

# Gas Analysis

## Modified Atmosphere Packaging Control

## Pharmaceutical & Medical Industry

- Headspace analyser for O<sub>2</sub>-analysis
- Extremely small headspace required
- Drift and calibration free O<sub>2</sub> measuring cell based on ZrO<sub>2</sub> solid electrolyte
- sampling via syringe, injection
- High measuring accuracy
- Automatic printout
- Short testing time
- Helpful specific functions
- RS232 interface
- Easy to use, plain text display



**MAT12-01**

### Quality control

The **MAT12-01** gas analyzer is designed for quality control in laboratory of pharmaceutical and medical industry. It is used for spot measurements of single packages like blister packages, vials and flexible packages with only small headspace volume.

### Measuring procedure

Before measuring it is of advantage to rinse the sampling length of **MAT12-01** with 2-3ml nitrogen via syringe.

The packaging has to be supplied with a self adhesive septum, to seal the puncture point.

A syringe (previously rinsed with nitrogen) is filled with headspace gas from the packaging (blister, vials and flexible packages). Only 1 ml volume is necessary. There is a possibility to collect headspace gas from several packagings.

After inserting the sample, the measurement is started by pressing the start button. Within a short time (approx. 10-15 seconds) the O<sub>2</sub> level is shown on the display and printed out for internal documentation. The device can be optimised for any kind of product due to adjustment possibilities. Adjusted once, the use of the

**MAT12-01** analyzer works impressingly fast and easy - without special training.

All menu are in plaintext, the operation can be carried out with 3 buttons only (measuring procedure itself with one button only).

### Features of the MAT12-01 analyser

- Stainless steel table housing, compact size
- Oxygen sensor based on ZrO<sub>2</sub> solid electrolyte
- Drift- and calibration free sensor
- Short measuring times, fast response
- Low sample gas consumption, 1ml
- Display hold on of measuring values
- Random test via injection (syringe)
- Lighted-up LC display with 2x16 digits
- Acoustic input acknowledgement
- Status-LED (2 coloured)
- Interface RS232 ( printer or PC)
- Printout: documentation of result, time, date and sample number with every printout
- Min / Max detection adjustable (menu)
- Spot (single) detection and online measurement
- Simple operation with only 3 keys
- Multiple accessories

# Gas Analysis

MAT12-01

## Accessories

- Transport box
- Matrix printer
- Filling septa
- Septa for packaging

## Applications / Products

Measurement of O<sub>2</sub>-concentrations in pharmaceutical and medical packaging like:

- Blister packagings
- Vials
- Soft packagings

## Technical Data / Delivery / Warranty

<b>Sensor O<sub>2</sub>:</b>	ZrO <sub>2</sub> cell, drift-free (no calibration required)
<b>Measuring Range:</b>	0,001 - 20,9 Vol.-% O <sub>2</sub>
<b>Accuracy:</b>	±0,001 Vol.-% O <sub>2</sub> - concentrations <1% O <sub>2</sub> ±0,005 Vol.-% O <sub>2</sub> - concentrations >1% O <sub>2</sub>
<b>Resolution:</b>	0,001 Vol.-% O <sub>2</sub> (10 Vol.-ppm)
<b>Meas. Time:</b>	typical 5-10 seconds
<b>Meas. Routine:</b>	Automatic test routine with display hold of measuring values
<b>Conditions:</b>	Operation Temperature 5-50°C Storage Temperature 0-50°C Humidity 0-95% rH
<b>Signal Output:</b>	4-20mA (option)
<b>Interface:</b>	RS232 (for printer or personal computer), 9-pol. Sub-D Port (F)
<b>Display:</b>	LC display, 2x16 digits, lighted-up
<b>Voltage Supply:</b>	230VAC, 50-60Hz (optional 115VAC)
<b>Housing:</b>	Stainless steel, degree of protection: IP50
<b>Dimensions (WxDxH):</b>	140x140x270mm
<b>Weight:</b>	approx. 3kg
<b>Certificates:</b>	EMC: EN55011, EN61000-6-2 Safety: EN61010-1
<b>Warranty:</b>	24 months on material and errors in manufacturing
<b>Standard Delivery:</b>	<ul style="list-style-type: none"> <li>• MAT12-01 - analyzer</li> <li>• Cable</li> <li>• Operating Manual</li> <li>• 30 pcs. septa</li> <li>• Filling septa to close the sampling length</li> </ul>

<b>Distribution by:</b>	
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