

Sample preparation for XRF analysis of pharmaceuticals

Contact us for more information

Sample preparation of solid pharmaceuticals including powders, tablets, capsules and other forms involve grinding. Considering that only small amounts of sample may be available, traditional preparation as pressed pellets is not always possible.

The preparation of capsules involves additional steps as both the capsule and the drug in it require different preparation methods. Note that you can easily prepare liquid pharmaceuticals and pastes using generic sample preparation for liquids.

Loose powder cups

When larger amounts of sample are available, you can use traditional liquid cups for the analysis of loose powders. This is a quick and practical solution when the sample must be recovered or when accuracy and reproducibility are not the main drivers.

Small mass holder

When only very small amounts of sample are available, you can use Malvern Panalytical's patented small [mass holder](#). This sample holder is easy to use and it requires minimal sample amounts ~ 100 mg.

Crushing

You may have to reduce the size of your sample to allow for further processing, such as representative sub-sampling, homogenization and grinding. Crushing of the material is then required.

Grinding

Grinding of the material into a fine powder is required to minimize undesired particle size effects and allow further processing like pressing or [fusion](#).

Pressing

Pressed powders are often used in production control environments, especially if the calibration ranges are narrow.

Pellets can be pressed freely into Al cups or steel rings. The use of binders is usually required to achieve the necessary mechanical stability and robustness. Note that the [ultra-wax binder](#) is used for the preparation of high-quality pellets for the most demanding applications. It can be found on Malvern Panalytical's eStore.



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