EFFECTIVE DATE	NP Analytical Laboratories	METHOD CODE
REVISED: 12/07/24	LABORATORY TEST METHOD SUMMARY	FTSX, FTME
REPLACES: 12/10/18	Fat, Ether Extraction - Soxhlet	PAGE 1 OF 1
KEY WORDS: soxhlet extraction, petroleum ether extract		

1. SCOPE AND PURPOSE:

This method measures petroleum ether extractables in grains, feeds, roughages, ingredients, and in raw and processed red meat and poultry. It should not be applied to baked and/or expanded products, dried milk products, or products containing urea.

2. PRINCIPLE:

2.1. The sample is refluxed with petroleum ether in a Soxhlet extractor to extract ether-soluble material (primarily "free" fats and oils). The ether is volatilized and the residue is dried, quantitated gravimetrically, and calculated as percent fat.

2.2. Using a 2 gram sample, the lowest confidence level of this method is 0.2% fat.

2.3. The FTSX test code is used for measuring petroleum ether extractables in grains, feeds, roughages and ingredients. Test code FTME is used for all raw and processed meat samples including samples submitted for USDA compliance testing. A sample size of approximately 2-3 grams is used in FTME/FTSX.

2.4. Known Interferences:

2.4.1. Any material which is not fat or oil, but which is soluble in petroleum ether, is quantitated and calculated as fat.

2.4.2. Moisture levels greater than 10-15% may inhibit fat extraction. Dry samples prior to fat analysis (see reference).

2.4.3. Large quantities of water-soluble constituents in feeds, such as carbohydrates, lactic acid, urea, and glycerol, may interfere with the extraction of fat. To remove them prior to fat analysis, see the reference.

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*.

4. REFERENCES:

Official Methods of Analysis of the AOAC International Method 920.39, Fat (Crude) or Ether Extract in Animal Feed and Method 934.01, Method 960.39a