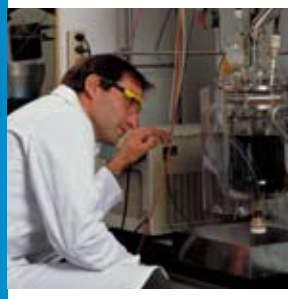
Synthesis and Screening

Parallel Productivity
at an Affordable Price



Discovery
Save time and streamline library synthesis for lead generation, lead optimization, and reaction screening.

Development
Gain valuable data and save starting material by screening for solvents, equivalents of reagents and reaction conditions.

Polymers
Understand and monitor ring closure for condensation reactions without extreme conditions or expensive equipment.

Petrochemicals
Screen for reaction conditions and catalysts in parallel to save time and expensive materials.

MiniBlock® XT-S and XT-S Plus

The MiniBlock® XT-S is an easy to use reaction block designed for synthesis and screening reactions. Applications include parallel synthesis of small organic molecules, optimization of critical process parameters, and screening for optimal reaction conditions.

The XT-S is widely used by chemists working in Bio-Pharma, Chemical, Petrochemical, and Polymers. The flexible and modular design is ideal for applications supported by statistical design of experiments (DoE.)

Today, more chemists choose MiniBlock® to increase productivity than any other similar tool. Originally designed by chemists at Bristol-Myers Squibb Company, the MiniBlock® has been further developed to address a broad range of chemistry methodologies.

METTLER TOLEDO

Technical data

Parallel Productivity at an Affordable Price MiniBlock® XT-S and XT-S Plus

Modular and Flexible

XT-S is available in a wide variety of configurations enabling arrays from 6 to 48 reactions with working volumes of 0.5mL to 60mL. XT-S can be heated and cooled with commercial stir plates, ice baths, or with laboratory recirculators. Temperature ranges are achieved between -78°C and 150°C. XT-S is fully upgradable to allow reactions to be run under reflux and inert conditions. Many XT-S parts are compatible with the MiniBlock® product line, which enables reactions that require filtration.

Excellent Mixing and Temperature Control

XT-S provides excellent mixing using commercial stir plates or orbital shakers. XT-S routinely mixes solutions with solid suspensions of 20% and fluid viscosities up to 60cP. Temperature uniformity between the different reactors is <1°C. MiniBlock® XT-S can achieve temperature stability in 10 minutes. Solvent loss during reflux is on average 4% over 20 hours.

MiniBlock® Product Family Summary

Function/Specification	MiniBlock™	MiniBlock™ XT
Solution Phase Synthesis	✓	✓
Solid Phase Synthesis	✓	N/A
SPE	✓	N/A
Scavenger Resins	✓	✓
Number of Reactors	6, 12, 24, 48, 96	6, 12, 24, 48
Working Volume	2-3mL, 5-7mL, 10-12mL, 25-30mL	2-3mL, 7-10mL, 20-25mL, 40-50mL
Heating	80°C (polypropylene) 120°C (glass)	160°C
Cooling	-20°C (via recirculator - not included)	-78°C (Ice Bath) -20°C (via recirculatior - not included
Inerting Capability	✓	✓
Reflux Capability	N/A	✓
Mixing	Orbital Shaking	Stir Plate/Orbital Shaking

MiniBlock® racks conform to microtiter plate standards, providing flexibility for collection, compatibility with dry down devices and better use of space. The unique valve body design of the MiniBlock® allows the opening and closing of all vessels at the same time. MiniBlock® reactors and supporting parts are also available in sets and packages, to better match your application and budget.

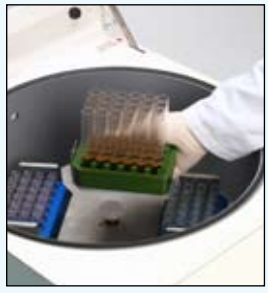
MiniBlock® Accessories

Reflux

The reflux layer is available to enable reactions to be run under reflux. Reflux layers are available in 6, 12, 24, and 48, position configurations.

Inert Conditions

The inert atmosphere manifold enables reactions to be run under inert conditions. Manifolds are also available in 6, 12, 24, and 48 positions. Manifolds are also used to evaporate solvents in combination with heating and gas delivery.



Parallel Evaporation

The Microtiter plate design enables compatibility with commercially available parallel evaporation systems.

Filtration

The unique valve body design of the MiniBlock® enables many processes where filtration is of critical importance. Examples include peptide synthesis, solid phase organic synthesis, use of scavenger resins in solution phase synthesis, screening of catalysts, screening conditions for biofuels.

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