

# NeOse Advance



## BENEFITS

- Capture objective, consistent odor data
- Easy-to-use, automated protocols to create odor libraries
- Compare and analyze odors with intuitive software tools
- Cloud-enabled database for easily accessible data and reports

## TYPICAL USES

- Formula development in R&D
- Raw material qualification for production
- QA / QC for finished products

## FEATURES

- Utilizes Aryballe's Core Sensor based on silicon photonics to capture odor signatures
- Intuitive software with common protocols for capturing odors in food, flavor and fragrance use cases
- Provides comparative metrology and advanced analytic capabilities for captured odor data



## Device Specifications

<b>Sensor</b>	Aryballe Core Sensor based on array of Mach-Zehnder Interferometers (MZI)	
<b>Measurement Principle</b>	VOC detection in gas phase (headspace)	
<b>Size</b>	215 mm x 130 mm x 50 mm	
<b>Weight</b>	400 grams	
<b>Warm-Up Time</b>	30 minutes	
<b>Power Consumption</b>	710 mA	
<b>Operating Conditions</b>	Altitude	0 - 2,000 meters
	Pressure	Atmospheric pressure
	Temperature	5 - 30°C
	Relative Humidity	80 % or less (at 30°C) with no condensation

<b>Response Time</b>	Instantaneous
<b>Acquisition Frequency</b>	> 30 Hz
<b>Recommended Time Between Measurements</b>	5 min
<b>Flowrate</b>	20 – 100 mL/min adjustable

### Core Sensor Specifications

<b>VOC Detection System</b>	Chemical affinity detection through MZI		
<b>Limit of Detection</b>	0.1 – 1,000 ppm (depending on VOC)		
	Ammonia	:	< 1 ppm
	Phenylethylethanol	:	< 0.1 ppm
	Agrunitrile	:	< 0.1 ppm
	Nonane	:	5 ppm
<b>Signal-to-Noise Ratio</b>	20 dB		
<b>Global CQS<sup>1</sup></b>	> 70%		
<b>Repeatability CQS<sup>1</sup></b>	> 70% (across 6 days)		
<b>Core Sensor Lifetime</b>	10,000 measurements (depending on VOC)		

<sup>1</sup> CQS is dependent on compounds measured in database and specific use case.

CQS figures for Global and Repeatability are provided to indicate instrument performance based on Aryballe gold standard samples. The CQS level indicated on this datasheet is achieved using any 3 of the following 7 compounds: nonane, beta-pinene, cis-3-hexenol, phenylethylalcohol, agrunitrile, R-carvone and octanol.

Full details for Aryballe gold standard samples are available upon request.

## Software Specifications

<b>Software</b>	Aryballe Suite
<b>Minimum System Requirements</b>	Microsoft Windows 10 Professional 64-bits build 1909 or higher, RAM 16 GB, CPU Core i7.  Internet connection for downloading Aryballe Suite software and exchanging data with shared database, Chrome or Mozilla Firefox installed.
<b>Cable Connection</b>	USB 3.0

## Precautions

- This device is not suitable for safety applications, such as detecting gas leakage, explosives, or potential sources of fire.
- This device is not water resistant and should be protected against water exposure.
- Water, dust and particulates can damage the Core Sensor, adhere to the usage guidelines outlined in the product manual during use to protect the sensor from contaminants.
- For best results, use an Aryballe valve or delivery system to improve data integrity and reduce experimental errors.

 [aryballe.com](http://aryballe.com)

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