Innovation and Commercialization

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A Rapid Sensitive Field-deployable Blood Cyanide Monitor

Tech ID: UTA 19-03

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TECHNOLOGY NEED

When a person inhales smoke in industrial and residential fires, this smoke inhalation is fatal as Cyanide is generated acting as a rapidly reacting poison. It is vital to know if the victims of the fire need nursing towards cyanide poisoning. This novel invention proposes a methodology where a field-deployable device is used for comfortably measuring the cyanide concentrations in the blood which helps the doctors to treat the patients who inhaled smoke. This methodology is different from the actual cyanide treatment which includes a countable amount of risk and is expensive.

INVENTION DESCRIPTION/SOLUTION

The proposed invention is a device that has a small handheld, reusable battery-operated reader and a disposable cartridge and a porous tube filled with aquocyanocobinamide which is used to detect the concentration of cyanide in blood. The cartridge is then inserted into the reader and the sample is injected through syringe outside a central tube. This technology uses a programmable system on a chip that calculated the slope of the increase in absorbance and compares it with the pre-stored table and gives the output of a cyanide concentration which is best suited.

APPLICATIONS

- Gas transfer devices
- Industrial reactors
- Measurement devices

KEY BENEFITS

- Disposable and reusable cartridges for gas transfer

STAGE OF DEVELOPMENT

Proof of Concept

INTELLECTUAL PROPERTY STATUS

Patent Pending

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