Isolation of Crude Fat by ANKOM^{FLEX} (Method: Crude Fat)

Definition
This method is used to isolate Crude Fat within a given sample.
Scope
This method is applicable to food and feed samples.

A. Apparatus

1. ANKOM^{FLEX} Analyte Extractor
2. Digestion Vessels (FLEX54, FLEX55)
3. Magnetic cross stir-bars (9415) – *for use in digestion vessels*
4. Round Bottom Flasks (9364) – *for recovery on the FLEX instrument*
5. Crude Fat Column
6. Fat Filters (FLEX-FF)
7. Cellulose Filters (FLEX-CF)
8. Analytical Balance – capable of weighing 1mg
9. Weigh tins for sample transfer

B. Reagents

1. n-Hexane (reagent grade or higher)

C. Sample Preparation

Each sample type must be appropriately homogenized or ground, before the analysis. The maximum recommended sample size to be run on the ANKOM^{FLEX} for Crude Fat analysis is one gram.

D. Procedure *(see the Operator's Manual for more detail)*

1. Place one cellulose filter and then one fat filter in each vessel bottom assembly.
2. Assemble digestion vessels (digestion vessel + vessel bottom assembly + filters) and **add a magnetic cross stir-bar** into each digestion vessel before adding sample.
3. Weigh sample into a weigh tin and then quantitatively transfer to the digestion vessels.
    a. Tare the weigh tin on the analytical balance.
    b. Weigh sample into tared tin.
    c. Quantitatively transfer the sample from the tin into the assembled digestion vessel using static free brush. If sample is wet, such as mayonnaise, and residue remains in the tin after transfer, reweigh and subtract from the initial weight of the [tin + sample] to calculate the actual sample weight.
    d. Note: It is important to not exceed the specified sample size. Exceeding the sample size could result in digestion filters plugging.
    e. Install digestion vessels on the ANKOM^{FLEX} and follow the instructions in the operating manual on how to: Start an Assay.
4. Select Method: Crude Fat
5. After the ANKOM^{FLEX} method has ended, the round bottom flasks in the recovery oven will contain the isolated fat. Remove the round bottom flasks for reconstitution or gravimetric transfer.