FIWE
RAW FIBER EXTRACTOR

VELP SCIENTIFICA

RAW FIBER EXTRACTION

Vegetables and derived products are made up of substances belonging to different categories:
- carbohydrates, proteins, fats, mineral salts;
- a non-digestible component consisting of polymers (lignin, cellulose, hemicellulose, pectin) called “fiber”.

There are many reasons why it is very important to determine the fiber content including nutritional, economic and legal reasons.

The **FIWE 3** and **FIWE 6** are suitable for raw fiber determination, conventionally known as an indigestible residue. **Rapid analysis**, **reliable results** and **high reproducibility** are some of the most relevant benefits of these units which are ideal for the following applications:

- total raw fiber determination (according to Weende)
- neutral detergent fiber and acid detergent fiber determination (NDF and ADF according to Van Soest)
- acid detergent lignin determination (ADL according to Van Soest)
- different fractions of fiber (cellulose, hemicellulose and pectin)

Raw fiber determination is useful for nutritional, economic and legislative aspects. FIWE performs single or sequential extractions including boiling, rinsing and filtration.

FIWE 6

FIWE 3

AOAC • AACC

CRUCIBLE

Crucibles are consumables and their lifetime is closely tied to correct use and proper cleaning. The average lifetime is 20-30 analyses. Crucibles have class 2 porosity according to Jena’s definition, with 45 µm (40 – 60 - µm) (ASTM) holes, class C in the USA.
The correct use of crucibles in the muffle furnace for analyzing ashes and proper cleaning in accordance with the recommendations in the operating manual are crucial.

TIPS FOR CRUCIBLE TREATMENT IN A MUFFLE FURNACE

The heating and cooling of glass crucibles for determining ash content requires special care in order to prevent breakages.
Thermal shock can lead to breakage, particularly in stressed areas such as the junction between the crucible body and the filter disk.
A temperature of 550 °C corresponds to the beginning of glass’s plastic state and should not be exceeded.

Maximum rates recommended for heating and cooling glass crucibles are follows:

Heating °C	Cooling °C	Rate °C/min	Required time min
20 to 350	350 to 20	350	1
350 to 480	480 to 350	24	6
480 to 550	550 to 480	12	6