

**Fast accurate MAP analysis for low volumes of headspace in gas flushed food and pharmaceutical products**



## Applications

Pharmaceutical Vials	Fish	Pharmaceutical Packaging	Wine
Fresh Meat	Cooked Meat	Vegetables	Salads
Snack Foods	Ready Meals	Coffee Pods	

## Features & Benefits

- Ability to analyse very low volumes of headspace, less than 1cc
- Easy to use touch screen
- 5 different test methods
- Easy to set up and use
- Intuitive menu
- Auto calibrate and auto diagnosis
- Set tests for pass or fail
- Built in Printer
- Computer software option with easy keyboard entry of data
- Documentation for Quality Management Systems (IQ, OQ, PQ)
- 21CFR11 Compliant

# GS1M Oxygen and GS3M Oxygen & Carbon Dioxide



Weight: 4.5 kg  
 Dimensions: 140H x 390W x 270Dmm  
 Stainless steel and stove enameled aluminium



Fast, accurate and simple to use the Gaspace Advance Micro is full of the most advanced features available in headspace analysis.

All Gaspace Advance Micro headspace analysers offer automatic calibration, diagnostics and control.

The Gaspace Advance Micro offers consistently reliable results and simplicity in operation allowing you to maximise your production efficiency.

## Test small headspaces

The Micro is specifically designed to allow analysis of very low volumes of headspace, less than 1cc.

## Test Easily

Using the large buttons and big clear display; testing is simple, errors are eliminated and no special operator training is required.

## Test Quickly

Using AutoSense allows many packs to be tested with just one button press. Saving you time and making your QA department more efficient.

## Auto-Cal & Auto diagnosis

Ensures the instrument is always performing to it's highest degree of accuracy - essential for HACCP compliance.

## Easy to see Pass/Fail messages

Speeds up the analysis process and removes any uncertainty with interpreting measurements.

## Test how you want to

With Timed tests, AutoSense, Peak / Valley, Syringe Direct Injection or Continuous testing. Fast configuration and fast selection, provides the test method that is best for you.

## Simple configuration

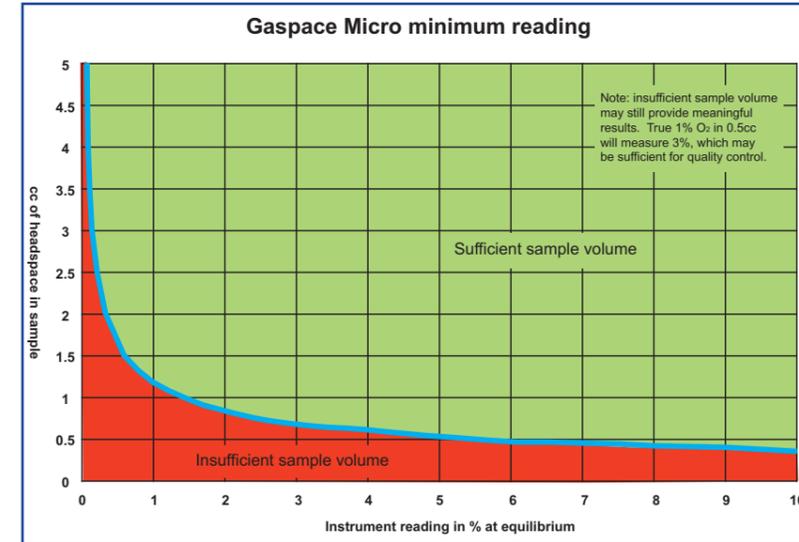
Simple configuration for all test types and methods – no special training required to use all the highly advanced features.

## Built-in printer option

Makes the documentation process a whole lot simpler. No cables and more space on the bench top.

## Will the GS Micro work for your application?

The graph below shows you the level of oxygen the GS Micro is able to display for a given volume of headspace. The y-axis shows the available headspace in your package. The green area of the x-axis shows the percentage reading that you should expect to be able to measure.



## Software

The GS Data Manager Software allows you to download results stored on your analyser and upload new settings. You can also search through your stored data by time, date, user, production line or any of the product information.

### Data Download View

Pass/Fail	Date/Time	User Code	Line Code	Product Code	Result
Pass	25/06/2009 11:28:37	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:28:44	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:28:52	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:29:00	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:29:07	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:29:15	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:29:22	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:29:29	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:29:36	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:29:43	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:29:50	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:30:04	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:30:11	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:30:18	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:30:25	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:30:32	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:30:39	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:30:46	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:30:53	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:31:00	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:31:07	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:31:14	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
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Pass	25/06/2009 11:31:35	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:31:42	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:31:49	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:31:56	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:32:03	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:32:10	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
Pass	25/06/2009 11:32:17	USER CODE 9	LINE CODE 1	PRD CODE 1	500 5500 40 600
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## Technical Specifications

### Sensor Type

GS1M	Oxygen 0 to 100%, Zirconia, solid state, ultra low volume
GS3M	Oxygen 0 to 100%, Zirconia, solid state, ultra low volume Carbon Dioxide 0 to 100%, dual wavelength, Infra-red Balance Gas 0 to 100%, Arithmetic
Response time	3 seconds
Minimum volume of sample gas	See graph on page 2, consult factory.
Accuracy:	Oxygen Measure from 10 to 100% = 0.2% absolute (max 2% of reading) and $\pm 1$ on the last digit. Measure from 1 to 9.99% = 0.02% absolute (max 2% of reading) and $\pm 1$ on the last digit. Measure from 0 to 0.999% = 0.005 % absolute and $\pm 1$ on the last digit.
	Carbon Dioxide $\pm 0.5\%$ absolute and $\pm 1.5\%$ of reading
Range selection	Automatic to 3 decimal places Oxygen: 0.001% to 99.9% CO2: 0.1% to 99.9%
Display type	Wide angle 95mm x 55mm 4.5" High Resolution Touchscreen LCD

### Operating conditions

Sample connections	Needle probe, can piercing station or direct syringe injection
Alarms	Programmable high/low limits for each measured gas, individual setting for up to 99 product, user and production line codes. Screen and printed display of high/low alarm conditions
Internal datalog	Stores over 1000 measurement results and alarm conditions
Communications interfaces	Serial computer interface for reports and data logging
Auto diagnostic routine	Initiated upon power up
Auto-cal	Auto calibration routine standard
Auto pass/fail	User programmable. Screen and printed display of alarm conditions
Auto test sequencing	Initiated by sample probe insertion into pack
Printer	Prints the results and alarms for each test

### Options

Flexible package kit	Everything required for analysis from standard packets and pouches
Can Piercing Station	For analysis of rigid cans and jars
Carry Case	Aluminium framed flight case
Data Transfer Software	For configuration and downloading of reports and internal datalog

### Power Requirements

Mains power	90-260 Vac, $\pm 10\%$ , 50/60 Hz, 50 VA
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Systech Illinois have 30 years experience of providing analysis solutions for a wide range of industries. From our manufacturing plants in the UK and U.S. we produce gas analysers for industrial process industries, headspace analysers for monitoring gas flushing of food products, and our range of permeation analysers.

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