

Measurement of Loss on Drying

[SJ-MM-013]

Principal	The sample is dried to determine the amount of volatile matter, including absorbed moisture, that is driven off under the conditions of the test(Note 1).	2005-05-25 Supersedes prior issues
Apparatus	1. Drying chamber maintained at specified temperature $\pm 2^{\circ}\text{C}$ 2. Glass moisture dishes with covers 3. Desiccator	Quality Assurance

Test procedure

1. Place the uncovered moisture dish and cover in the drying at 105°C for 30 minutes. Remove from oven, replace cover immediately and place in desiccator. After approximately one hour, weigh dish with cover to nearest mg for tare weight.
2. Mix sample thoroughly (Note 2) and transfer 1 to 2 g into the tared moisture dish. Replace cover and weigh to the nearest mg. By gentle sidewise shaking distribute the sample as evenly as possible. Most materials will be at a depth of about 5 mm.
3. Remove cover and place both cover and loaded moisture dish in the oven at 105°C for two hours. Remove from oven, replace cover promptly and place in desiccator (Silica gel).
4. Cool to room temperature and weigh. Repeat heating for 30 minute periods until constant weight, or a loss of less than 2 mg for a 30 minute heating period, is attained.

Calculations

$$\% \text{ Loss at } 105^{\circ}\text{C} = \frac{(G - W) \times 100}{G}$$

Where :
W = weight of residue in grams
G = weight of sample in grams

Notes

1. The test temperature is 105°C for many materials, thus the test may often be entitled "Loss at 105°C "
2. If the sample is in the form of large crystals, crush or grind to a particle size of about 2 mm.

References

1. C.T.F.A Method E 34-1
2. Standard of Cosmetic Ingredients (Korean)



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