A Sensor for Ketone Body Detection

Published date: Jan. 27, 2014

Technology description

Elevated ketone levels often indicate diseases such as diabetic mellitus. Type 1 Diabetic patients often have a need to test their ketone levels to ensure they are at healthy levels and not suffering from ketosis. Current tests for ketones are either performed through invasive blood sampling or urine testing. University of Utah inventors developed a sensor for ketone body detection that uses a highly efficient and selective colorimetric test to recognize ketones in saliva, breath or urine.
As many as 3 million Americans have type 1 Diabetes and each year more than 15,000 children and 15,000 adults are diagnosed. From 2001-2009, there was a 23% increase in the incidence of type 1 diabetes in Americans under the age of 20. In addition to diabetes care, the sensor for ketone body detection technology can also be used as a "fat burn" test for people on a diet. It is estimated that approximately 45 million Americans diet annually and require routinely monitoring of their ketones levels.

Advantages

Easy and non-invasive method to test for ketones
Rapid 3 minutes response compared to current blood and urine tests
Able to detect all three types of ketone

Institution

The University of Utah

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