

## The Detection of Microorganisms and Viruses out of Air – Quantitatively and Reproducible with the MD8 airscan



The system consists of the MD8 airscan air sampler and disposable gelatine filter units. The system is routinely used for the quantitative detection of air-borne organisms, mainly in sterile areas of class A and B (classification according to "EU-Guide for GMP"), isolators, or blow-fill-seal machines.

The very high air flow rate of 8 m<sup>3</sup>/h enables isokinetic sample removal at flow speed usual in laminar flow as well as for the filtration of 1 m<sup>3</sup> air very quickly (less than 8 minutes). The filter unit can be placed remote from the air sampler.

The MD8 airscan air sampler allows to adjust selectively and easily air flow rate and sample removal speed. By means of a specially developed calibration unit (see accessories) the user can calibrate the MD8 airscan locally, e.g. within the scope of validation steps.

After removing the sample, the gelatine filter can be placed directly on the agar culture medium for incubation and colony growth.

### Specifications for the MD8 airscan air sampler

|   |  |
|---|--|
| Air flow rate                           | 2.0 m <sup>3</sup> /h – 8 m <sup>3</sup> /h adjustable in 100 liter steps  |
| Timer                                   | 1–99 minutes, adjustable in 1 minute steps   |
| Max. deviation                          | ±5% in a temperature range of 15°–35°C   |
| Noise level                             | For gelatine membrane filters, max. 62 dB (A)  |
| Weight                                  | Approx. 6.5 kg   |
| Dimensions (L × W × H)                  | 375 × 242 × 228 mm   |
| Correction of the air flow rate setting | When the entered air flow rate cannot be attained, the display shows the max. attainable flow rate for a corresponding new setting below this value. |

### Specifications for gelatine filters

|                           |   |
|---------------------------|---|
| Gelatine filter           | Water-soluble, pore size 3 µm. Diameter 80 mm. Thickness approx. 250 µm.  |
| Max. temperature          | 60°C.   |
| Residual dampness content | 46%–49%.  |
| Air flow rates approx.    | 2.7/min./cm <sup>2</sup> at Δp = 0.05 bar.  |
| Retention rates           | 1. Bac. subtilis niger 99.9995% at 0.25 m/s inlet velocity<br>2. Coli-Phages: phage T1, 99.9% at 0.3 m/s inlet velocity and 50% rel. air humidity. Phage T3, 99.94% at 0.3 m/s inlet velocity and 80% rel. air humidity |
| Filtration area           | 38.5 cm <sup>2</sup>  |
| Conditions for use        | Room temperature, max. 30°C, max. air humidity 85%  |
| Sterilization             | Supplied presterilized by gamma irradiation   |

**Order information for the MD8 airscan air sampler**

|       |  |
|-------|--|
| 16746 | MD8 airscan air sampler, 230 V, 50 Hz    |
| 16747 | MD8 airscan air sampler, 115 V, 60 Hz    |
| 16748 | MD8 airscan air sampler, 100 V, 50–60 Hz |

Each version can be switched from 50 to 60 Hz and back.

**Accessories for the MD8 airscan air sampler**

|       |   |
|-------|---|
| 17801 | Holder for disposable gelatine filter units |
|-------|---|

**Order information for consumables**

Disposable gelatine units, sterile, pack of 10

|               |   |
|---------------|---|
| 17528-080 ACD | Individually packed in 1 Polyethylene bag each                              |
| 17528-080 BZD | Individually packed in 3 Polyethylene bags each                             |
| 17528-080 VPD | Individually packed in 3 Polyethylene bags each, but label on innermost bag |

Further consumables on request!

Special brochures available on request. Order no. SLF3001-e | SM-3011-e

## Accessories for the MD8 Air Samplers



### Calibration unit

The user himself can calibrate the MD 8 airscan and AirPort MD8 directly on the job by means of the calibration unit\*.

This is absolutely necessary above all within the scope of validation steps, for which it is important, that the shown air flow rate (desired value at the MD8) corresponds to the actual air amount (actual value at the calibration device). On request, a calibration certificate of the German Calibration Service can be made available. The calibration unit is supplied complete with battery charger | power supply unit (specific for the country in which it is used), filter holder, connectors set and connection tube (PVC, 2m).

### Tubing and connectors set

If the disposable gelatine filter unit is not placed directly at the MD8 airscan, but in a distance from it, a flexible plastic hose (2 m or 5 m), a connectors set and, if not available, a holder (tripod 16970, double socket 16976, clamp 17037) are necessary for the connection between filter and MD8 airscan.

The autoclavable silicone hose is used instead of the flexible plastic hose, if the MD 8 airscan has to be used in sterile rooms, operating rooms, isolators, blow-fill-seal machines, etc.

With this hose attached to the air outlet connector (exhaust), the waste air can be led off into an other room.

### Specifications for calibration unit

|                                    |   |
|------------------------------------|---|
| Dimensions                         | Length without filter holder, 295 mm<br>Width, 174 mm<br>Height with handling, 246 mm |
| Connectors                         | Quick locks (bayonet principle)   |
| Operational life with full battery | Approx. 70 hours  |
| Weight                             | Approx. 5.6 kg  |
| Charge time for empty battery      | Approx. 30 hours  |
| Max. fault                         | To 3.2 m <sup>3</sup> /h, ±3%   |
| Max. fault                         | 3.2 to 16 m <sup>3</sup> /h, ±1.5%  |
| Measuring range                    | 1.6–16 m <sup>3</sup> /h  |
| Type of protection                 | IP 40   |
| Ambient conditions                 | Rel. air humidity, 30%–80%<br>Temperature, min. –10°C, max. 40°C                      |

\* Alternatively, a maintenance agreement can be signed. Within the scope of the contractual services, Sartorius technicians will carry out a calibration of the MD8 at regular intervals.

### Case

Stable case for the transport and the storage of a MD 8 airscan incl. accessories.

### Gelatine membrane filter, 80 mm, sterile, pack of 50

Gelatine membrane filters are still available as 80 mm filter discs, suitable for the filter holder supplied with the MD8 airscan. The filters are sterile supplied, but the filter holders have to be sterilized by dry heat (180°C, 2 h) and then equipped with the filters under sterile conditions. For performing routine check-ups, a stack is recommended in this case.

### Aluminium stack

It consists of a middle part, 10 numbered filter holders and 2 end caps. The stack is first sterilized (by 180°C dry heat, 2 h), and then equipped with the filters under sterile conditions (LF-cleanbench). The prepared filter holders are put on a side of the middle part. After removing the sample, the inserted filter holders are put on the other side of the middle part, so that used and not-used filter holders are separated from each other.

**Order numbers**

|               |  |
|---------------|--|
| 16740         | Calibration unit                                     |
| 17208         | Case   |
| 12602-080 ALK | Gelatine membrane filter, 80 mm, sterile, pack of 50 |
| 17656         | Aluminium stack                                      |

**Tubing and connectors set**

|       |                                |
|-------|--------------------------------|
| 17085 | Plastic hose, 2 m              |
| 17088 | Plastic hose, 5 m              |
| 17662 | Silicone hose, 1 m (25 × 3 mm) |
| 17657 | Connectors set                 |

**Replacement parts for the stack**

|       |                           |
|-------|---------------------------|
| 17655 | Individual filter holders |
| 17660 | Middle part               |
| 17661 | End cap                   |