

MARS ONE

THE ONE MICROWAVE DIGESTION SYSTEM
FOR YOUR ANALYTICAL LABORATORY

FAST, ECONOMICAL MICROWAVE DIGESTION



CEM

Finally - a high quality system to meet every laboratory budget

Specifically designed for routine sample preparation, the MARS One provides laboratories with an economical alternative to higher priced systems. The MARS One incorporates many of the same features found in our world-class MARS 6 platform, and provides rapid processing of one to twelve samples.



Featuring the Xpress Vessel and New Lightweight Turntable

The patented MARS Xpress vessel revolutionized sample preparation a decade ago. A simple three-piece design with vent and reseal technology ensures complete digestions for a variety of sample types.

- Lightweight 12-position all Teflon turntable (weighs < 4 kg)
- Two vessel sizes: 55 and 75 mL volume
- Vent-and-seal technology for larger sample sizes
- Run a single sample or up to 12 simultaneously
- Open architecture promotes fastest cooling



Both 55 mL and 75 mL vessels are available for MARS One. The easy-to-assemble 3 part vessel resides in a thin-walled composite sleeve that allows for rapid cooling.

Features -

RUGGED DESIGN - 316 solid steel cavity with multi-layered Teflon® coating, impact and acid resistant polymer shell

EASE OF OPERATION - Choose a pre-existing method or simply program time and temperature

PRECISE POWER DELIVERY - Superior waveguide technology

VERSATILITY - Accommodates one to twelve vessels

HIGH RESOLUTION, FULL COLOR TOUCH SCREEN CONTROLLER

Large 7-inch (800 x 489) glass capacitance LCD screen

XPRESS VESSEL TECHNOLOGY

The most popular vessel in the world - two sizes: 55 and 75 mL

LIGHTWEIGHT TURNTABLE -

Corrosion-proof, contamination proof construction; weighs less than 5 kg (11 lb.)

COMPLETE REACTION CONTROL

Controls up to 12 vessels using a contactless IR sensor

VESSEL COUNTING AND IDENTIFICATION SENSOR -

Allows precise power input of even one sample; identifies proper vessels for use in the MARS One

REACTIGARD SECURITY

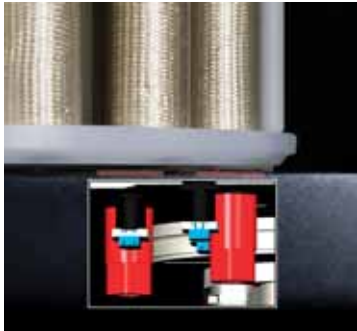
Automatically shuts off power if a disturbance is detected during a run

Simplified Programming



Select a preloaded method, or choose a temperature, ramp, and hold.

Complete Reaction Control & Documentation

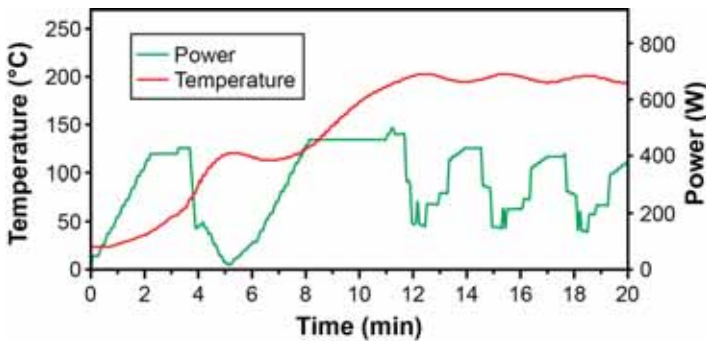


Each sample is under full temperature control using floor mounted contactless IR technology.

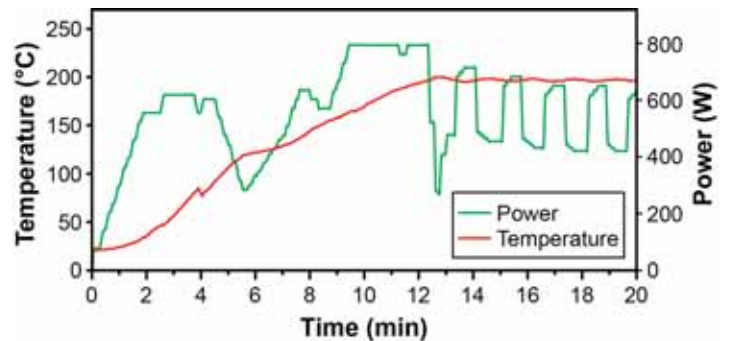
Reaction conditions are documented for each sample and easily exported as a laboratory report.



Run a single vessel or a batch of mixed foods - MARS One can handle it



Precise power delivery allows for preparation of even a single vessel.



The MARS One can easily digest a mixture of food samples (pizza, broccoli, milk powder).

MARS One - your solution for routine sample preparation



SPECIFICATIONS

Overall Instrument Dimensions	63.5 cm (25 in.) height x 53.3 cm (21 in.) width X 63.5 cm (25 in.) depth
Weight	61.2 kg (135 lbs.)
Touchscreen	7" (800 x 480) TFT-LED glass capacitive touchscreen display
Ports	1 USB, 1 USB-B
Turntable Design	PerfectCircle™ design provides absolute radial symmetry.
Microwave Cavity	Heavy-duty, multi-layer Teflon® coating
Electrical Requirements	200/208/230 VAC (200-253 VAC), 60 Hz, 15A @ 230 VAC 220/240 VAC (202-250 VAC), 50 Hz, 15A @ 240 VAC
Magnetron Frequency	2450 MHz
Power Output	1200 W Magnetron
Safety Features	Three independent door safety interlocks, including an interlock monitoring system plus three independent thermal switches, are used in each instrument to prevent instrument operation and microwave emissions in case of improper door closure or misalignment. The instrument complies with HHS standards under 21 CFR, Part 1030.10, Subparts (C)(1), (C)(2) and (C)(3). Reactiguard continuously monitors the cavity and disables the magnetron if disturbances occur inside the cavity.
Emissions and Safety Approvals	Conforms to Globally Harmonized EN61010-1 Standard for Safety Requirements for Electric Equipment for Measurement, Control, and Laboratory Use Part 1: General Requirements (CAN/CSA-C22.2 No. 1010.1-1992).
Patents	CEM microwave systems and vessel designs may be covered by any one of the following US patents: 04835354, 04080168, 05369034, 04672996, RE034373, 05230865, 04877624, 04672996, 05206479, 05427741. Other patents pending.

Teflon® is a registered trademark of DuPont. TFM® is a registered trademark of Hoechst A.G.

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Service & Support

All CEM Systems are backed by our experienced applications support team and award-winning service department. CEM's factory-trained field technicians and in-house service team are well known in the industry for their prompt response and problem-solving capabilities.



CEM has been an ISO-certified facility since 1994.

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