Microwave Digester - 40 Position Digestion System - 3000 W - IR and Pressure Control

Model **MSMDS-800-T40SWISS** | Brand **Master Science**





The Master Science 3000 W Microwave Digester handles 40 vessels of 50 mL in one run, with up to 3000 W of adjustable microwave power for fast acid digestion of large sample batches. It is used for food, textile, geological, metallurgical, coal, biological, cosmetic, petrochemical, environmental and battery samples.

KEY HIGHLIGHTS

- Large batches, fast
- No cross-contamination from probes
- Samples saved on over-pressure
- Large method library
- Multi-level safety

AT A GLANCE

50 to 400 °C TEMPERATURE CONTROL RANGE	**0 to 15 MPa** PRESSURE CONTROL RANGE
±0.1 °C TEMPERATURE ACCURACY	**IR reads the solution itself.** WALL TEMPERATURE NOT MATCHING THE SAMPLE

Request a Quotation
Contact us for pricing, configuration options and delivery details.

support@themsci.com
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Overview

Each vessel is watched without contact: an infrared sensor reads the temperature of the solution itself, not the vessel wall, and a contactless sensor tracks the pressure in every vessel throughout the run.

Key Benefits

Large batches, fast
the Master Science 3000 W Microwave Digester runs 40 vessels with high power.

No cross-contamination from probes
fully contactless temperature and pressure sensing.

Samples saved on over-pressure
vessels vent and reseal automatically.

Large method library
255 stored programs.

Multi-level safety
double-locked door and abnormal sound monitoring.

For smaller batches, see the Master Science compact 8-vessel microwave digestion system.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSMDS-800-T40SWISS
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Model Number	MSMDS-800-T40SWISS
SKU	MSMDS-800-T40SWISS
Number of Vessels	40
Vessel Volume	50 mL
Vessel Material	Inner TFM; outer PEEK with glass fibre
Temperature Monitoring	Contactless IR, every vessel controlled
Temperature Control Range	**50 to 400 °C**
Maximum Working Temperature	250 °C
Temperature Accuracy	**±0.1 °C**
Pressure Monitoring	Contactless sensor, every vessel controlled
Pressure Control Range	**0 to 15 MPa**
Maximum Working Pressure	6 MPa
Pressure Accuracy	**±0.01 MPa**
Microwave Leakage	< 5 mW/cm²
Cavity	316L stainless steel, corrosion-proof coating
Rotation	One direction, 360° continuous
Methods	255 programs, up to 10 steps each
Exhaust	High-power corrosion-proof blower
Display	8-inch touch screen

POWER

Microwave Power	0 to 3000 W adjustable
Microwave Frequency	2450 MHz
Power Supply	AC 220 V ±10 %, 10 A, 50/60 Hz

DIMENSIONS & WEIGHT

Dimensions (L × W × H)	640 × 630 × 590 mm
Net / Gross Weight	78 kg / 155 kg (main unit and accessories)

COMMON LABORATORY PROBLEMS AND HOW THIS DIGESTER HELPS

Common Laboratory Problems and How This Digester Helps	How the Master Science 3000 W Microwave Digester solves digestion bottlenecks:
Too few positions for daily workload	40 vessels per run.
Lost samples from vented vessels	automatic resealing after pressure release.
Wall temperature not matching the sample	IR reads the solution itself.
Probe contamination between samples	contactless monitoring.

Applications

The Master Science 3000 W Microwave Digester is used for
Food and agricultural products Geology, coal and metallurgy Environmental and wastewater samples Cosmetics and textiles Battery materials and petrochemicals

Vessels

- 40 × 50 mL TFM inner vessels
- Auto-vent and self-resealing design
- PEEK and glass fibre outer sleeves

Monitoring

- IR temperature of the solution in each vessel
- Contactless pressure reading per vessel
- Live display of all values

Safety and Control

- Double-locked security door
- Over-pressure and over-temperature adjustment
- 8-inch touch screen, 255 methods