

EPTP-P-03.- Grinding PET Articles to Flake.

Background

PET articles are reduced in size by grinding articles in a rotary granulator. This step creates PET flake that is used in subsequent process steps. Granulating is also intended to liberate package components such as lidding film, labels and attachments from the PET packaging.

Equipment Required

- Weigh scale (0.01 ± grams)
- Rotary plastic granulator fit with a screen containing holes within the range of 8 to 12 mm
The machine is to be evacuated via gravity (without pneumatic transport)
- Compressed air line and/or shop vacuum cleaner to use in cleaning the granulator

Materials Required

- Control Article
- Test Article
- Soft cloths for cleaning the granulator
- Containers such as plastic pails or bags to hold granulated flake samples
- Other required tools or cleaning materials.

Practice Steps

Test and control articles are each ground separately. The granulator is cleaned before and after granulating each sample:

1. Clean the plastic granulator prior to use with compressed air and/or a shop vacuum.
 - Wipe up any fines or other contamination with a clean cloth, if necessary.
 - Be aware of material hang-up inside the granulator behind the cutting head which may be difficult to reach and inspect.
 - Do not leave fragments of the cleaning cloth in the machine.
2. Observe all safety practices relevant to the machine, including lock-out procedures.
3. Before grinding, retain five (5) samples each of the Control and Test articles.
4. Check to ensure the granulator screen is properly installed with the proper diameter holes.
5. Weigh the required number of Test and Control articles to provide the desired weight of granulate for each as specified in the test to be conducted
6. Granulate a given sample by manually feeding the article into the granulator.
 - Granulated material may include PET flakes, label pieces, and closure pieces.
7. Store each sample in a sealed and labeled container.
8. Retain 50-100 g samples of each ground sample.
9. Clean the granulator between each sample.

DOCUMENT REVISION HISTORY

Version	Publication Date	Revision notes
V0	Sept 21	NEW DOCUMENT