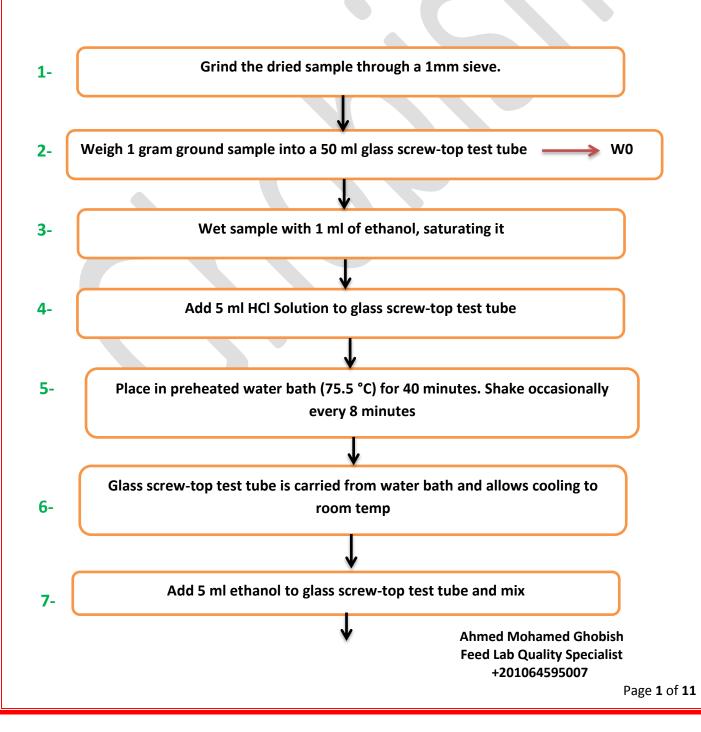
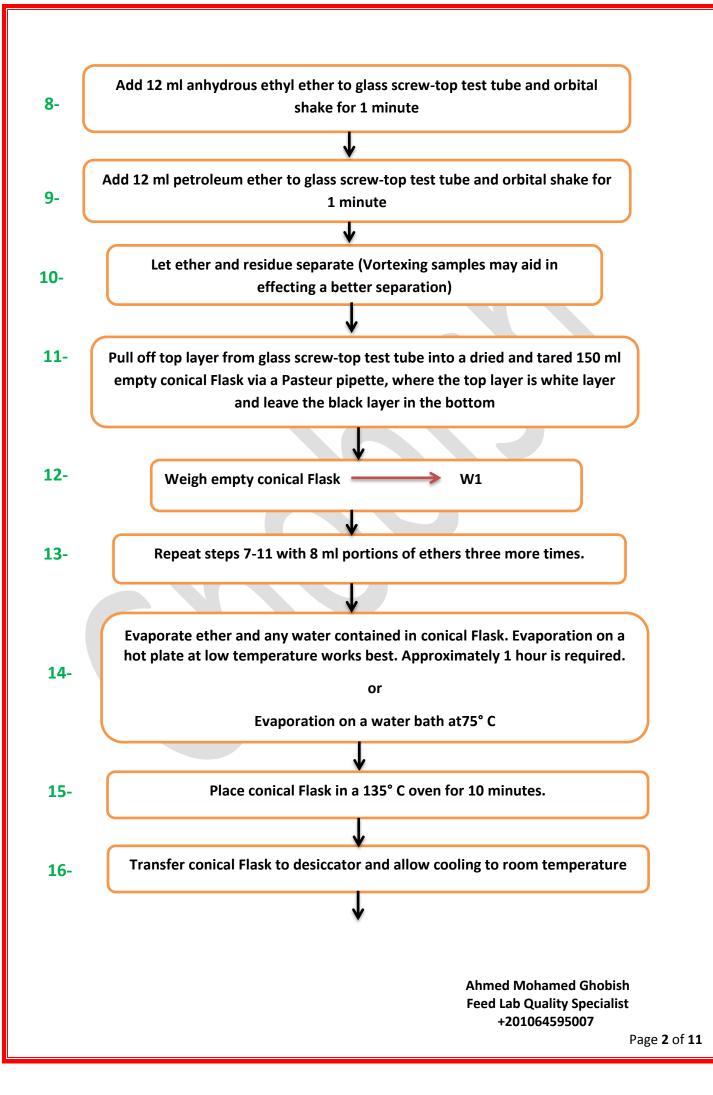
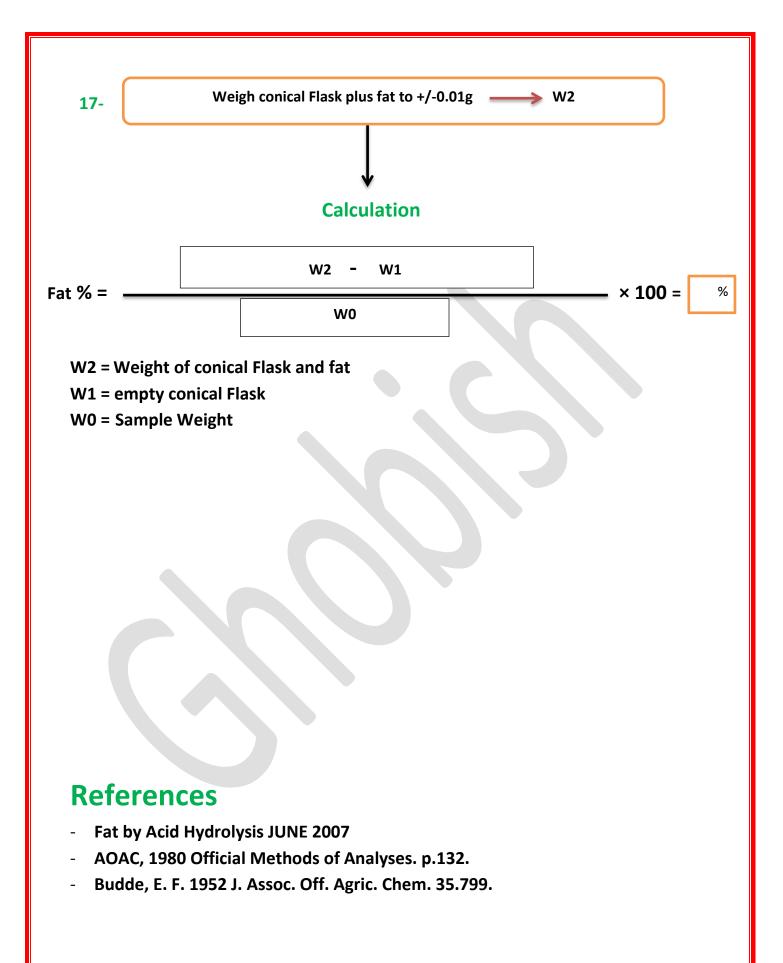
## **Chemicals for Fat analysis**

- a) Petroleum Ether 40°-60°
- b) HCL Solution 25:11 (Acid: Water) dilution
- c) Ethyl Alcohol 95% or Ethanol absolute
- d) Anhydrous Ethyl Ether

### **Fat Determination (Extruder Animal Feed)**

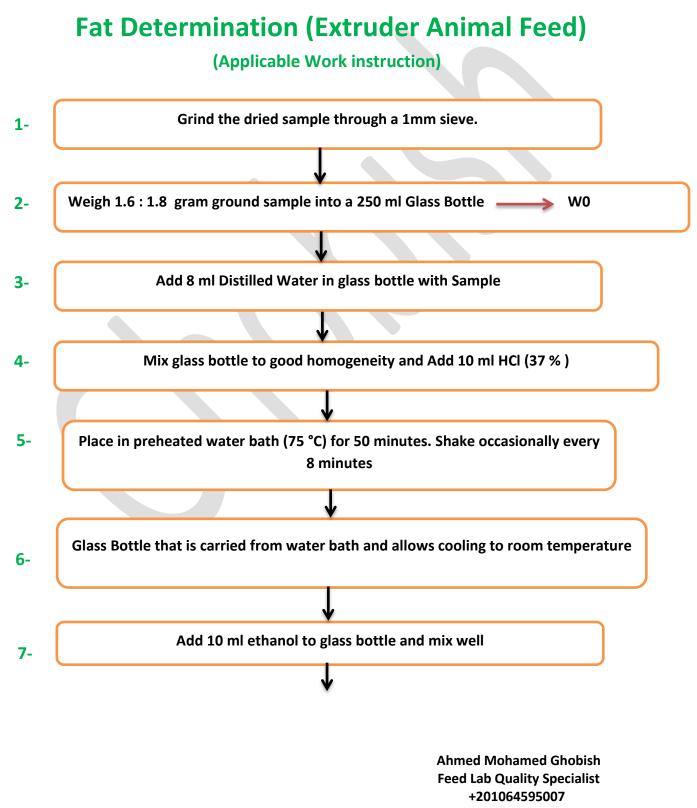


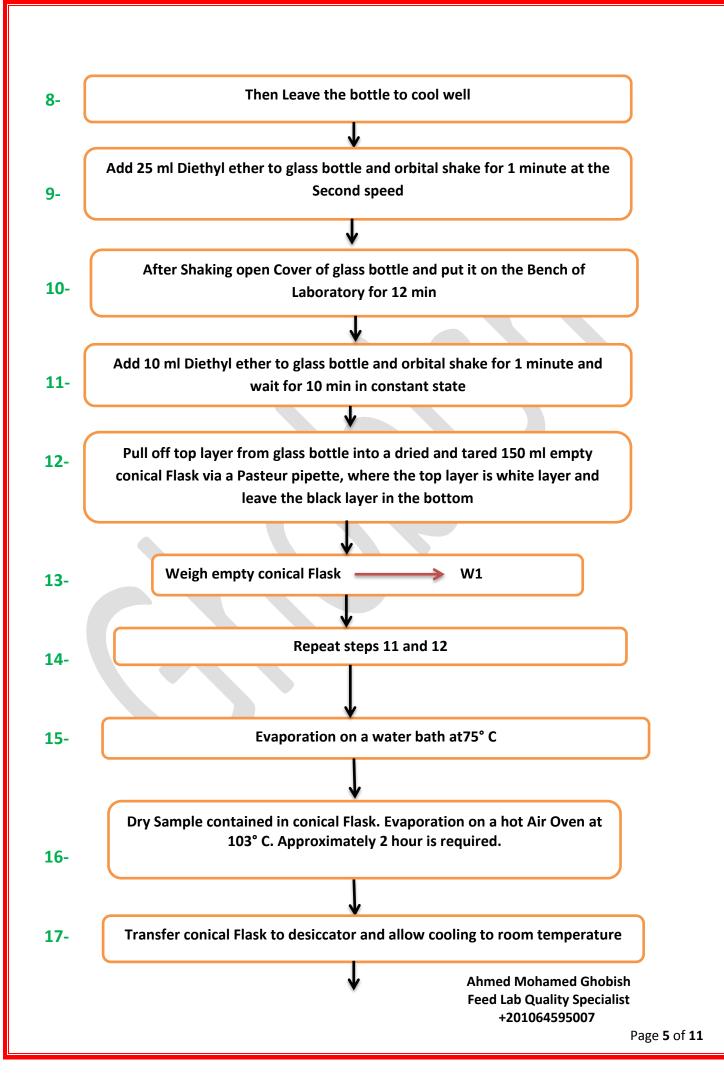


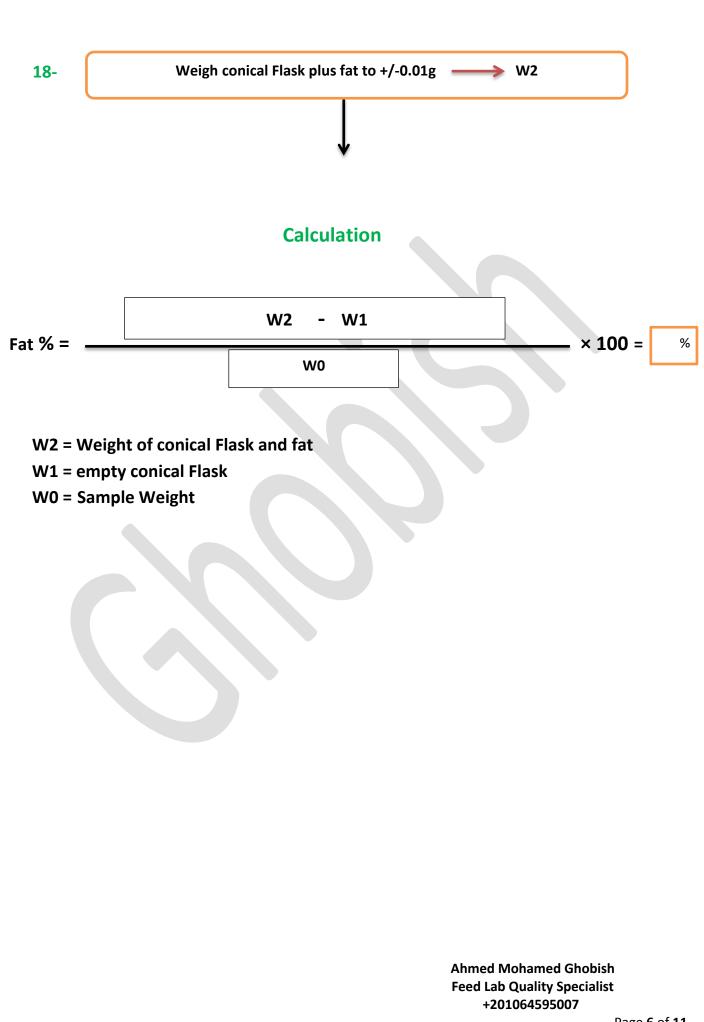


# Chemicals for Fat analysis

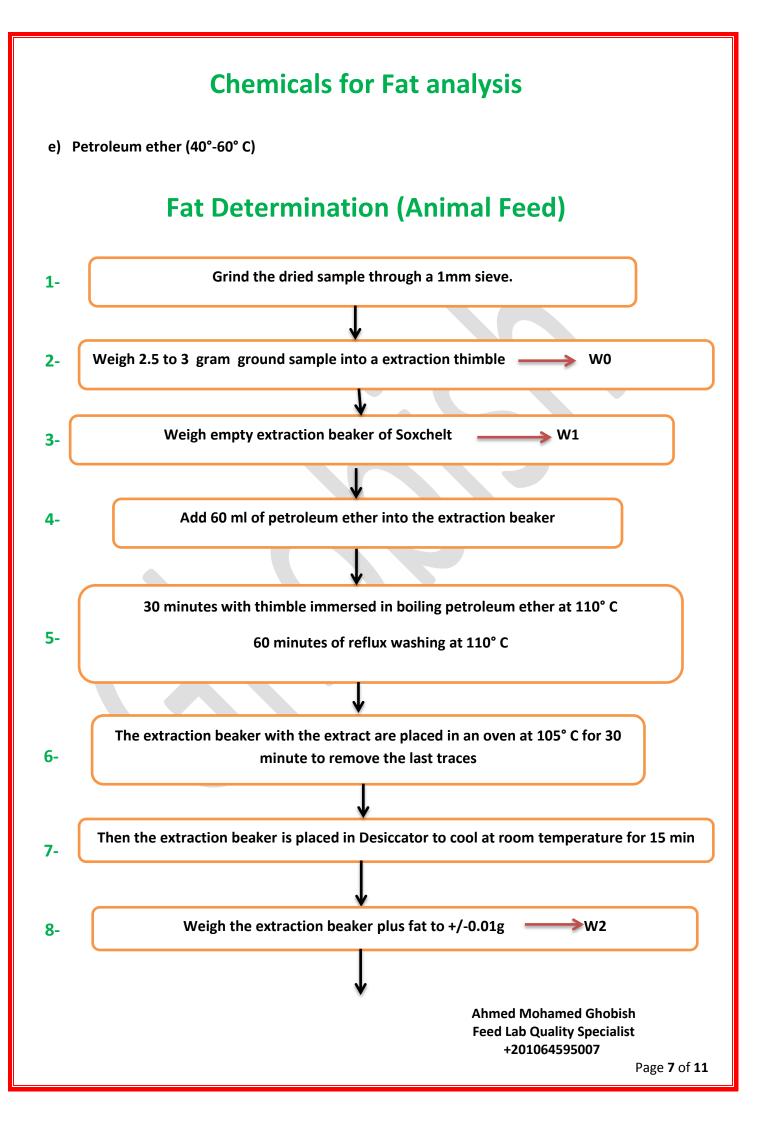
- a) HCL 37%
- b) Ethyl Alcohol 95% or Ethanol absolute
- c) Diethyl Ether
- **d)** Distilled Water

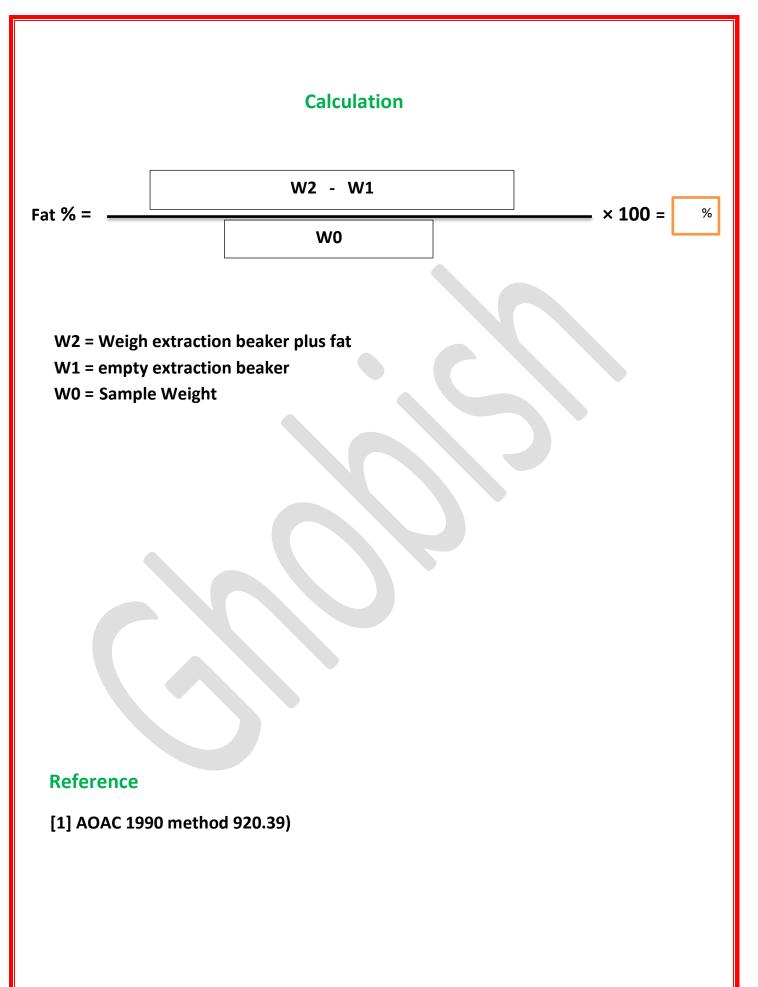






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## **Chemicals for Fat analysis**

a) Petroleum ether (40°-60° C)

## Fat Determination (Dry Animal Feed)

1-

Hydrolysis Procedures for Sample of dry animal feed by HU 6 Hydrolysis unit

#### Or you can do Hydrolysis Procedures for Sample Manually

#### a) Chemicals

- 1) Hydrochloric acid 4 mol/L: 4 Litre HCl 32% are filled up to 10 L with deionized or distilled water
- 2) Petroleum ether (40°-60° C)

#### b) Hydrolysis Procedures

- 1) feed is homogenized in the mixer
- 2) Work in a fume hood. Preheat the heating plate with a low heating level.
- 3) Place 4-5 dried boiling stones in 250 mL beakers and weigh up to 6 g of homogeneous sample

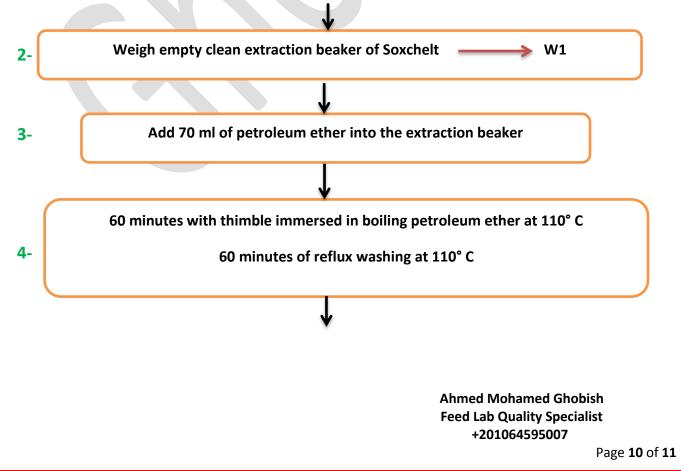
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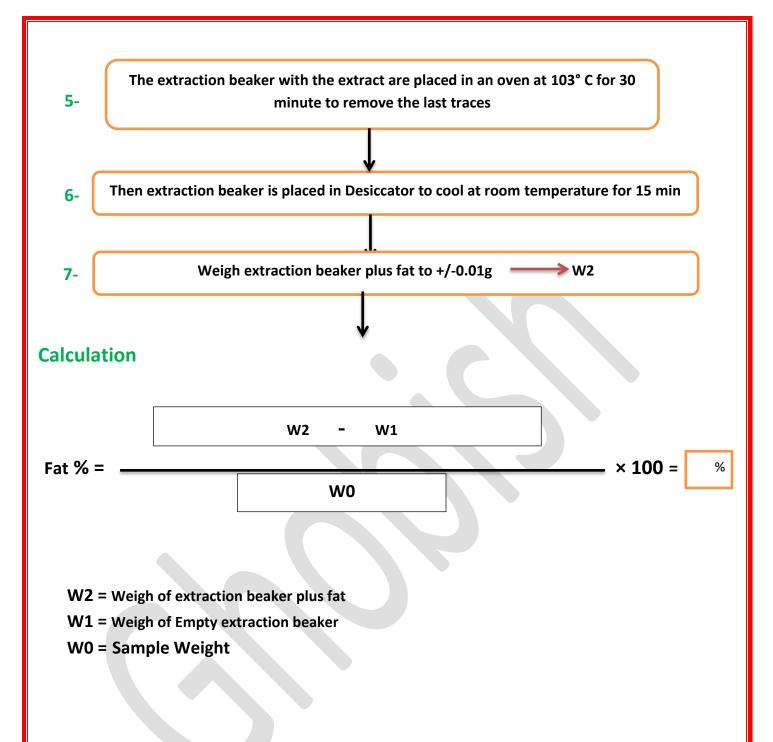
- 4) Add 50 mL 4 M HCl and stir gently. Add another 50 ml 4 M HCl rinsing the walls of the beaker.
- 5) Place the beaker on the heating plate; cover it with a watch glass. <u>Note you should</u> keep the low heating level, to prevent excessive splashing of the sample to the walls.
- 6) Watch the solution until a stable gentle boil is reached.
- 7) After boiling occurs, let the sample be hydrolyzed for 30 minutes.
- 8) Prepare a rack with digestion tubes, glass funnels and Filter papers. Wet the filters with boiling water. Wear thermal protection gloves
- 9) After the hydrolysis time is up, use a Tongs to carefully remove the beakers from the heating plate. Prepare at least 500 mL of boiling water for each sample.
- 10) Rinse the watch glass with boiling water into the beaker. Dilute the solution with 100 mL of boiling deionized or distilled water.

- 11) Filtrate the solution through the filter and wash the beaker with 100 ml of boiling water until the sample is transferred completely. <u>Three rinses should be enough</u>,
- 12) Rinse thoroughly each filter paper with a volume of at least 300 mL of boiling water until the filtrate reaches neutral water pH. Check the pH, <u>Note you should</u> Rinse the filter paper. Make sure to rinse all the filter so there are no acidic zones left.



- 13) Place the filter in the cellulose thimble. By folding the filter paper
- 14) the filter in the cellulose thimble is placed in a clean extraction beaker.
- 15) Dry the thimble and the beaker in a drying oven for 1.30 hour at 102 ± 2 °C.
- 16) Allow the thimble and beakers to cool down to ambient temperature in a desiccator (for at least 15 : 20 minutes ).
- 17) Once the dried beakers have cooled down, (pulling up the thimble contained sample and place it in Soxchelt )





#### References

[1] AOAC official method of analysis .Arlington, Virginia, usa, method 7.0

- [2] ISO 1443:1973 Meat and meat products -- Determination of total fat content
- [3] AOAC 945.16 Oil in cereal adjuncts

[4] § 64 LFGB Nr. L 06.00-6: 2014-06 Bestimmung des Gesamtfettgehaltes in Fleisch und Fleischerzeugnissen

[5] Application Note 773/2021 - Fat determination in manually hydrolyzed samples