

# ELECTRONIC NOSE

SENSORY ANALYSIS SOLUTIONS



Sensory evaluation  
of your products



# MUI Nose 1.1

## Portable Electronic Nose



### Intelligent electronic nose for identification of odorous substances

**MUI Nose** 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 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 etc.

#### 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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# E-Nose MU 1.1

## Portable Electronic Nose



### TechnicalData

#### 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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**MUI ROBOTICS** is specialized in electronic sensing system. We are developer and manufacturer of high-quality instruments based on artificial sense technology for robots.

We offer reliable and precise method for control the sensory quality of your products and secure manufacturing process.

## BENEFITS OF OUR SOLUTIONS

### Quality Improvement

- Standardize sensory in production plants
- Make sensory evaluation more reliable and objective
- Improve production sensory quality and consistency

### Cost Saving

- Qualify customer claims to reduce financial loss
- Significantly decrease production loss due to earlier detection and better reactivity on sensory defects

### Time Saving

- Speed up liberating tests on production batches



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## Our Experiences in Industries



### Food & Beverage

- Grading and quality check of tuna, shrimp, seafood
- Quality control of meat products, milk and cheese
- Determination the recipe of food & beverage products
- Determination the shelf life of products
- Benchmarking of competitive products



### Agriculture

- Quality control of agriculture raw materials and products
- Classification and identification of Jasmine rice
- Measurement of volatile organic compounds in soil to assess soil fertility and organic fertilizer
- Determination of best storage conditions & shelf life



### Cosmetics & Perfumes

- Design of perfume and deodorant
- Measurement of Herb recipe
- Sensory control of ingredients and raw materials
- Benchmarking of competitive products



### Industrial products

- Sensory conformity tests during production
- Sensory control of raw materials
- Influence of the manufacturing process modification
- New product development
- Investigation of consumer claims (Paper, Packaging, Plastic, Resin, Solvent etc.)



### Environment

- Measurement of odor emission
- Identification of odor source from factories or livestock farms
- Smart indoor and outdoor odor monitoring system
- Online and Real-time monitoring of odor

## Trusted by



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