Wrinkled Metal Film Strain Gauge For Fetal Movement Detection

Tech ID: 24223 / UC Case 2014-613-0

CONTACT

Alvin Viray
aviray@uci.edu
tel: 949-824-3104.

OTHER INFORMATION

CATEGORIZED AS

- » **Agriculture & Animal Science**
  - » Devices
- » **Biotechnology**
  - » Health
- » **Engineering**
  - » Engineering
- » **Materials & Chemicals**
  - » Other
  - » Thin Films
- » **Medical**
  - » Devices
  - » Disease: Women's Health
- » **Nanotechnology**
  - » Materials

BRIEF DESCRIPTION

There is great importance to monitoring fetal movement because it is an indicator of fetal health. A medical device has been developed for continuous monitoring of fetal movement outside the clinic. The easy to wear device will give mothers' reassurance that they are doing everything they can to monitor their baby's health.

FULL DESCRIPTION

Fetal movement counting is a technique used by the mother to monitor her baby's movements (such as kicks), which is an indicator of fetal health. Every mother and baby pairs vary in the frequency of movement. However, each pair may be able to find a pattern from continuous monitoring in order to determine a baseline of movement. If the baby deviates from the baseline then the baby may be under stress.

Most mothers do not have time to accurately monitor her baby's movements. Currently, there is no device on the market that can provide 24 hours monitoring outside the clinical setting. For this reason, there is a need for a simple way for the mother to continuously measure and record the activity of her fetus. University of CA researchers have developed a wearable sensor that can record and quantitate information relating to the baby's movement. The sensor can be worn at all times allowing for accurate 24 hour monitoring without any requirements of the mother. Overall, the sensor will be able to assist mothers' ability to monitor fetal health.

SUGGESTED USES

A device for continuous monitoring of fetal movements has been developed into an easy, wearable sensor. It will record and accurately quantitate fetal movements. And if there are any changes in the movements, it may indicate that the baby is under stress. The changes in fetal movement may be indicative of the fetus' health. This invention will give mothers the ability to monitor their fetus outside of the clinic setting therefore providing better comprehensive care for their baby.

ADVANTAGES

There are many advantages to using a wearable sensor for monitoring fetal movements which include:

- Device can be used outside the clinic (ei. Home)
- It is wearable
- Allows for continuous 24 hour monitoring
- Will not disrupt the mother's daily routine
- Quantifies the fetus' movement as well as records frequency of movement

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	11,207,002	12/28/2021	2014-613

Additional Patent Pending

» Tools and Devices
» **Sensors & Instrumentation**
» Biosensors
» Medical
» Position sensors

RELATED CASES

2014-613-0