

Identification, Wetting Time

Applicable Products: Carbopol®* ETD 2020 NF Polymer and Carbopol® Ultrez 10 NF Polymer

Scope:

This procedure describes an identification test for Carbopol® ETD 2020 NF and Carbopol® Ultrez 10 NF polymers. A sample of the polymer will wet out in water without mixing.

Abstract:

A weighed sample of Carbopol® ETD 2020 NF or Carbopol® Ultrez 10 NF polymer is screened onto the surface of a beaker of water. The time for the powder to wet out is determined.

Interferences:

No interferences are recognized.

Safety Precautions:

1. Wear safety goggles and gloves and follow good laboratory practices.
2. Polymer dust is irritating to the respiratory passages and inhalation should be avoided.
3. See Material Safety Data Sheets (MSDS) for additional safety and handling information.

Apparatus:

1. Analytical balance capable of ± 0.01 gram accuracy.
2. Beaker, 800 mL.
3. 20 mesh stainless steel screen, 150 mm (6") diameter, marked with a 75 mm (3") diameter area from the center (see Note 1).
4. Constant temperature water bath, 25°C (see Note 2).
5. Laboratory spatula.
6. Weighing dish.
7. Timer.

Reagents:

1. Deionized water.

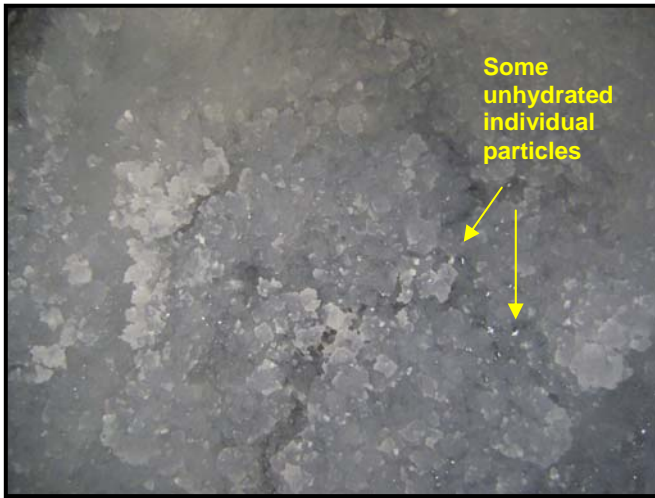
Procedure:

1. Weigh 500 g deionized water into an 800 mL beaker.
2. Place the beaker in a constant temperature water bath until the temperature is 25° C.
3. Remove beaker to a laboratory bench.
4. Weigh 2.5 ± 0.01 g polymer onto a weighing dish.
5. Center the 150 mm screen onto the top of the beaker.
6. Start the timer and begin tapping polymer within the 75 mm diameter circle marked on the screen.
7. Spread the polymer with the spatula over the marked area of the screen and allow to fall evenly across the surface. The entire 2.5 gram should be added within 1 minute.
8. Remove the screen after all the polymer has passed through the screen.
9. Continue timing until the polymer appears wet. Record the time at which the polymer has wetted out. (See the following photograph of a Carbopol® ETD 2020 NF polymer test at 60 minutes). A wetting time of not more than 60 minutes would be recorded as a "Pass" for a Carbopol® ETD 2020 NF or Carbopol® Ultrez 10 NF polymer identification by wetting time.

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Polymer which has been completely wetted out by water.

Calculations:

None

Notes:

1. Screening the product ensures there are no agglomerates which would increase the observed wetting time.
2. Rate of hydration of Carbopol® ETD 2020 NF polymer and Carbopol® Ultrez 10 NF polymer is influenced by temperature.

References:

- *Current edition of the United States Pharmacopoeia/National Formulary (USP/NF)*