Microwave Digestion Workstation - 40 Vessel Digester - 2000 W - 300°C, 15 MPa

Model **MSMDS-Tan40SWISS** | Brand **Master Science**





The Master Science Microwave Digestion Workstation prepares samples for ICP-OES, ICP-MS and AAS by closed-vessel acid digestion. Two inverter-controlled magnetrons deliver up to 2000 W of continuous, non-pulsed microwave power, giving an even field in the cavity and consistent digestion from vessel to vessel.

KEY HIGHLIGHTS

- High throughput
- Even digestion
- Every vessel monitored
- Two levels of pressure safety
- Audit-ready records

AT A GLANCE

600 × 685 × 660 mm
DIMENSIONS (W × D × H)

Aerospace composite fibre with PFA coating
OUTER VESSEL MATERIAL

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

support@themsci.com
www.themsci.com

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Overview

Up to 40 vessels can run in one batch. Every vessel is watched by a mid-infrared sensor from below, and microwave output stops with an alarm if any vessel shows an abnormal temperature.

> Digested samples are typically analysed on instruments like the Master Science laboratory instrument range.

Key Benefits

High throughput
the Master Science Microwave Digestion Workstation digests up to 40 samples per run.

Even digestion
dual magnetron with closed-loop PID control.

Every vessel monitored
infrared temperature sensing with automatic stop.

Two levels of pressure safety
safety bolt or elastic auto-release vessels.

Audit-ready records
electronic signature and audit trail.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSMDS-Tan40SWISS
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Microwave Source	2450 MHz, dual magnetron inverter, non-pulse continuous output
Cavity	316L stainless steel, wall over 3 mm, multi-layer PFA coating
Door	3D adjustable explosion-proof self-sealing door with interlock
Temperature Monitoring	Non-contact mid-infrared sensors for every vessel
Exhaust	Automatic air volume, cooling to room temperature in under 15 min
High-Pressure Vessels	40 × 70 mL TFM, 300 °C, 15 MPa
Auto-Release Vessels	40 × 55 mL TFM, 300 °C, 15 MPa
High-Pressure Vessels (large)	24 × 110 mL TFM, 300 °C, 15 MPa
Ultra High-Pressure Vessels	18 × 100 mL TFM, 320 °C, 15 MPa
Outer Vessel Material	Aerospace composite fibre with PFA coating
Operating Environment	0 to 40 °C, 15 to 80 % RH

POWER

Maximum Microwave Power	2000 W
Installed Power	3800 W

DISPLAY & DATA

Displays	7-inch colour touch screen for data and curves; 5-inch colour screen for cavity view
Software	Android based, electronic signature, user levels, audit trail, automatic rotor and vessel recognition

DIMENSIONS & WEIGHT

Dimensions (W × D × H)	600 × 685 × 660 mm
Net Weight	62 kg

COMMON LABORATORY PROBLEMS AND HOW THIS SYSTEM HELPS

Common Laboratory Problems and How This System Helps	How the Master Science Microwave Digestion Workstation addresses digestion problems:
Slow hotplate digestion	closed-vessel microwave heating cuts hours to minutes.
Incomplete digestion of some vessels	uniform field and per-vessel temperature control.
Vessel over-pressure risk	passive pressure release.
Waiting for vessels to cool	automatic exhaust cools in under 15 minutes.

The Master Science Microwave Digestion Workstation is used in

- **Environmental monitoring of soil, water and sludge**
- **Food safety testing for heavy metals**
- **Public health and disease control labs**
- **Petrochemical and metallurgy analysis**
- **Education and research**

Microwave System

- Dual magnetron inverter, 2000 W
- Continuous non-pulse output
- 316L PFA-coated cavity

Safety

- Explosion-proof interlocked door
- Pressure relief on every vessel
- Infrared temperature alarm

Software and Display

- 7-inch touch screen with curves
- 5-inch cavity camera screen
- Automatic vessel counting

Optional Accessories

- Tool trolley for moving loaded rotors
- Additional vessel rotors (high-pressure, auto-release, ultra high-pressure)