DRAGON 12

Robotic Transdermal Sampling System

The Logan DRAGON 12 is a Robotic Transdermal Sampling System, which is designed to save valuable time by delivering precise transdermal samples into HPLC vials or sample tubes automatically. This system includes two groups of six Dry-Heat Bubble Free Cells that are surrounded by a thermostatically controlled heater block where temperature is maintained at 32° or 37°C. Homogenous distribution of temperature in the saline bathing solution is accomplished by the agitating motion of a Teflon-covered magnetic stirring bar, driven by an external magnet mounted on a speed controlled motor. The cell volume can be changed by using different sized stirring bars. The donor is heated to represent the sample temperature of the human body. The donor is open air which allows for a finite dose application of the compound being studied or can be closed by a cap.

When the DRAGON 12 is in use, the scientist loads the dry heat cells in the heater block while the media automatically fills into the cells by syringes. While the media heats up, the samples can be prepared. Once the media reaches the test temperature, just load the membrane / sample on the receptor surface and then put the donor on top. The clamps are built-in on the heater blocks. When one needs to clamp the cell, simply lift and clip. Once all the samples are loaded, just purge out the bubbles to start the test.

The DRAGON 12 has an automated arm that samples from twelve donor heated vertical diffusion cells. When heater block tilts for sampling, it allows all the air bubbles to purge out while the cells are refilling. This will ensure that there are no air bubbles under the skin/patch, the tilted block goes back to the horizontal position once the media replacement is complete and continues the test. Each dry heat cell has a temperature sensor under the membranes. The printer reports the cell temperature at every sampling point.

The DRAGON12 comes with a twelve channel syringe pump. Each syringe corresponds with one cell. The sampling needles are connected with a syringe pump which is responsible for sampling and refilling the same amount of sample volume. Individual samples are dispensed simultaneously into HPLC vials that are stored in the sample rack. The needles are rinsed and washed inside and out in the washing bath after each sampling. Once the media replacement is completed the needles air dry and are ready for the next sampling cycle. The optional twelve channel 10 ml syringe pump can be added to remove all the media in the cell and replace it with fresh media.

The Logan DRAGON 12 is the most advanced Transdermal robotic system for IVRT and IVPT that handles twelve samples simultaneously. For more info please contact Logan Instruments….

LOGAN
INSTRUMENTS CORP.