

MARATHON PRODUCTS

# microDL-200C

*Cryogenic Temperature  
Data Logger*



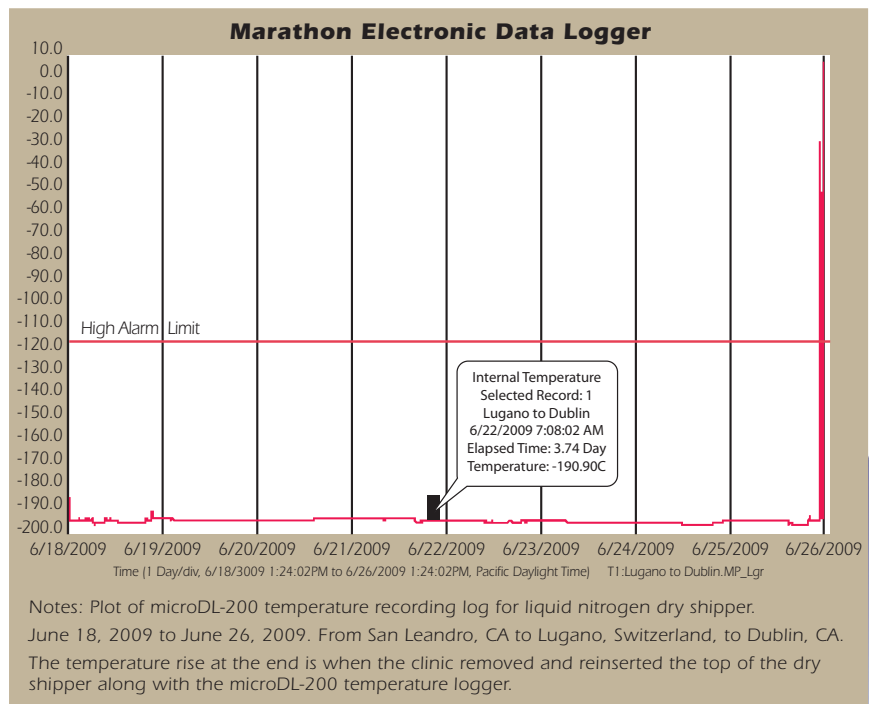
**THERMAL DATA LOGGER - OPERATING RANGE 72°C to -200°C**

**21CFR** compliant software available with full database capabilities

**MONITOR** and validate your critical stem cells and biologics during transportation and storage with our micro display loggers. In conjunction with our 21CFR software, the micro dl -200°C will document your liquid nitrogen stored products for your GxP and FDA regulated environment.

**THESE** high-precision laboratory-grade products will operate up to 3 years without a battery change. View current and stored data, prior to downloading to a computer, by scrolling through the screen displays, including high, low, elapsed time, alarm excursions and Mean Kinetic Temperature.

**FIND** out and document what you've been missing!



An example plot of temperature data for an 8 day international shipment.

# MARATHON



PRODUCTS, INC.

*Don't ship without us!®*

## DISPLAY EXAMPLES

Press the Start button to see the following information display with each press of the start button:



**1. REC -198.5°C**  
shows recording and current temperature



**5. LOW -199.9°C**  
shows alarm has occurred and low temperature



**2. RUN 176 D**  
shows elapsed time in days



**6. HI HR 0.5**  
shows alarm time hours over high threshold



**3. MKT -198.1°C**  
shows mean kinetic temperature (available on silver model only)



**7. LOW HR 0.0**  
shows alarm time hours over low threshold



**4. HI 23.1°C**  
shows alarm has occurred and high temperature



**8. REC -198.5°C**  
Push to return to current temperature

## microDL-200C Specifications

EEPROM Memory	32K and 31,855 samples
Temperature Range	
High	72°C / 162°F / 345.2°K
Low	-200°C / 328°F / 73.5°K
Temperature Accuracy	
At zero	+ - 0.5°C at 20°C
Extremes	+ - 1.0°C at -200°C
Measurement Intervals	User programmable from 2 seconds to 2 months
Examples:	
7 days =	2 min, 42 sec
30 days =	11 min, 28 sec
60 days =	22 min, 56 sec
90 days =	4 min, 24 sec
180 days =	1 hr 8 min, 44 sec
365 days =	2 hr 19 min, 16 sec
Features	
Power Source	(2) 3 volt lithium coin cells. 10 year shelf life with approx. 3 year continuous operating mode.
Alarm Limits	High & Low Alarms (ALR) set by temperature and time
Computer Interface	USB cable with IR infrared detectors
Weight	1 oz. / 30g.
Height	1.25 cm (0.75 in.)
Diameter	25.20 cm (1.25 in.)
Water Resistant - Splash Proof	
Standard Stainless Steel Probe	
Length	61 cm (24 in.)
Outside Diameter	3.49 mm (0.136 in.)
Inside Diameter	2.5 mm (0.099 in.)
Flexible Teflon Probe with Stainless Steel Tip	
Total Length	50.8 cm (20 in.)
Stainless Steel Tip	15.24 cm (6 in.)
Outside Diameter	3.49 mm (0.136 in.)
Inside Diameter	2.5 mm (0.099 in.)
Custom Probe Lengths	Available
Reader Station	USB Port Interface
Software Compatibility	Windows 2000, XP, Vista, & 7
Warranty	60 days



For information on the microDL-200C and MDAS-Pro software, please contact Marathon Products.

**Please call 1-510-562-6450 x607**  
for more information or to place an order.

[www.marathonproducts.com](http://www.marathonproducts.com)

627 McCormick St., San Leandro, CA 94577 ▪ [jperry@marathonproducts.com](mailto:jperry@marathonproducts.com)