Partnering Opportunity

Profile status : Published

Technology Offer

Low-cost, instant test for identifying adulteration of alcoholic drinks looking for licence agreement

Summary

An independent Greek researcher, a chemical engineer, presents an instant test device for detecting the presence of toxic and illegal methanol or ethylene glycol concentrations in alcoholic drinks. The device is easy to use and provides the result immediately. The Greek researcher is looking for either a license or technical cooperation agreement.

Reference TOGR20200116002

Details

Description

An independent Greek researcher, who is dealing with chemical engineering, has invented an instant test for detecting the presence of toxic adulterants in alcoholic drinks. These toxic substances could cause serious and harmful methanol poisoning leading to blindness, paralysis, coma etc. The proposed test is based on a pocket-sized device and is suitable for testing any alcoholic drink and beverage. The test allows the detection of methanol and ethylene glycol at illegal levels (>0.4% as EU legislation proposes). The test has two possible results (positive/negative) and the results are provided by a color indication.
The current invention is a low-cost test (approximately 2€ per use) that provides reliable and reproducible results. The device consists of a reactor and a detector. A material contained in the reactor selectively converts methanol to a desirable product, which is instantly read by the detector. The detection limit is variable, proportional to the chemical composition of the detector's liquid. Illegal methanol or ethylene glycol levels lead to a positive result for adulteration, where legal methanol levels lead to a negative result for adulteration. The indication of the detector is visual, while sample injection consists of a few drops from the tested drink. Detection is complete within 7 seconds. The device can be maintained at room temperature, and no expiry date characterizes the product. When produced industrially, it could look like a cigarette packet box, suitable for 2-3 uses.
The Greek researcher is looking for companies working in the fields of analytical devices, pharmaceutical companies or other companies interested in the market potential of the device. The collaboration sought is license

agreement.

Advantages and innovations

There is only one commercial test nowadays which is expensive, costing more than 12€ per use and should be kept in a refrigerator. Total detection time is 1 hour, if one takes into consideration the time it needs to get at room temperature, where the biochemical reaction is possible. The main advantages of the proposed test are:

1) Low cost
2) Portability
3) Preservation of the test at any environmental temperature
4) Can be sold at drug stores (pharmacies) and used by consumer for preventing harmful methanol poisoning (blindness, paralysis, coma etc.)
5) Can be sold to governmental authorities to tackle the tax evasion from methylated spirits. In Greece, according to the State's General Chemistry Laboratory and the Ministries, the annual loss from methylated spirits (no alcohol tax is applied) sold as original (where alcohol tax is applied) is about 50.000.000€.

Stage of development

Available for demonstration

Partner Sought

Type and Role of Partner Sought

A partner is sought to invest and bring this test to mass production under a licensing agreement. The options for the partner are the following. The partner can license the technology overseas to other companies. The partner can share the commercial profits from the royalties in Greece. The partner will need to get a commercial license from Greek authorities. A production license can be provided in a few days by the Greek Ministry of Economy.
The ideal partner could come from pharmaceutical sector or analytical devices manufacturer but also other interested companies from other areas could be included.

Type and Size of Partner Sought

SME 11-50,SME <10,>500 MNE,251-500,SME 51-250,>500

Type of Partnership Considered

License agreement