

ABSTRACT

Methods and systems for measuring and using the oxidation-reduction characteristics of a biological sample are provided. The system generally includes a test strip and a readout device. A fluid sample is placed in the test strip, and the test strip is in turn operatively connected to the readout device. The readout device provides a controlled current that is sent across the fluid in the sample chamber. In addition, the readout device identifies an inflection point or transition time at which the voltage between contacts of the test strip is changing at the highest rate. The oxidation-reduction capacity of the sample is taken as the integral of the current profile from the time at which current begins to be supplied to the sample to the identified transition time.