

QUICK AUTHENTICATION OF LIQUIDS

The laboratory has developed a new device for quick and accurate identification and authentication of liquids. A sample of the liquid to analyze is set on a semi conductor plate. A luminous scan of the surface combined with a laser source and a measurement of the current generated through the plate gives a characteristic picture of the liquid.

DESCRIPTION

The authentication method consists in comparing the picture from the sample with the picture of the reference sample. The user can create a database of these reference products and control the quality and authenticity of the products. The chemical treatment on the surface of the plate can be adapted according to the tested liquid, to have an optimal signal.

STAGE OF DEVELOPMENT

A laboratory prototype has been validated :

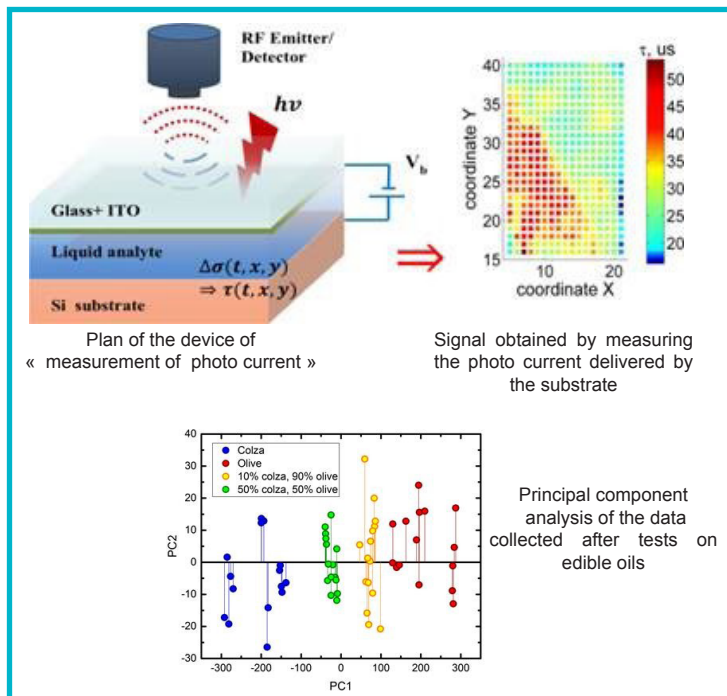
- Identification of edible oils (800 pictures analyzed by treatment of images compared with reference images)
- Identification of several alcohol (cognac, armagnac, whiskies)
- Identification of different waters.

INTELLECTUAL PROPERTY

2 Patent pending in France, Europe, Japan and USA
Priority date : December 27, 2012 (FR 1262884 and FR 1262879)

ADVANTAGES / NOVELTY

- Quick analysis, on and/or off-line
- Product traceability
- Possible miniaturization (portable versions for laboratories and industry)
- Low cost manufacturing
- Multi-parametrical highly-reliable control
- High sensitivity and selectivity
- Small sample volume needed



APPLICATIONS

Biological and non-biological samples :

- Determination of product origins, traceability, fight against counterfeiting (drinks, perfumes, chemicals, ...)
- Rapid on-line and/or off-line control of quality, aging, stability (food, cosmetics, biomedical industries...)
- Security (authentication of dangerous chemical or explosive products, drugs...)

COLLABORATION TYPE

PULSALYS is looking for industrial partners interested in getting a license of these patents and who would like to test the method on their products.

RESEARCH TEAM

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