

Applications and Markets

Lactate Monitoring for Sports Medicine

The blood lactate test is reported to be the current gold standard used by elite endurance athletes to determine optimal training intensities. Research suggests that blood lactate response to exercise is a better predictor of endurance performance than VO2 max. However, athletes during normal training are rarely asked to progressively increase their exercise intensity, as required for the lactate threshold test. Maximal lactate steady state (MLSS) is defined as the highest concentration of blood lactate that can be maintained (± 1 mM) during constant workload test. This performance-related measure has received increasing attention for optimizing athletes' training programmes, and it has been suggested that physical training at intensities approximating MLSS may heighten cellular adaptations while minimizing the risk of overtraining.

Probe Scientific's MicroEye® with online sensor is unique because it provides continuous, automated and online real-time lactate data enabling lactate threshold to be more accurately defined and allowing athletes to tailor work-load to maintain MLSS.

- No finger-pricking
- No ear-lobe lancing
- No blood withdrawal
- Simple to setup and easy to use
- Can be adapted easily to concurrently measure additional analytes such as glucose pyruvate, and other energy related metabolites and markers

Furthermore, Probe Scientific will seek to develop the platform to test for adrenal insufficiency to reduce the risk of adverse events associated with severe stress.

Whatever the parameter, Probe Scientific Limited will endeavour to ensure that its MicroEye® platform remains the gold standard in performance testing for elite endurance athletes now and in the future. The company see this market as providing valuable information that can be used by clinicians to understand severe stress and metabolite function that can help the care of critically ill patients.