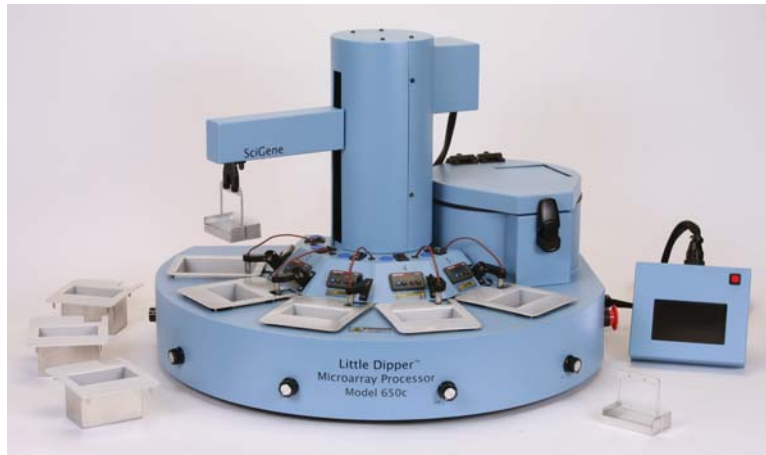


Little Dipper® Processor for BeadChips

Automates Processing of Illumina® BeadChips for Gene Expression

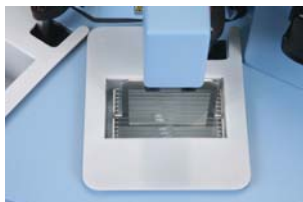


Improves Assay Reproducibility

The Little Dipper Processor is a programmable robotic system that replaces the multistep manual process normally used for post-hybridization processing of BeadChips. Batches of up to 12 BeadChips are moved at programmed times between five temperature-controlled baths containing wash buffers or blocking/staining reagents. While submerged in each bath, BeadChips are reproducibly washed, blocked and stained by a combination of up/down agitation and stir bar vortex action. The final drying step is automatically performed in an integral centrifuge.

Optimized Hardware for Economical Operation

The Little Dipper Processor for BeadChips is designed to conserve the consumption of buffers and reagents. Low volume bath trays and a low profile, 12-position rack work together to minimize the amounts of buffers, blocking and staining solutions needed. Instrument operating costs when processing typical batch sizes are equivalent to manual methods.



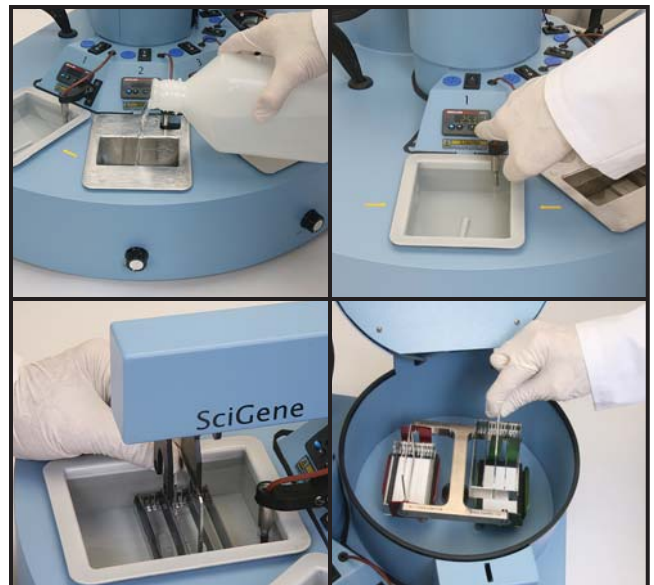
Chips are washed using up/down agitation and stir bar mixing.



Solution consumption is minimized with low volume baths and a special rack.

Load and Go BeadChip Processing

After filling the bath trays and setting the buffer temperatures, BeadChips are removed from Illumina hybridization chambers and placed into a simple to load, 12 position slide rack. After inserting the rack onto the Little Dipper robotic arm, the instrument takes over and performs the elevated and room temperature washing steps. Blocking, staining, final wash steps and centrifugal drying are then completed on the instrument after an exchange of bath trays.



Fill baths, set temperature, load rack and start protocol. Remove rack from centrifuge.

Little Dipper® Processor for BeadChips

Ready to Use with Validated Protocol

The Little Dipper Processor for BeadChips comes fully outfitted, ready to use for processing BeadChips for gene expression. The system arrives with all of the necessary components and with validated protocols pre-loaded. Training takes only a few minutes. Following the *User Guide*, fill the baths with Illumina-supplied buffers and reagents, press Start on the touch screen and load the BeadChip rack.

A Single Processor for All Microarray Types

The Little Dipper Processor can be easily configured and programmed to perform all commercial and self-spotted array processing protocols as well as FISH procedures. Use of a single piece of equipment for processing all microarray types simplifies operator training, avoids duplicating equipment costs and saves bench space.

Table 1. BeadChip Gene Expression Program

Step	Bath Position	Buffer	Agitation (cycles/min)	Time (sec)
1	1	High Temp	250	600
2	2	E1 BC	250	300
3	3	Ethanol	250	600
4	4	E1 BC	250*	120
Instrument Pause / Change Out Baths 2 and 3.				
5	2	Block E1	50	600
6	3	Stain	50	600
7	5	E1 BC	250	300
8	Centrifuge	none	—	300
*Includes user controlled pause in program at Step 4.			Total Time:	57 min



The Little Dipper automates processing of arrays from commercial suppliers such as Illumina, Agilent, Roche NimbleGen and others.

Specifications

Electrical	
Cat.# 1080-30-1	115V AC; 50/60 Hz; 1700W
Cat.# 1080-30-2	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) in 2 cartons
Performance and Controls	
Temperature Range	Ambient +5°C to 90°C
Temperature Regulation	± 0.5°C from set point
Bath Volumes	7x 200 ml and 1x 670 ml
Centrifuge RPM / force	690 RPM / 50 g

Ordering Information

Catalog No.	Description	UoM
1080-30-1	Little Dipper Processor for BeadChips, 115V.	EA
1080-30-2	Little Dipper Processor for BeadChips, 230V. Ships complete with required baths, processing racks, preloaded optimized programs and digital thermometer for bath temperature calibration. Includes a 12-month warranty.	EA
1080-41-0	Little Dipper Upgrade Kit for Agilent and NimbleGen Arrays	EA
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