

# Emisens Emili 1+ : Liquid scanner for security applications



Robust stand alone plug-and-play instrument, suited to checkpoint applications:

- liquid identification in less than one second per bottle
- works for any non-metallic bottle above 50 millilitres content
- no push button for starting inspection
- no ionizing radiation
- plug and play - no calibration required
- optional bar code reading and data base for duty free items
- can be used as stand alone equipment or incorporated into larger systems

## New Technology

EMILI 1+ is based on a patented multimode microwave near field sensor technology, developed at Forschungszentrum Jülich, which is the largest multidisciplinary research center in Germany (Noble Prize for Physics in 2007). The properties of the liquid are measured through the bottle wall. Liquids are distinguished according to their dielectric permittivity, molecular relaxation and ionic conductivity.

## Distinguishing capability

- **Aqueous liquids** in any glass, plastic or ceramic bottle (either opaque or clear) with volume above 50 ml (soft drinks, drinks with alcohol content of less than 50 %, shower, gels, tea, milk, yoghurts, liquid soaps, etc.) can be safely distinguished from:
- **Inflammable liquids** such as alcohols (methanol, ethanol, propanol), acetone, benzene, diesel, chloroform.
- **Corrosive liquids** such as highly concentrated acids and hydrogen peroxide water solutions.
- **Liquid explosives** and precursors are either in the range of inflammable or corrosive liquids.
- **Metal containers:** EMILI 1+ displays METAL for metal or metalized bottles or cans, content cannot be identified without opening.

## Additional features

- **Barcode reader + duty free items database;** safe separation of perfumes and other cosmetic liquids from harmful liquids.
- **Alcohol content** determination.
- **Liquid drug** identification.

## Operation

Emili 1+ is extremely simple to operate. The bottle or container under test is simply placed on the sensor plate; the results will be displayed immediately on the LCD screen with a clear decision for the user, accompanied by an acoustic signal (can be switched off). Results are simply displayed:

- Green - pass without control
- Orange - requires further inspection
- Red - reject

In case of an orange or red screen EMILI 1+ displays information about the category of liquid (example: weak corrosive, strong corrosive).

The parameter range of green, orange and red can be adjusted according to individual customer requirements.

## Technical Data

Line power: (230 / 110 V AC, < 50 W)

Dimensions: (H x W x D) 780 x 300 x 480 mm

Weight: 17 kg

Display: 27 cm diagonal LCD monitor

Ethernet Adapter

USB Adaptor on request

Remote control software available on request

Display languages: English, other languages on request

Note: No high voltage, no ionizing radiation, no magnetic fields, emitted microwave radiation below 100  $\mu\text{W}/\text{cm}^2$  .

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