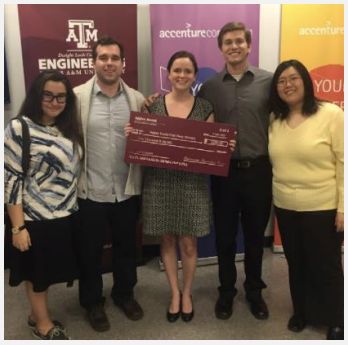
TECHNOLOGY COMMERCIALIZATION

TEES TEXAS A&M ENGINEERING EXPERIMENT STATION



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Dehydration Detection Pacifier

Overview

Dehydration is a dangerous health condition that can affect all organ systems, since the human body is made up of primarily water. Babies and toddlers are a particularly vulnerable patient group due to their inability to communicate. Even older children or adults can die if dehydration remains undetected and untreated.

There are no point-of-care tools on the market today that can be used to continuously detect and quantify hydration levels in a non-invasive manner. Hydration levels are currently evaluated qualitatively in the clinic by a physician or quantitatively using invasive, time consuming, and expensive test methods requiring a health professional. However, once a patient starts exhibiting symptoms, they are already at dangerous levels of dehydration.

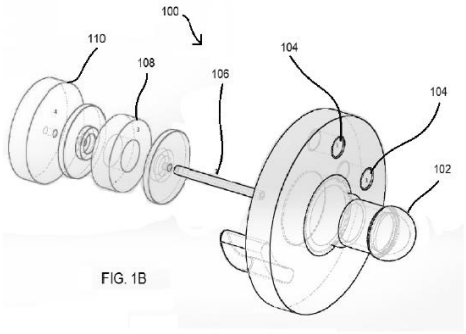

FIG. 1B

Technology

The dehydration detection device monitors hydration status in a user by analyzing conductivity of saliva based on sodium concentration. The dehydration detection device includes a sensor or probe portion that is positioned to come into contact with the user's saliva. Once the sensor or probe is in contact with the user's saliva, conductivity of the saliva is measured by a conductivity circuit and a microcontroller analyzes the data. Once the data is analyzed, the device outputs a signal via an LED or smartphone application to inform the user of hydration status.

Advantages

- Non-invasive, simple-to-use, familiar interfaces
- Safe to use with babies and toddlers
- Continuous monitoring
- Remote notification through wireless signaling capabilities

Applications

- Baby and toddler safety
- Athlete hydration monitoring
- Emergency diagnostic

Stage of Development

- Tested each component in lab; developed and tested prototype.

Patent Status

Patent Pending