A Rapid Method To Measure Cyanide In Biological Samples In The Field

Tech ID: 22173 / UC Case 2010-742-0

BRIEF DESCRIPTION

Cyanide is a highly toxic and rapidly acting poison that is infamous due to its use in murders, suicides, wars and attempted genocide.In the present day, cyanide may be responsible for up to 10,000 deaths annually in the United States due to smoke inhalation.Cyanide may also be used as a terrorist weapon. Prior methods to measure cyanide in the blood have involved acidifying the blood after lysis of red blood cells.However, this method is time consuming (takes at least a few hours) and tedious, and thus, inadequate for rapid detection of cyanide toxicity in field or hospital settings.Field or laboratory devices capable of rapidly measuring cyanide levels in blood or body fluids are not currently available, however such field or laboratory devices would be highly useful.

Researchers at the University of California, Irvine have developed a method to rapidly measure cyanide in biological samples, which can be carried out in field settings.This method is based on measuring cyanide based on spectral changes that occur when cyanide binds to the reagent.Advantages of this method are its ease of use, stability, and applicability across a wide range of cyanide concentrations and may be used with ease in the field or on laboratory devices.

SUGGESTED USES

This invention may be used for rapid detection of cyanide in patients anywhere where cyanide poisoning may present a risk.For example, it can be used in civilian, military, fire personnel, hospitals, clinical office settings, or hospital laboratories.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	8,741,658	06/03/2014	2010-742

TESTING

The method has undergone testing in animals and was demonstrated to have comparable results to a currently used cyanide detection method.

CONTACT

Patricia H. Chan
patricia.chan@uci.edu
tel: 949-824-6821.

OTHER INFORMATION

KEYWORDS

cyanide, poison, detection, blood

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- **Medical**
  - Devices
  - Diagnostics
  - New Chemical Entities, Drug Leads
  - Screening
- **Research Tools**
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5270 California Avenue / Irvine,CA 92697-7700 / Tel: 949.824.2683