

Little Dipper® Processor for Self-Spotted DNA Microarrays

Automates Washing and Centrifugal Drying



Improves Assay Reproducibility

The Little Dipper Processor for Self Spotted Arrays is a programmable robotic system that replaces the multistep, manual processes normally used for processing spotted DNA microarrays.

Batches of 1 to 24 arrays are moved at programmed times between baths containing buffers in validated protocols. While submerged in each bath, arrays are washed using a combination of programmed up/down agitation and stir bar vortex mixing.

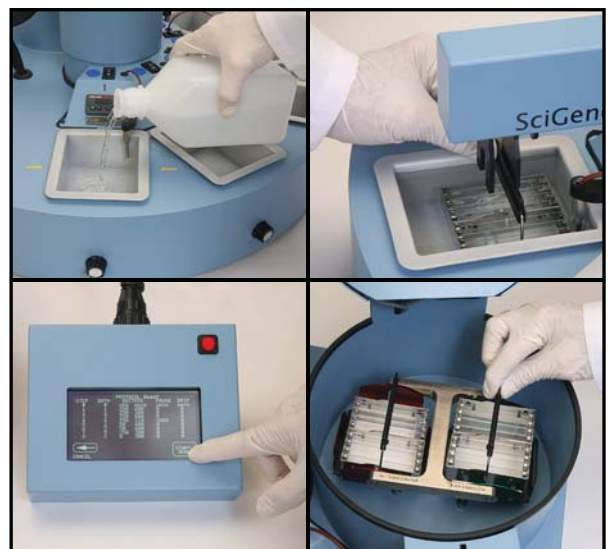
For best results, the system is used within a NoZone Workspace to eliminate day-to-day assay variability caused by high ozone levels. The tight control of time, temperature, ozone levels and washing action assures superior array-to-array and batch-to-batch reproducibility.



Operates inside the NoZone Workspace to eliminate ozone damage to arrays.

Load and Go Operation

After filling baths and setting temperatures and stir bar rotation, arrays are loaded from cassettes into a 12 or 24 position rack then mounted onto the system's robotic arm. Alternatively, racks of arrays hybridized in the Hybex system can be loaded directly on the system without handling. After rack loading, the instrument takes over and performs all the processing steps including gentle drying in an integral centrifuge. The simplicity of the design makes training of new operators a snap.

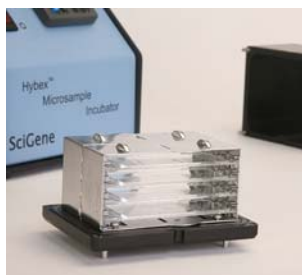


Fill baths, load array racks onto gripper and start protocol. Remove arrays from centrifuge, ready for scanning.

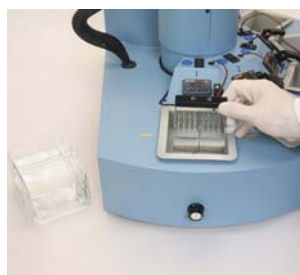
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Hybridize Arrays with the Hybex System

The Hybex Microarray Incubation System simplifies array hybridizations by eliminating cassettes and waterbaths. Coverslipped arrays are incubated in slide racks inside a humidified chamber placed in a small, heating unit. After incubation, racks are removed from the chamber and mounted directly on the Little Dipper for processing. The Hybex and Little Dipper Systems work together to streamline and tightly control the entire microarray sample incubation and array washing process for improved reliability of results.



Hybridize arrays in racks ready for processing.



After hybridization, load Hybex racks onto system.

Ready to Use with Validated Protocols

The Little Dipper Processor for Self Spotted Arrays is configured and programmed ready to use. The system arrives with all required components with validated protocols installed. Just follow the reference card and press start on the control screen. The instrument does the rest.

Table 1. Oligo Array Processing Protocol

Bath Position	Buffer	Volume (ml)	Temp (°C)	Agitation (cpm)	Time (sec)
1	2x SSC; 0.03% SDS	670	55°	400	60
2	2x SSC	670	RT	400	30
3	2x SSC	670	RT	400	30
4	1X SSC	670	RT	400	90
5	0.2x SSC	670	RT	400	90
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A Single Processor for All Microarray Types

The Little Dipper Processor can be easily configured for use with all commercial arrays and processing protocols, as well as FISH procedures. Use of a single piece of equipment for processing all microarray types simplifies operator training, avoids the added cost from duplicating equipment and saves bench space.



The Little Dipper automates processing of arrays from many commercial suppliers.

Specifications

Electrical	
Cat.# 1080-50-1	115V AC; 50/60 Hz; 1700W
Cat.# 1080-50-2	230V AC; 50/60 Hz; 1700W
Dimensions (HxWxD)	
	20 x 28 x 22 inches (51 x 71 x 56 cm)
Weight	
Instrument Net	47 lbs (21 kg)
Shipping Gross	85 lbs (39 kg)
Performance and Controls	
Temperature Range	Ambient +5°C to 90°C
Temperature Regulation	± 0.5°C from set point
Bath Volumes	5x 670 ml
Centrifuge RPM / force	690 RPM / 50 g

Ordering Information

Catalog No.	Description	UoM
1080-50-1	Little Dipper Processor for Self-Spotted DNA Microarrays, 115V.	EA
1080-50-2	Little Dipper Processor for Self-Spotted DNA Microarrays, 230V.	EA
Ships complete with baths, processing racks, preloaded optimized programs and digital thermometer for bath temperature calibration. Includes a 12-month warranty.		
Extended Warranty Options		
1080-01-1	12 Month Extended Warranty.	EA
1080-01-2	24 Month Extended Warranty.	EA
1080-01-3	36 Month Extended Warranty.	EA
Related Equipment		
1090-00-1	NoZone Workspace, 115V.	EA
1090-00-2	NoZone Workspace, 230V.	EA
1090-11-1	NoZone TL Workspace, 115V.	EA
1090-11-2	NoZone TL Workspace, 230V.	EA
1057-36-1	Hybex Microarray Incubation System, 115V.	EA
1057-36-2	Hybex Microarray Incubation System, 230V.	EA