35.1.23

AOAC Official Method 948.15
Fat (Crude) in Seafood

Acid Hydrolysis Method
First Action 1948
Final Action

A. Preparation of Test Sample

Prepare test sample according to type of pack as in **937.07** (*see* 35.1.01) and keep ground material in sealed jar. If jar has been chilled, let test sample come to room temperature and shake jar so that any separated liquid is absorbed by fish. Open jar and stir contents with spatula, thoroughly scraping sides and lid so as to incorporate any separated liquid or fat.

B. Determination

Weigh 8 g well-mixed test sample into 50 mL beaker and add 2 mL HCl. Using stirring rod with extra large flat end, break up coagulated lumps until mixture is homogeneous. Add additional 6 mL HCl, mix, cover with watch glass, and heat on steam bath 90 min, stirring occasionally with rod. Cool solution and transfer to Mojonnier fat-extraction flask. Rinse beaker and rod with 7 mL alcohol, add to extraction flask, and mix. Rinse beaker and rod with 25 mL ether, added in 3 portions; add rinsings to extraction flask, stopper with cork or stopper of synthetic rubber unaffected by usual fat solvents, and shake vigorously 1 min. Add 25 mL petroleum ether (bp <60°C) to extraction flask and repeat vigorous shaking. Centrifuge Mojonnier flask 20 min at ca 600 rpm and proceed as in **922.06** (*see* 32.1.14), beginning "Draw off as much as possible of ether–fat solution . . .".

Drying to constant weight takes ca 40 min for fish. Long heating periods may increase weight of fat. If centrifuge is not available, extraction can generally be made by letting Mojonnier flask stand until upper liquid is practically clear, then swirling flask and again letting stand until clear. If troublesome emulsion forms, let stand, pour off as much of ether–fat solution as possible, add 1–2 mL alcohol to Mojonnier flask, swirl, and again let mixture separate.

Reference: *JAOAC* **31,** 334(1948).