

According to the AOAC 985.29E method (and referred to in the AOAC 991.43 method), any sample with a fat content >10% must have the fat removed before determining the amount of Dietary Fiber.

In the conventional method, most labs perform the de-fatting step in the same beaker in which the enzyme digestion occurs. While this method would work with the ANKOM^{TDF} Dietary Fiber Analyzer, many would find transferring the sample from the beaker into the IDF or IDF Flow-Thru bags less than efficient. As a result, we have developed a de-fatting method using an ANKOM XT4 Filter Bag in an effort to eliminate sample loss.

Note: The XT4 Filter Bag is used in the ANKOM XT Fat Extractors. The bag has a porosity of 1-4 microns. As a result, the likelihood of sample loss is eliminated.

To de-fat your sample prior to running the IDF/SDF or TDF analyses, follow the steps below.

- 1. Number all of the necessary XT4 Filter Bags to be used for testing.**



- 2. Record the weight of each XT4 Filter Bag.**

Note: It is important to note that the weight of the XT4 Filter Bag must be included in the analysis calculation in the following ways:

- For an IDF/SDF analysis, add the weight of the XT4 bag to the weight of the IDF bag.
- For a TDF analysis, add the weight of the XT4 bag to the weight of the SDF bag.



- 3. Weigh and record the weight of each sample to be defatted in the appropriate XT4 Filter Bags.**



- 4. Heat seal the Filter Bags.**

With the heat sealer set at 5 – 6, seal the Filter Bag within 4mm of its open end. Be sure to hold the sealer arm down for 2 – 3 seconds after the red sealer light turns off (this helps to properly cool the seal).

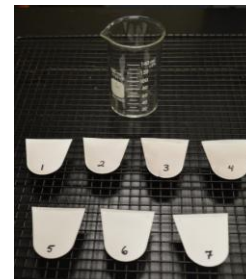


5. Soak the bags in Petroleum Ether.

- a. Place all XT4 Filter Bags into a beaker or other container.
- b. Pour enough Petroleum Ether in the container to cover the bags and allow them to soak in the solvent for 10 minutes.



6. Remove the Filter Bags from the container and allow the solvent to evaporate until the bags are completely dry.



7. Carefully cut the XT4 Filter Bags inside the IDF Filter Bags or the IDF Flow-Thru Bags on the TDF instrument.

To get the XT4 Filter Bag pieces into the TDF instrument bags, hold each XT4 Filter Bag inside the appropriate TDF instrument bag and cut the XT4 into approximately a dozen pieces being careful not to lose any sample. If any sample sticks to the scissors, brush it off into the TDF instrument bag.



8. For a TDF analysis, make sure all XT4 pieces drop from the IDF Flow-Thru Bags into the SDF Filter Bags.

Use tongs if necessary to help move the pieces.



9. When performing the Ashing procedure, use an XT4 ash BLANK value in the calculation.

10. When performing the Kjeldahl Procedure, in order to appropriately digest the extra XT4 bag material, add 4-5ml more sulfuric acid than is specified in the "Protein Determination" section of the Operator's Manual.

The XT4 Filter Bags do NOT contain any protein.

Note: A small amount of PTFE polymer will NOT digest during the Kjeldahl procedure. This is of NO concern.