

FREQUENTLY ASKED QUESTIONS

Q: How long does it take to perform a test using Lactate Scout+?

A: Once the blood sample has been inserted, results are reported within 10 seconds.

Q: How much blood is required?

A: Just 0.2 µl is required from a sample taken from a finger or earlobe.

Q: What technology is used?

A: The Scout measurement system operates on the basis of enzymatic-amperometrical detection.

This means that the device reads the electrical signal created by the reaction of the sample with the biochemical reagent on the inserted sensor. This signal corresponds directly to the lactate concentration of the sample.

Q: How do the sensors work?

A: The Scout uses disposable 'Sip In' sensors which automatically take up the precise required sample volume. The sensor must be inserted into the device before the sample is taken because the biochemical reaction starts as soon as the blood comes into contact with the sensor allowing the reading to be taken immediately. It is not possible to get readings from pre-filled or used sensors.

Q: What sample types can be used in the Lactate Scout+?

A: The 'Sip-In' sensors are designed specifically for human whole blood. Different samples, such as centrifuged blood / serum, chemical liquids and buffer solutions have different characteristics in their viscosity and biochemical content. For this reason, sensors react much more sensitively to interferences in such samples.

After sampling whole blood changes its characteristics within seconds, so immediate sampling with fresh blood is highly recommended. Remains of disinfectant liquids, blood circulation-stimulating crèmes, dried blood and sweat must be always removed with clean water from the sampling area before taking the sample.

Q: What power supply is required for Lactate Scout+?

A: 2 AAA batteries will perform approximately 1,000 tests. Data storage and settings will not be lost when batteries are replaced.

Q: How should the sensors be stored?

A: Avoid storing the sensors in direct sunlight or at high temperatures for long periods. For long term storage the sensors should be kept in the closed vial in the refrigerator at -18°C to +8°C. The sensors must be removed from the refrigerator 20 minutes before use so that they attain the same temperature as the device. The reagent is very sensitive to sunlight and humidity. It is recommended to only take the required number of sensors from the vial for immediate use. After first opening the vial of sensors, the storage stability is three months or until expiry date if it is sooner. Afterwards, inaccurate measurement results will occur increasingly. Sensors can be kept at 25 °C for max. 30 days in the closed vial. Always transport the device and sensors in suitable conditions. Protect them from direct sunlight in summer and in winter time carry the system under the jacket, close to the body. Thanks to the rapid measurement procedure the Scout+ can also be used for winter sports.

Q: Is it necessary to calibrate the Lactate Scout+?

A: Sensors are pre-calibrated. In order to synchronise the sensors with the device a two-character calibration code (printed on the vial label) must be entered in the device when prompted. After 24 readings the device reminds you to check the code settings with the used sensor vial for confirmation or correction.

Wrong code settings may cause incorrect results, (depending on lactate concentration >+/- 1 mmol/L.)

Q: Is there a power save function?

A: If there is no user activity during five minutes, the device automatically switches to stand-by mode. If no sensor is inserted for more than five minutes the Scout switches off. To reactivate the device, simply press the scroll button.

Q: Can the stored data be transferred to a PC?

A: The integrated Bluetooth™ Technology provides an easy way to send data to your PC. EKF offers software solutions for fast and intelligent data analysis, suitable for amateurs and professionals

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Q: How does the Lactate Scout+ compare to laboratory tests for lactate?

A: Studies have shown that the coefficient of variation depends on the lactate concentration. The Scout has a CV of $\pm 3\%$ (minimal standard deviation: ± 0.2 mmol/L) within the hematocrit range of 35 – 50% and $\pm 4\%$ (minimal standard deviation: ± 0.3 mmol/L) within the extended hematocrit range.

Sample quality plays a very important role in the accuracy of the result. To minimise external influences we recommend that the same sampling area is used throughout (finger tip or ear lobe). Different parts of the body provide different results because of differences in blood circulation.

Due to the high number of potential interferences in lactate measurement and the specific characteristics of different analysers no standard measurement has been defined. For comparative reasons the general impression of the characteristics and trends of lactate curves (given from step tests) is much more meaningful than a comparison of single/absolute values.

Independent reference measurements and studies show a good correlation of the Lactate Scout+ to lab analysers from EKF Biosen, Radiometer ABL, Yellow Springs (YSI) and Analox. Good correlations were also found with Dr.Lange/ Diaglobal and Lactate Pro analysers.

The latest version of Lactate Scout+ compensates for the influence of low (<35%) and high (>50%) hematocrit levels on the lactate reading. This leads to a significantly increased accuracy in these ranges.

Q: Does the device function in extreme temperatures?

A: There is an internal temperature sensor in the Scout+ and this symbol will flash if the sensor detects temperatures that are too high or too low. The device and the sensor must reach the same temperature.

The battery symbol may flash or the display may work slower at temperatures below 10°C. At low temperatures the power of the batteries and the LC display are reduced.

Q: What effect does sweat have on readings?

A: Sweat contamination can deliver significantly higher values of lactate at rest or levels of moderate effort. Sweat should only be removed with water. Cleaning with alcohol swabs is insufficient and may even dilute the blood sample. After cleaning, the puncture area must be dried. A water spray bottle can be purchased separately.

High resting values may also be caused by general stress, metabolic or health problems or even by diet. Usually, the values will come to a 'normal' level (about 2 mmol/L) during the first training steps. If the values remain high or significantly increased the step test should be aborted and a medical check of the patient should be undertaken.



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