NeOse Advance

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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	
Sensor	Aryballe Core Sensor based on array of Mach-Zehnder Interferometers (MZI)
Measurement Principle	VOC detection in gas phase (headspace)
Size	215 mm x 130 mm x 50 mm
Weight	400 grams
Warm-Up Time	30 minutes
Power Consumption	4 W
Operating Conditions	Altitude — 0 - 2,000 meters Pressure — Atmospheric pressure Temperature — 5 - 30°C Relative Humidity — 80 % or less (at 30°C) with no condensation

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Response Time	Less than 1 second
Acquisition Frequency	> 30 Hz
Measurement Time	Typical: 20 seconds
Recommended Time Between Measurements	5 min
Flowrate	20 – 100 mL/min adjustable

Core Sensor Specifications

VOC Detection System	Physisorption		Biosensors
	Physical Property Change		Refractive Index
	Transduction		Mach-Zehnder Interferometry
Limit of Detection	0.1 – 1,000 ppm (depending on VOC)		
	Ammonia		< 1 ppm
	Phenylethylethanol		< 0.1 ppm
	Agrunitrile		< 0.1 ppm
	Nonane		5 ppm
Signal-to-Noise Ratio	20 dB		
Global CQS[1]	> 80%		
Repeatability CQS[1]	> 70% (across 6 days)		
Core Sensor Lifetime[2]	10,000 measurements		

[1] 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 the following 3 compounds: phenylethylalcohol, R-carvone and octanol.

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

[2] Depending on VOC

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System Specifications

Software	Aryballe Suite
Minimum System Requirements	Microsoft Windows 10 Professional 64-bits build 1909 or higher, RAM 8 GB (16 GB recommended), CPU Core i5 8th Gen and after (>2017) 1.6GHz
	Internet connection for downloading Aryballe Suite software and exchanging data with shared database, Chrome or Mozilla Firefox installed.
Cable Connection	USB 3.0
Data Format	CSV and HTML

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.

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