

Drug test

DESCRIPTION OF INVENTION

A team from the Universitat Politècnica de València and the Centro de Investigación Biomédica en Red de Bioingeniería, Biomateriales y Nanomedicina (CIBER-BBN), in collaboration with the BAM Institute in Berlin, has developed a new test that can quickly, easily and cheaply detect the presence of "burundanga" and "cannibal drugs", either in a saliva sample or diluted in any drink.

According to recent studies, sexual assaults with chemical submission of the victims already account for 20.9% of cases. The main drug used in these rapes is alcohol, although the perpetrators also use other psychotropic substances, such as scopolamine (SCP), better known as burundanga, which is very difficult to detect because its trace disappears very quickly in the body.

The new test devised by researchers at the IDM Institute of the UPV, the CIBER-BBN and the BAM allows rapid detection, "in just fifteen minutes", according to the researchers who

have developed it. To do this, they have designed a test strip on which a nanosensor based on nanoparticles loaded with a fluorescent indicator (rhodamine B) and functionalised with a molecular gate that responds specifically in the presence of the drug is deposited. It is read using something as commonplace as a mobile phone.

With a mobile phone and in less than a quarter of an hour, we can find out if there has been an attempt of sexual assault by chemical submission with this drug. To do this, it is enough to take a small sample of saliva or drink and immerse the strip; if the drug is present, the level of fluorescence will increase rapidly, due to the release of the dye from the deposited nanosensor. Once the 15 minutes have elapsed, a photo is taken with the mobile phone where, by comparing it with a sample that does not contain the drug, the presence of burundanga can be truly verified.

BUSINESS APPLICATIONS

- Health, hygienic-sanitary and pharmaceutical sector.

TECHNICAL ADVANTAGES AND BUSINESS BENEFITS

- Fast colour change and high specificity.
- Easy to use by non-specialists using test strips and a mobile phone
- Versatile, can be used with a variety of substances

STATE OF TECHNOLOGY DEVELOPMENT

Validated in different kinetic release tests

INDUSTRIAL PROPERTY RIGHTS

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