

Fibertec™ 1023 Dietary Fibre Solutions



Tecator™ Line

The Fibertec™ 1023 Dietary Fibre Analysis System is a semi-automated incubation and filtration system for quantitative determination of dietary fibre in processed food, cereal products, fruits and vegetables, health food, plant materials etc., using established enzymatic methods, for use in the laboratory.

Sample	Parameters
Food and Food Ingredients	Total, soluble and insoluble dietary fibre



Rapid Dietary Fibre analysis

The Fibertec™ 1023 is designed for rapid and rational determination of dietary fibre according to established enzymatic methods, including those approved by AOAC, AACC, NMKL and Asp.

The system includes a shaking water bath and a filtration module for quantitative determination of dietary fibre in a variety of sample types. The filtration module filters and collects six sample solutions and includes a system for rapid dehydration. The filtration step is speeded up through a built-in "Pressure Mode", to break up clogged filter residues during filtration. Filtration time varies from 2-4 minutes for 100 ml of digested solution. The WB 1024 Water bath incubates 12 samples in each batch. The temperature range is from ambient up to 80°C and it is possible to preset three temperatures.

Batch handling processes up to 6 samples at a time saving time. Laboratories around the globe have invested in Fibertec™ instruments that go on working year after year, making Fibertec™ a solution that will keep your lab up to speed, well into the future.

Effective laboratory operations

The Fibertec™ 1023 takes fibre analysis to new levels of efficiency with facilities to match today's demands. The Fibertec™ systems handle samples in specially designed incubation flasks, along with a range of innovative features to make your laboratory operations even simpler:

- Free choice of methods like AOAC, AACC, NMKL and Asp
- Determines total, soluble and insoluble dietary fibre

- Rapid filtration of six samples simultaneously
- Specially designed incubation flasks
- High incubation and separation capacity
- Repeatable readings, S.D. < 0.5% absolute
- Easy and convenient to use
- Saves time, space and manual work
- Minimal downtime and service with long-life components

Laboratory staff will be grateful for the reliability, ease of use and time-saving facilities that make everyday operations simpler and more convenient.

APPLICATIONS

- Total Dietary Fibre (TDF) according to AOAC 991.43 and AACC 32-07
- Soluble (SDF) and Insoluble (IDF) Dietary Fibre according to AOAC 991.42/43 and AACC 32-07
- Total Dietary Fibre (TDF) according to AOAC 985.29 and AACC 32-05
- Soluble (SDF) and Insoluble (IDF) Dietary Fibre according to AOAC 985.29 and AACC 32-05

A Total Dietary Fibre Enzyme Kit for 200 determinations (100 duplicate estimations) is available for above. Part Number 60046527

- Integrated Total Dietary Fibre (ITDF) Codex Definition method according to AOAC 2009.01*

**Note. The Fibertec™ system forms one part of the instrumentation required for the Integrated TDF method.*



Semi-automated incubation and filtration system for quantitative determination of dietary fibre* in food, cereals, fruit and vegetables.
*Note. A Boiling Water Bath, not supplied, is required for estimation of dietary fibre

Technology

The Fibertec™ 1023 determines total dietary fibre as well as the insoluble and soluble fibres separately. It is also useful in sample preparation for detailed studies of fibre fractions, e.g. by chromatographic or colorimetric techniques.

The basic Fibertec™ 1023 includes a WB 1024 Water bath and a Filtration Module*. The WB 1024 Water bath incubates 12 samples in each batch. The temperature range is from ambient to 80°C and it is possible to preset three temperatures. The shaking frequency and amplitude are continuously adjustable.

*A Boiling Water Bath, not supplied, is required for estimation of dietary fibre

The Filtration Module filters and collects 6 sample solutions batch wise and includes a system for rapid dehydration. The filtration step is speeded up through built-in "Pressure Mode". Reversed pressure is applied to facilitate filtration by breaking up clogged filter residues during filtration. Filtration time varies according to sample type, but on average it is 2-4 minutes for 100 ml of digested solution.

The reproducibility (standard deviation) of the Fibertec™ 1023 in determining total, insoluble and soluble dietary fibre is < 0.5% absolute.

Technical Specifications

System description

Fibertec™ 1023

- Filtration Module complete, comprising: Filtration Module, Incubation Flasks (4 sets of 6), Standard Crucibles (P2, 2 sets of 6), Basket for Incubation Flasks, 2 Stands for Crucibles, 2 Spray bottles, 2 Water aspiration pumps, Filter aid, Tubing, WB 1024 Water bath, complete, comprising: a tray for 12 Incubation Flasks and a hinged inclined lid.
- Filtration module as above but without WB 1024 Water bath

In addition, we recommend:

- Incubation Flask (set of 6), at least 4 sets
- Crucible, P2 (40 - 100 µm) set of 6, at least 2 sets
- Basket for 12 Incubation Flasks, at least 1
- Total Dietary Fibre Kit for 200 determinations
Note – A Balance, Boiling water bath, Drying oven, Muffle furnace and Kjeldahl system are also required

Accessories:

Alternative filter crucibles:

- 1000 1174 Crucible, P0 (160 - 250 µm), set of 6
- 1000 1171 Crucible, P1 (90 - 150 µm), set of 6
- 1000 1173 Crucible, P3 (16 - 40 µm), set of 6
- 1000 1079 Stand for 6 Crucibles
- CT 193 Cyclotec™ Sample Mill
- CM 190 Cemotec™ Sample Mill
- KN 195 Knifetec™ Sample Mill for high fat, high fibre samples
For protein determination we recommend our Kjelttec analyzers.

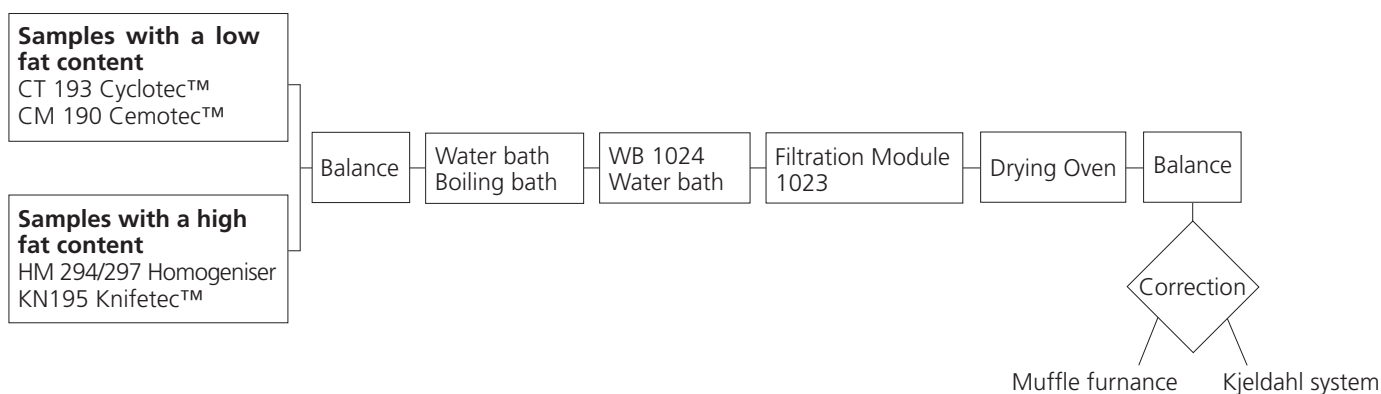
Alternative flask trays for other applications, e.g. biochemical work:

- 1000 2203 Tray for E**-flasks, 50 ml
- 1000 2204 Tray for E**-flasks, 100 ml
- 1000 2205 Tray for E**-flasks, 250 ml
- 1000 2206 Tray for E**-flasks, 500 ml
- ** Erlenmeyer

Performance data:	
Filtration Module:	
Filtration and dehydration capacity:	6 samples/batch
Filtration rate:	2-4 minutes/100 ml of digested solution, depending on sample type
Repeatability:	S.D. < 0.5% absolute
Flask volume:	600 ml
Accuracy:	According to official methods
WB 1024 Water bath:	
Capacity:	12 flasks/batch
Temperature range:	ambient to 80°C
Temperature accuracy:	± 0.1°C
Shaking frequency:	0-150 strokes/minute
Stroke length:	0-50 mm

Installation requirements:				
Equipment	Power supply	Power consumption	Dimensions w x d x h	Weight
1023 Filtration Module	210-230 V, 50-60 Hz	8	770 x 280 x 500	24 kg
WB 1024 Water bath	210-230 V, 50-60 Hz	1.500	890 x 370 x 320	24 kg

A complete analytical scheme for dietary fibre determination consists of:



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