

EFFECTIVE DATE	N P Analytical Laboratories	METHOD CODE
REVISED: 07/12/24	LABORATORY TEST METHOD SUMMARY	ASHB, ASHC, ASHF, ASHFW ASHG, ASHS, ASHT
REPLACES: 04/20/22	ASH	PAGE 1 OF 2
KEY WORDS: Ash, Loss on Ignition		

1. **SCOPE AND PURPOSE:**

- 1.1. This method measures ash in foods, feeds, ingredients, feed ingredients, and biological samples. The conditions of the test vary depending on the composition of test sample.
- 1.2. The test result may vary depending on the ashing temperature and time selected for the test sample.
- 1.3. Mineral fractions that are volatile at the temperature selected for ashing are not recovered.

2. **PRINCIPLE:**

- 2.1. The sample is ignited and the organic portion is removed by ignition in a muffle furnace. The residue is quantitated and calculated as percent ash.
- 2.2. For all ash procedures the limit of quantitation is 0.2% ash from a 2g sample.
- 2.3. Known Interferences:
 - 2.3.1. Flaking and chipping of ashing vessels will cause low analytical results.
 - 2.3.2. Incomplete ashing will yield high analytical results.
- 2.4. Method references and scope of application for each ash test code are listed in the following table.

Test Code	Scope of Application	Reference
ASHB	Margarine, butter, and other samples with high fat or oil content	AOAC 920.117, AOAC 926.02E
ASHC	Milk, milk products, cheese, cheese products, most spices, seafood	AOAC 935.42, AOAC 930.30, AOAC 941.12, AOAC 938.08
ASHF, ASHFW	Feeds, feed ingredients, soy flour, plant material, oilseed cakes, and oilseed meals	AOAC 942.05
ASHG	Grains, cereals, flours, breads, macaroni, grain products, dried milk, baked products except those containing fruits, nuts, or high levels of sugar	AOAC 930.30, AOAC 945.38, AOAC 945.18, AOAC 923.03
ASHS	Sugars, syrups, dessert powders, meats, nuts, nut products, molasses, molasses products, confectionery, canned vegetables, beverages, fruits and fruit products, gelatin, flavoring extracts, food dressings, and products containing high levels of sugar or starch	AOAC 950.49, AOAC 940.26, AOAC 900.02A
ASHT	Casein, isolated soy proteins	ASTM Standards with Related Material, Part 15, pp 621-622 (1965)

3. **PRECISION:**

Records of method precision based on Method Validation and/or known control summaries are located in the QA Master file for this test method. Assay precision may vary with test matrix and analyte level. Terms used to describe method precision are defined in NPSOP3000, *Validation of Quantitative Chemical Tests*.

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4. REFERENCES:

See table above.