FOSS

Fibertec™ 8000
Fully automated Crude and Detergent Fibre analysis

Tecator™ Line

The Fibertec™ 8000 is a fully automated system for determination of crude fibre and detergent fibre and related parameters according to standard reference 'crucible' methods such as Weende, van Soest etc. Each sample is being treated seperately, according to the official procedures. Once you have loaded the sample, you do not need to do anything else until the analysis is finished – just press the start button and walk away.

Sample	Parameters
Raw materials and finished products in Feed and Agriculture	Crude fibre (CF), neutral detergent fibre (NDF), amylase treated neutral detergent (aNDF), acid detergent fibre (ADF), and acid detergent lignin (ADL)

Dedicated Analytical Solutions

Previous market leading solution*	Fibertec™ 8000	Acid/Alkali digestion in Hot Extraction Unit
0,5	0,5	Insert crucibles
	1	Choose program and start
6		Add acid, antifoam and mix sample
9		Heating up to boil, keep gentle boiling
10		Draining and rinsing
6		Add alkali, antifoam and mix sample
9		Heating up to boil, keep gentle boiling
10		Draining and rinsing
0,5	0,5	Remove crucible
51 min	**2 min**	**Total minutes**

Operator time for Crude Fibre determination

In this table the operator time is shown for each step in Crude Fibre analysis using Fibertec 8000 compared to a semi automated instrument. The Fibertec 8000 has the lowest operator time compared to any other fibre analysis instrument following the official approved methods with samples being treated seperately.

*** FOSS Fibertec™ 2010**

Free your lab resources

Forget those time-consuming interruptions involved with other fibre analysis methods such as acid hydrolysis, alkaline hydrolysis, heating and rinsing. All of which require your valuable time.

The Fibertec™ 8000 has an extremely low operator time compared to other fibre analysis solutions and can handle up to six samples simultaneously. There is no handling of individual samples or filter bags. Automatic functions take care of heating and dispensing of reagents and antifoam as well as rinsing with water. You can even let it run overnight.

With Fibertec, your laboratory team is released to do other tasks, plus an intuitive software display reduces training needs by making it easy to set-up jobs.

Official reference method results with unrivalled accuracy

Official reference tests according to ISO, AOAC and others using Weende, van Soest and other recognised methods is made simple with the Fibertec™ 8000.

Fibre analysis is complex and standard methods are of great importance for reliable results. The traditional methods for analysis of fibre involves repeated sample treatments, transfer and filtration together with the handling of various, often hot, reagents. Each sample has to be treated seperately. Each of these processes is a potential source of error or safety concern.

With Fibertec, single or sequential extractions including boiling, use of internally preheated reagents, rinsing and filtration are performed batch wise under reproducible and controlled conditions.

Approvals for the crucible method encompass organisations such as ISO, EEC and AOCS.

Safest fibre analysis solution available

Innovative safety features help you to raise the safety level in everyday operations.

All reagents are dispensed automatically avoiding any contact with hot chemicals and their fumes. In addition, automatic heat reduction when the boiling point is reached prevents spillage. The system adds antifoam and enzymes automatically (when required).

For Crude fiber, ADF, ADL and NDF

Typical applications include:

- EN ISO 6865 (AOAC 978.10) refers to Analysis of Crude Fibre (CF) in Feed, describes an analytical procedure based on the crucible or Fibertec™ method.
- EN ISO 16472 (AOAC 2002:04) refers to Analysis of Neutral Detergent Fibre (NDF) in Feed, describes an analytical procedure based on the crucible or Fibertec™ method.
- EN ISO 13906 (AOAC 973.18) refers to the Analysis of Acid Detergent Fibre (ADF) and Lignin (ADL) in Feed, describes an analytical procedure based on the crucible or Fibertec™ method.

Technology

The Fibertec™ 8000 is specifically designed for fibre determination in accordance with Weende, van Soest and other recognised methods internationally.

FOSS has decades of experience in the automation of basic chemical operations and comprehensive documentation from laboratory studies and round robin tests.

With the Fibertec, single or sequential extractions including boiling, use of internally preheated reagents, rinsing and filtration are performed under reproducible and controlled conditions. The system can handle up to six samples simultaneously.

These samples are handled seperately in standard filter crucibles which are used both as an integral part of the assembly during extraction, rinsing and filtration and as sample vessels during weighing, drying and ashing. Sample residue remains in the crucible during the whole procedure, avoiding sample transfer and associated risk of error. The consistent rate of heating and time to boiling ensures repeatability. Discrete analysis of each sample gives reliable reference results to ±1 % accuracy, relative at 5% - 30% fibre level.

On-board heating and dispensing of reagents

Heating power is automatically adjusted so that users never need to stand in front of the instrument to wait for the boiling point or to adjust power for a gentle rate of boiling. All chemical liquids (including water, acid, alkali, ADS, NDS, alpha-amylase, antifoaming agent octanol) are dispensed into the column through a moving nozzle. The Fibertec is the first ever fibre analysis solution to offer these facilities for fibre analysis based on the crucible method.

Secure your investment with a FossCare™ Support Agreement

Let FOSS take care of you for a maximum return on your analytical investment. Get a four year warranty as part of the new FossCare Premium Preventive Maintenance Agreement or two years as part of any other FossCare agreement. In addition to the peace of mind afforded by the warranty period, the continual preventive maintenance pays off by keeping your analytical instruments working perfectly every day, year after year.

Why preventive maintenance?

As with any analytical solution, it is essential that your FOSS instrument receives regular maintenance to ensure optimal performance and extended lifetime. Avoiding expensive downtime is a matter of following factory standards and preventively replacing parts before they wear out. In turn, this helps ensure reliable and consistent results at the highest level.

Preventive and predictive maintenance combined with global support from 300 dedicated service, application, software and calibration specialists keeps your instrument running perfectly all year round.

Benefits of a FossCare™ Support Agreement:

- Extended Warranty (two or four years depending on the chosen agreement)
- Regular maintenance; the instrument is diagnosed, cleaned, adjusted, tested, fine tuned and recalibrated
- Minimal downtime from replacing components before they are worn out
- Consistent, accurate and reliable results you can always trust
- Preventative maintenance visits when it suits you (your business)
- 24/7 phone support - no need to worry about closing hours or PO
- Low, fixed service budget prevents unexpected expenses
- Discounts on additional services, spares, training, reagents, consumables and software upgrades

Contact your local Foss office for more information.

Technical specifications

System description:
Fibertec™ 8000, complete system, 230V, 50/60Hz comprising:
- Fibertec™ 8000, hot extraction unit
- FT 121 Fibertec™, cold extraction unit
- Standard accessory kit,
- Document kit

Fibertec™ 8000 system, 230V, 50/60Hz same as above but without cold extraction unit.

Accessories:
Crucible stand for 6 crucibles, crucible holder, acid tank, alkali tank, NDS tank, ADS tank

Optional accessories:
Crucibles, P0 (porosity 160 - 250 µm), set of 6
Crucibles, P1 (porosity 100 - 160 µm), set of 6
Crucibles, P2 standard (porosity 40 - 100 µm), set of 6
Crucibles, P2 US (porosity 40 - 60 µm), set of 6
Crucibles, P3 (porosity 16 - 40 µm), set of 6

Performance data:	
Sample size:	0.5 - 3 g
Measuring range:	0.1% - 100%
Capacity per batch:	Up to 6 samples simultaneously
Capacity per day:	Up to 36 analyses (crude fibre method). Up to 60 analyses using modified procedure
Repeatability:	±1 % relative at 5% - 30% fibre level
Reagent preheating time:	10 - 12 minutes
Heating-up time from preheated temperature to boiling:	5 - 7 minutes

Installation requirements:

Equipment	**Power supply**	**Power consumption**	**Dimensions w × d × h**	**Weight**	**Water supply**
Fibertec™ 8000 Hot Extraction Unit	200 - 240 V, 50 or 60 Hz	2.000 W	73 × 39 × 64	67 kg	Tap water minimum 2 L/min (4-25°C, depending on water pressure)
FT 121 Fibertec™ Cold Extraction Unit with water aspirator	-	-	58 × 38 × 28	14 kg	Tap water 2 L/min

Note: Cold Extraction Unit must be placed in the fumehood with at least 0,5 m/sec airflow.

** When Fibertec™ 8000 is in standby mode the tap water supply is closed down.*

FREE YOUR LAB RESOURCES WITH THE LOWEST OPERATOR TIME OF ANY FIBRE SOLUTION

- Unattended measurement of up to six samples simultaneously releases staff to do other things – it can even run overnight
- On board heating and dispensing of all reagents, antifoam and rinsing with water avoids interruptions to your other tasks while avoiding risk of human error
- Intuitive software display reduces training by making it easy to set-up jobs

OFFICIAL REFERENCE METHOD RESULTS WITH UNRIVALLED ACCURACY (ISO, AOAC)

- Sample residue remains in crucible during whole procedure avoiding sample transfer and associated risk of error
- Discrete analysis of each sample for reliable reference results : ±1 % relative at 5% - 30% fibre level
- Consistent rate of heating and time to boiling ensures repeatability

SAFEST FIBRE ANALYSIS SOLUTION AVAILABLE FOR CRUDE FIBRE, ADF, ADL AND NDF

- Machine dispensing of all reagents avoids chemical contact and fumes
- Automatic heat reduction when boiling point is reached prevents spillage
- System adds antifoam and enzyme when required

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