Labsystems

iEMS Incubator/Shaker Family

Exceptional temperature uniformity

iEMS Incubator/Shaker Family for microplate assays

iEMS Incubator/Shaker for temperature sensitive EIA assays

A unique microplate incubator and orbital shaker that can be used for any microplate-based assay requiring optimal incubation of up to 40°C.

- **Exceptional temperature uniformity across the plate**
- **Efficient mixing with orbital shaking**
- **Superior sensitivity and specificity for EIA assays**
- **Expandable modular design from 3 to 9 microplates**

Exceptional temperature uniformity across the plate

The iEMS Incubator/Shaker uses an individual Thermal Microplate Holder designed for ease of use and uniform heating of each microplate. Temperature variation is less than 0.3°C across the microplate. To eliminate temperature gradients and edge effects, microplates are evenly heated from all sides. This ensures assay reproducibility.

Efficient mixing with orbital shaking

For effective mixing, a powerful variable-speed orbital shaker is incorporated. Featuring an orbit of 1.0 mm and speeds from 400 to 1400 in 250 rpm increments, the shaker motion ensures efficient mixing of even very viscous liquids.

Superior sensitivity and specificity for EIA assays

Superior temperature control and efficient orbital shaking dramatically reduce incubation times. Orbital shaking at a constant 37°C has been shown to increase the sensitivity and specificity of EIA assays and enhance the reaction kinetics.

Expandable modular design from 3 to 9 microplates

The iEMS Incubator/Shaker offers expandable capacity from 3 up to 9 microplates, which is ideal for the various throughput needs of laboratories. The modules are simply stacked to a maximum height of three units and are controlled with a single keypad.

iEMS Incubator/Shaker HT for DNA hybridization, primer extension and enzyme kinetic assays

Along with all the other superior advantages of the iEMS Incubator/Shaker, this model also offers an extended temperature range of up to nearly 70°C.

- **Unique temperature range up to nearly 70°C**
- **3 microplates incubated simultaneously**

Unique temperature range up to nearly 70°C

The iEMS Incubator/Shaker HT is especially designed for superior performance at elevated temperatures. Temperature ranges from ambient +3°C up to 69°C. Temperature variation is less than 0.6°C, and temperature accuracy is ±0.5°C.

3 microplates incubated simultaneously

The iEMS Incubator/Shaker HT comes in a 3-plate holder unit.

Technical specifications

	iEMS Incubator/Shaker	iEMS Incubator/Shaker HT
Temperature control		
Temperature range	*+14°C to +40°C*	*+14°C to +69°C*
Incubation range	*Ambient +3°C to +40°C*	*Ambient +3°C to +69°C*
Resolution	*0.1°C*	*0.1°C*
Incubation time	*Up to 48 h in steps of 1 s*	*Up to 48 h in steps of 1 s*
Warming speed	*<20 min from +24°C to 37°C*	*<35 min from +24°C to 65°C*
Accuracy	*±0.3°C*	*±0.5°C*
Uniformity	*<0.3°C across the whole plate*	*<0.6°C across the whole plate*
Evaporation	*<2mg/h/well*	*No evaporation as film on the plate (All specs are with a film on the plate)*
Shaker		
Frequency	*400 to 1,400 rpm in steps of 250 rpm (5 speeds)*	*400 to 1,400 rpm in steps of 250 rpm (5 speeds)*
Amplitude	*1 mm (radius 0.5 mm)*	*1 mm (radius 0.5 mm)*
Shaking time	*Up to 48 h in steps of 1 s*	*Up to 48 h in steps of 1 s*
Interval time	*Up to 48 h in steps of 1 s*	*Up to 48 h in steps of 1 s*

Ordering information

iEMS Incubator/Shaker	
5112220	*iEMS Incubator/Shaker 1 module including 3 thermal microplate holders*
5112210	*iEMS Incubator/Shaker 2 module including 6 thermal microplate holders*
5112200	*iEMS Incubator/Shaker 3 module including 9 thermal microplate holders*
5921200	*iEMS Thermal Microplate Holder*
iEMS Incubator/Shaker HT	
5112250	*iEMS Incubator/Shaker HT including 3 thermal microplate holders*
5921210	*iEMS Thermal Holder HT*

Labsystems

Labsystems Oy
P.O. Box 208, FIN-00811 Helsinki, Finland
Tel. +358-9-329 100, Fax +358-9-3291 0415
www.labsystems.fi

A Thermo Electron Company

151 5200 Labsystems/Imageneering Agency/Ekholmin Kirjapaino 8/00