# E-Nose MU 1.1

## Portable Electronic Nose

### Intelligent electronic nose for identification of odorous substances

**E-Nose MU** is a tool for monitoring and analysis of odors. Its working principle mimics the human olfaction. E-Nose MU is based on a metal-oxide gas sensor array. It offers a detection and identification of odorous substances. Due to its unique combination of various sensors, portable e-nose is able to detect and identify a very wide range of odorous substances in the odor intensity unit and also improves the substance identification capability through combined evaluation of all sensors.

E-Nose MU simulates a human nose and the entire mental process of human classification, recognition and olfactory imprint of odorous emission.

### Our solution

- Sensory control of raw materials, final products or packaging
- Sensory conformity tests during production
- Influence of the manufacturing process modification
- Organoleptic control of packaging interactions
- New product development
- Benchmarking of competitive products
- Investigation of consumer claims
- Self-life study
- Determination of best storage conditions & shelf life

### Advantages

- Intelligent sensors
- Portable instrument
- Online and offline analysis
- Detects in seconds all the odors
- Fast, flexible and robust
- Unique combination of a wide range of gas sensors

### Quality Control

Freshness of food, off odor in packaging materials, residual solvents in polymers, degradation of flavours, characterization of resins or aroma in beverages, frying or roast process control

### Product Development

Food, Beverage, Packaging, Coffee & Tea, Oil & Fats, Dairy & Milk, Flavor & Aroma, Cosmetics & Perfumes, Home care products, Petrochemicals etc.

### Environmental & Safety Control

Odor in waste water plants or in compost plant, supervision of filters, solvents at workplace atmosphere, smouldering fires, leakage control or odor emission

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## Portable Electronic Nose

### Technical Data

#### Product Description

| | |
|---|---|
| Sensor technology | Metal oxides sensors, working temperature 350°C ... 500°C |
| Sensor array | 8 different metal oxide sensors, optional adapted to application |
| Sensor response time | Typical: 1 second |
| Inlet Sampler | Special fluidic connector |
| Sample flow | 500 ml/min to 1000 ml/min |
| Flow system | Internal pumps, internal sample dilution system |
| Measurement time | Depending on application from 20 seconds to some minutes<br>Typical: 1 minute (30s sample, 30s zero gas) |
| Display | Graphical display |
| Dimension | 47 x 35.7 x 17.6 cm |
| Weight | 2 kg |

#### Environment Requirements

| | |
|---|---|
| Temperature | Typical: 0°C to 80°C |
| Humidity (relative) | 0% to 80%, non-condensing |

#### Power Requirements

| | |
|---|---|
| Main power | Power supply: max. 100 watt |

#### Communications

| | |
|---|---|
| Computer interface | USB port |

#### System Requirements

| | |
|---|---|
| Operating system | Windows XP, Vista, Windows 7 |
| Software | WinMuster PEN for evaluation and analysis<br>Algorithm for analysis: Euclid, Correlation, Mahalanobis, DFA, PCA, LDA and PLS |

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