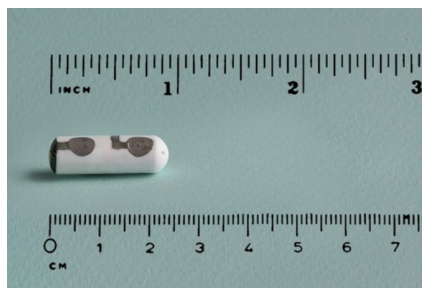




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Data Loggers DST Micro HRT



Features

DST Micro HRT - implantable heart rate and temperature logger

- Small, leadless logger (8.3mm x 25.4mm)
- Data stored in memory
- Automatic measurements
- Simple and cost effective
- Group and unconfined housing

The heart rate sensor DST micro-HRT simultaneously measures long term heart rate and core temperature in animals. This makes it ideal for studies in which baseline and immunology responses are recorded, it's also suitable for toxicological, metabolic and thermoregulation studies. The heart rate is derived from a leadless single channel ECG in which the electrodes are part of the housing material, making the logger especially easy to implant. The logger then takes a burst measurement on any set time interval and calculates the mean heart rate for each recording. Each burst recording of heart rate consists of 600 measurements. For validation purposes, each individual burst is graded with a certain quality index (QI) accessible in the accompanying application software.

The heart rate sensor can store up to 21844 paired heart-temperature measurements and has a battery life of circa 3.5 months (with sampling interval of 10 min). The DST micro-HRT logger is easy to sterilize (gas sterilizer or 70% ethanol) and can be reused as long as the batteries last. Each DST micro-HRT has its own five digit serial number permanently marked on the logger housing as well as placed in the logger's memory and provided with all downloaded data. DST micro-HRT is especially useful when you wish to record a comprehensive data set throughout your research with no disturbance to the animal. Each logger comes with a calibration certificate.

The DST micro-HRT is supported by the Mercury software and the Communication Box which serves as an interface between the logger and a PC computer. Communication between the logger and the Communication Box is wireless when logger is placed in the Communication Box.

In the software, the user programs the start time, start date and sampling interval before the logger is implanted. A single interval is defined in



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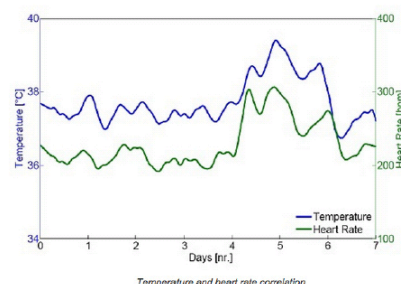
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minutes or hours, fastest interval is 1 minute. Optionally it's possible to program with multiple intervals; up to seven different intervals can be used within the same measurement sequence. The user would then define the number of measurements to be recorded within each interval and thereby have more/less frequent measurements during specific time periods. After recovering the DST, recorded data is uploaded in the software where the results are displayed both in graphic and tabular form. The software also provides the user with some basic statistic information on the data such as minimum and maximum values on defined area, median, average, distribution of values etc. When recorded data has been retrieved, the DST can be re-programmed and reused as long as the batteries last. A set of Communication Box and Mercury software needs to be purchased with the first order.



Technical specifications

Sensors	Temperature
Size	25,4 mm x Ø 8,3 mm
Housing Material	Alumina (Ceramic)
Weight in air/in water	3,3 g
Memory type	Non-volatile EEPROM
Memory capacity	43,690 measurements per sensor
Data resolution	12 bits
Temperature resolution	0,032°C
Temperature accuracy	+/- 0,2°C
Temperature range	5 to 45°C
Data retention	25 years
Clock	Real time clock, accuracy +/- 1 min/month
Sampling Interval	In Minute(s) or Hour(s)
Number of sampling intervals	-Single interval throughout measuring period -Or multiple intervals throughout period
Communications	Communication box, RS232C 9 pin serial or USB
Battery life	3,5 months - with a sampling interval of 10 min at room temp. Non-replaceable batteries



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DST micro HRT Heart rate and temperature recorder



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