

I A F M M

international association of fish meal manufacturers

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**RECOMMENDED METHOD OF ANALYSIS
FOR DETERMINATION
OF ASH IN FISH MEAL**

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1. General

Determination of inorganic material (minerals).

2. Principle

The ash content of a fish meal is the residue left after ashing at 550°C.

3. Apparatus

Electric muffle furnace set at 550°C. with air circulation and a thermostat.

Crucibles, with lids made with material unaffected by the conditions of the test having a minimum diameter of 44mm. or equivalent area.

Drying oven, set at $103 \pm 2^\circ\text{C}$.

Desiccator with indicating silica gel.

Hot plate or gas burner.

4. Method

Two grams of the analytical sample are weighed accurately to the nearest 1 mg into a crucible previously heated for at least 30 min. at 550°C., cooled in a desiccator and weighed to the nearest 1 mg, and ashing is commenced by heating in a fume chamber on a hot-plate or over a low flame (avoid spitting) until the sample is completely charred. It is then put into a muffle furnace at a temperature of 550°C. having an adequate air supply. Heating is continued for 4 hours. Inspect visually whether the ash is free from carbonaceous particles. If it is not, replace the dish in the furnace and heat for another 1 hour. If carbonaceous particles are still visible, or if there is a doubt as to whether they are present, allow the ash to cool, moisten with water, evaporate carefully to dryness in the oven, set at $103 \pm 2^\circ\text{C}$., replace the dish in the furnace and heat for another 1 hour. The crucible is then put into a desiccator and cooled to room temperature and weighed to the nearest 1 mg.

5. Calculation

$$\frac{\text{Weight of crucible and crude ash (g)} - \text{weight of empty crucible (g)}}{\text{Weight of sample (g)}} \times 100 = \text{Ash content (\%)}$$

6. Repeatability

The difference between the results of two determinations carried out simultaneously or in rapid succession by the same analyst should not exceed 0.50%.