Laboratory Muffle Furnace – Max Temperature: 1100°C

Brand **Master Science**



Muffle Furnace

The following data describe the MSBWF11-07NSWISS laboratory muffle furnace. This benchtop unit is designed for ashing, sintering, heat treatment, and material testing applications requiring precise thermal control up to 1100°C. All values are measured under the manufacturer's standard test conditions.

KEY HIGHLIGHTS

- Integrated chimney for cleaner processing

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Key Benefits

POWER FAILURE MEMORY FOR UNINTERRUPTED EXPERIMENTS

Integrated chimney for cleaner processing

Technical Specifications

PARAMETER	SPECIFICATION
Chamber volume	7 liters
Maximum temperature	1100°C
Continuous operating temperature	1000°C
Power consumption	4.0 kW
Power supply	220V, 50/60Hz, single phase
Control system	Microcomputer PID controller
Programmability	63 total steps (7 periods, 9 steps per period)
Heating element type	High-quality electric furnace wire
Insulation material	Alumina ceramic fiber
Safety protection	Over-current, over-voltage, and overheat sensors
Safety interlock	Automatic power-off door switch

The microcomputer PID controller supports 63 programmable steps arranged in 7 periods with 9 steps per period. A materials researcher designing a multi-stage sintering profile programs heating ramp, soak, cooling, and hold segments without manual intervention. Automation reduces technician time and eliminates operator errors.

The high-grade insulation material keeps the exterior housing cool while maintaining the internal chamber at the target temperature. A laboratory operating the furnace at 1000°C for eight hours experiences lower energy costs and safer surface temperatures. The exterior remains touch-safe, reducing burn risks.

The combination of high-quality heating elements and ceramic fiber insulation ensures stable internal temperatures across the chamber. A researcher performing ashing of multiple samples achieves consistent results across all positions. Uneven annealing or sample contamination is effectively eliminated.

Over-current, over-voltage, and overheat sensors protect both the user and the equipment. The automatic power-off door switch triggers when the door is opened. A busy laboratory with multiple operators benefits from these safety features. The system is built to protect both the user and the integrity of the experiment.

If a power failure occurs, the controller remembers the settings. A researcher running a 12-hour heat treatment cycle does not lose the sample when power returns. The interrupted heating cycle resumes from the stored parameters, ensuring sample integrity.

The unit includes a built-in chimney to enhance combustion efficiency. A laboratory performing ashing of organic or mineral samples benefits from optimised airflow and exhaust. Cleaner processing reduces sample contamination and improves ashing accuracy.

Ashing, sintering, heat treatment, annealing, material testing, ceramic processing, metallurgical research