

# Soxtec™ 2050 Auto Fat Extraction System



*Soxtec™ 2050 Auto Fat Extraction System - the fully automated solvent extraction system for safe determination of soluble material in food, feed, soil, polymers, textiles, paper pulp, etc.*

## Features and benefits

- Fully automatic for unattended operation
- Accessories for batch handling offer operator convenience
- Closed solvent addition limits operator's exposure to solvent
- Cooling water control reduces water costs
- Automatic shutdown enables overnight operation
- Official approvals; AOAC 991.36 (meat), AOAC 2003.05, 2003.06 (feed), SCAN-CM 49:93 (paper pulp), EPA No 3541 (soil)

## System description

The Soxtec™ 2050 System represents the new generation of automated Soxhlet extraction. It is designed for maximum user convenience with full automation for unattended operation and minimum system handling.

This has been achieved by applying a new patented version of the Soxhlet extraction technique

combined with integral solvent handling. The system consists of an Extraction Unit, a Control Unit and a Drive Unit. The sample to be analysed is weighed into thimbles and inserted into the extraction unit. Solvent is added to the extraction cups in a closed system. The cups are heated by the electric heating plate. The 4-step extraction consists of boiling, rinsing, solvent recovery and pre-drying.

The system is flexible and suitable for a broad range of applications in the food, feed, environmental and industrial segments. It is designed to work with all common solvents used for solvent extraction (we do not recommend the use of Diethyl ether due to the explosion risk when handling it). Typical solvent recovery is 80%, only 16 ml solvent is used per sample. Sample preparation prior to GC/HPLC work is also suitable; ask for our special accessories. The repeatability is equal to traditional technique.

**System description:****Soxtec™ 2050 comprises:**

- 20500001 Soxtec 2050, 230V complete with  
 1 ea Soxtec 2050 Extraction Unit  
 1 ea Soxtec 2050 Control Unit  
 1 ea Soxtec 2050 Drive Unit  
 1 ea Food/Agri Routine Accessories kit comprising:  
 Extraction cups (3 sets of 6), Cup holder, Thimble support, Thimble holder, Thimbles (set of 25), Thimble adaptors (2 sets of 6), Thimble handler, Tong for extraction cups, Thimble stand (2 sets of 6), Cup stand, seals of viton and butyl, Solvent addition tube, Solvent emptying tube, Manual and Application Note AN 301.
- 20500002 Soxtec 2050, 115V. As above.

**Accessories:**

- 10007510 Extraction Cups (set of 6), aluminium  
 10007673 Extraction Cups (set of 6), glass  
 10007525 Seals for condensers, viton (set of 6)  
 10007526 Seals for condensers, butyl (set of 6)  
 10007830 Seals for condensers, RESEL (set of 6)  
 10013969 Seals for condensers, polyuretane (set of 6)  
 15210072 Solvent dispenser  
 1090 Cemotec™ sample mill (food, feed prior to moisture analysis)  
 1093 Cyclotec™ sample mill (food, feed general applications)  
 2094 Homogenizer, blender type  
 2096 Homogenizer, blender type  
 1095 Knifetec™ (water cooled for high fat and high fibre)

**In addition, we recommend:**

- 15220030 Cellulose thimble, Ø 33mm (set of 25) double thickness  
 15220045 Cellulose thimble, Ø 33mm (set of 25) single thickness

**For total fat determination, used in conjunction with Soxtec™ Extraction Systems we recommend:****SoxCap™ 2047 comprises:**

- SoxCap 2047, 230 V, complete system for integrated boiling and filtration of samples and all accessories needed for acid hydrolysis of food and feed samples
- SoxCap 2047, 115 V. As above.

**Performance data:**

- Thimble size: 33 × 80 mm, 65 ml  
 0.5 to 15 g depending on sample
- Solvent volume: 70-90 ml
- Extraction time: typically 40 to 60 min, depending on application
- Capacity per batch: 6 samples
- Capacity per day: 42 samples
- Measuring range: 0.1-100% fat
- Accuracy: According to official approvals
- Repeatability: ± 1% rel. or better (5-100% fat)
- Heating up time: from 20 to 280°C in 7-9 min (230V)



*Closed solvent addition limits operator's exposure to solvents.*

**Installation requirements:**

Equipment	Power supply	Power consumption	Dimensions w × d × h	Weight	Water supply	Ventilation
Extraction Unit	-	-	60 × 38 × 58	30 kg	2 l/min.	Fume hood min. airflow 0,5 m/s (inter locked)
Control Unit	230V, 50-60 Hz 115V, 50-60 Hz	1550 W	31 × 24 × 16	3 kg	-	-
Drive Unit	230V, 50-60 Hz 115V, 50-60 Hz	40 W	40 × 28 × 12	8 kg	-	-

# FOSS

FOSS Analytical  
 69, Slangerupgade  
 DK-3400 Hilleroed  
 Denmark

Tel.: +45 7010 3370  
 Fax: +45 7010 3371

info@foss.dk  
 www.foss.dk