

ISO 3451-1 (Method A)

Milestone Application Note for Ashing – High Throughput - Officials



Summary

This procedure covers the determination of the ash content of a range of plastic samples (resins and compounds) according to ISO 3451-1 (A) method.

Instrumentation

Milestone PYRO microwave system

HighThroughput muffle furnace

Large quartz crucibles or ceramic crucibles

Analytical balance ($\pm 0,0001\text{g}$)

Diseccator

Spatula



Sample amount

Sample weight*	10-200 g* (according to the expected ash content)
Nº of crucibles (max)	2
Total sample amount (max)	50 g

* For plastics yielding very low ash, it is necessary to use large test portions. When it is impossible to burn the whole of the test portion at one time, weigh the required quantity in a suitable weighing bottle and introduce it into the crucible in convenient amounts for a succession of burnings until the whole of the test portion has been burnt.

Procedure

1. Place a clean crucible on the balance plate, tare it and weigh the sample.
2. Place the crucible into the preheated furnace.
3. Remove the crucible from the furnace and cool it in dissector.
4. Place the crucible on the balance plate and take the weigh.
5. Calculate the ash residue.

Microwave program

Step	Time	#T1	Power	Vent.
1	00:40:00	#600°C	1800 W	*
2	00:30:00	#600°C	1800 W	*

The ashing temperature must be set in accordance to what prescribed for different types of plastics.

Notes

The crucible before use must be at constant weight. **All modifications to the present method must be agreed with Milestone Application Specialist.**

General precautions

Always use hand, eye and body protection when operating with the microwave system.

Subject to change without notice.
For additional information please contact
application@milestonesrl.com

