

GMIA STANDARD METHODS FOR THE TESTING OF EDIBLE GELATIN



2.5 Granulation

PRINCIPLE

A weighed sample of gelatin is placed on a sieve shaker to determine the particle size distribution of the sample.

REFERENCES

GMIA Official Procedures of Gelatin, 1986

APPARATUS

1. Ro-Tap testing sieve shaker (W.S. Tyler Company)
2. Assorted Sieves
 - 8 mesh (0.0937 in., W.S. Tyler Co.)
 - 10 mesh (0.0787 in., W.S. Tyler Co.)
 - 16 mesh (0.0469 in., W.S. Tyler Co.)
 - 20 mesh (0.0335 in., W.S. Tyler Co.)
 - 30 mesh (0.0234 in., W.S. Tyler Co.)
 - 40 mesh (0.0167 in., W.S. Tyler Co.)
 - 60 mesh (0.0098 in., W.S. Tyler Co.)
 - 80 mesh (0.0070 in., W.S. Tyler Co.)
 - 100 mesh (0.0059 in., Fisher Scientific Co.)
3. Sieve Cover
4. Sieve Receiver
5. Balance (readability to 0.1g)
6. Brushes (bristle and steel)
7. Large tray or basin, plastic or non-stick freezer paper

PROCEDURE

1. Weigh a homogeneous sample of gelatin to be tested.
2. Select the sieves to be used. The selection should cover the full range of expected particle sizes.
3. Arrange the sieves with the coarsest screen on top and a catch tray on the bottom.
4. Weigh out 100 ± 0.1 grams of gelatin.
5. Pour gelatin sample into the top screen, place the cover on, position in the shaker, and place hammer on top of the cover.
6. Turn the shaker on for five minutes.
7. When the shaking is completed, remove from the shaker; brush out all granules from

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- each sieve.
8. Use the freezer paper to capture all gelatin from each screen. Weigh the sample retained on each screen and that which passed through the finest screen (material in catch tray).
 9. Record the actual weight retained on each screen.
 10. Calculate the percentages of gelatin retained and/or passed through the sieves.