

Application Note

/// Grinding acetate fibres

PRODUCT

MultiDrive basic (0025002638)
 MI 400 grinding chamber (0025003965)
 MI 400.2 cutting blade (0020023171)

INDUSTRY

Chemical

OVERVIEW

The requirement was to grind acetate fibres into a fine powder.

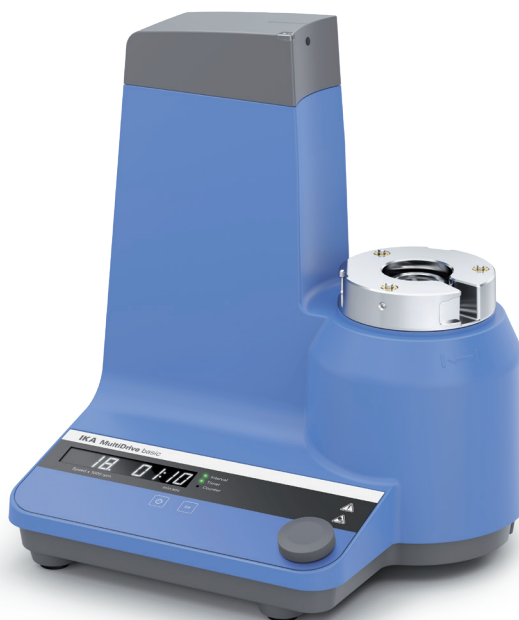
Acetate fiber is a semi-synthetic polymer also known as cellulose acetate. It is mainly used in the textile industry for making clothing, lining, felts, upholstery, umbrellas and so on.



MI 400



MI 400.2



MultiDrive basic

EXPERIMENTAL SETUP / SETTINGS

Grinder	MultiDrive basic
Grinding Chamber	MI 400
Cutting Blade	MI 400.2
Procedure	<ol style="list-style-type: none"> 1. Grind for 3 minutes 2. Cool down the sample for 5 minutes 3. Grind for 2 minutes
Speed	20,000 rpm
Sample quantity	80 g

RESULT

The setup above together with the MultiDrive was able to successfully grind the samples into micron-sized powders in the range of 180 – 300 μm .



Before grinding



After grinding

RECOMMENDATION

There will be a temperature increase during the grinding procedure due to the high rotational speed required to grind these samples efficiently.

It is therefore recommended to use the following configurations for grinding this type of sample:

1. Use the interval grinding mode to slow down the temperature increase
2. Use the double-walled milling chamber and connect it to an external chiller in order to dissipate the heat produced during grinding