, ensuring accuracy and reliability of the microanalysis.

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