

# QuickStart manual

# VWR<sup>®</sup> Microbiological Air Sampler SAS Super ISO USB

EU Catalogue Number: 710-2088 710-2087 710-2090 710-2089



CE





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Legal address of manufacturer

#### Europe

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A more detailed instruction manual is available for download on our website **vwr.com**.

# Warning!

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# Safety Information

Please use this device only for the purposes indicated. The device must be correctly used according to this instructions manual before starting any operation. Any electrical cables need to be replaced immediately when damaged; never use a damaged or worn electrical cable.

Always disconnect the charger before:

- Repairing or maintenance; these operations must be carried out by gualified staff - Cleaning the unit

Use original spare parts and accessories for any replacement.

Do not use this device in the presence of explosive gas.

Please follow the guidelines below and read this manual in its entirety to ensure safe operation of the unit.



Be aware that the voltage and frequency of the electrical system are compatible with the requirements of the battery charger.



Never use a non-OEM charger to charge the air sampler. Use of an improper harger may damage the unit.

Carefully read this manual before operating your instrument.

# Technical features

Feature	SAS SUPER ISO USB 100 Contact	SAS SUPER ISO USB 180 Contact	SAS SUPER ISO USB 100 Petri	SAS SUPER ISO USB 180 Petri
Cat. No.	710-2088	710-2087	710-2090	710-2089
Air flow	100 l/min	180 l/min	100 l/min	180 l/min
Use with	55 mm contact plates	55 mm contact plates	90 mm Petri dishes	90 mm Petri dishes
Portable	Yes	Yes	Yes	Yes
Battery	Rechargeable	Rechargeable	Rechargeable	Rechargeable
Battery life	70 000 litres	40 000 litres	70 000 litres	40 000 litres
Speed sensor	Yes	Yes	Yes	Yes

### Intended use

#### Principle

The Surface Air System (SAS) encompasses several models which use the same principle. Air is aspirated at a fixed speed for a variable time through a cover which has been machined with a series of specially designed small holes. The resulting laminar airflow is directed onto the agar surface of a "contact plate" (or Petri dish) containing media suitable for the microbiological examination to be performed. When the pre-set sampling cycle is completed, the plate is removed and incubated. The organisms are then visible to the naked eye and can be counted in order to assess the level of contamination.





#### The basic idea

The major points of the Surface Air System (SAS) are:

- 1 To use a simple and inexpensive "contact plate" ("SURFAIR PLATE", "RODAC") for surface, hands or air control. These plates are very well known and easily available and can be purchased ready poured with different media.
- 2 To sample a known volume of air for a variable time to provide a large range of sampling volumes.
- **3** To aspirate air in a laminar flow pattern with sufficient velocity to impact organisms on an agar surface.
- **4** To accumulate data on the level of hygiene in each environment so that fluctuations can be monitored.
- 5 To take advantage of advanced electronics for more reliable results in different operating conditions.
- 6 To have the flexibility to choose between 55 mm contact plates or 90 mm standard disposable Petri dishes.
- 7 To apply cGLP and cGMP to air sampling operations.
- 8 To organise sequential sampling to obtain a more representative sample under actual operating conditions.

#### Models available

SAS SUPER ISO USB 100 and SAS SUPER ISO USB 180: Two instruments for two different applications.

The two air samplers have the same performances with the only difference being in the rate of air aspirated:

SAS SUPER ISO USB 100 = 100 litres of air per minute.

SAS SUPER ISO USB 180 = 180 litres of air per minute.

The SAS SUPER ISO USB 180 is appropriate for use in cleanrooms and other applications demanding fast sampling times. In cleanrooms, for example, it is important to test larger volumes of air, because microbial air contamination is very low. The SAS SUPER ISO USB 180 reduces the time required to obtain a sample.

Both SAS SUPER ISO USB 100 and SAS SUPER ISO USB 180 are identified as "SAS SUPER ISO USB".

# Brief instructions

#### Brief operating instruction for SAS Super ISO USB 100 and 180

The airflow can be seen on a digital display at the fourth automatic succession presentation each time the instrument is switched on.

1 Touch the OK button for at least one seconds to switch the instrument on.



- 2 Press OK to sample the same air volume as the last sampling cycle.
- 3 To change the volume of air, press 🤝 or 🛆 to reach "SELECT VOLUME", then press OK and use
- the arrows to choose the new desired volume of air.
- 4 Refer to instruction manual to change settings.
- 5 Press OK to confirm selection.
- 6 Press  $\bigtriangledown$  or  $\bigtriangleup$  , for menu selection to modify other pre-set parameters.
- 7 Press OK to reach the sub menu of the chosen parameter.
- 8 Refer to the instruction manual to change settings.
- 9 Press C each time you need to end an action. The unit will then go back to its initial configuration.
- 10 Press (C), and confirm by pressing OK to switch the unit off.

# Installation

#### The practical use of contact plates



- 1 Remove the aspirating head.
- 2 Insert an identified, closed and prepared plate and remove the plate lid.
- 3 Replace the aspirating head.
- 4 Select required volume and start the unit. The airflow is directed into the agar surface of the plate.
- 5 At the end of the cycle, remove the aspirating head.
- 6 Close and remove the plate.
- 7 Incubate.
- 8 Count the colonies, record the results on the microbiological air sampling report and read the results.

#### List of menus and utility sub menus

ОК	Press to repeat the same volume of prior sampling
$\bigtriangledown$ or $\bigtriangleup$	Press to enter the following sub menus
C	Press to switch off (in the Main Screen), or each time you need to end an action.
SELECT VOLUME	The volume of aspirated air can be modified according to 8 programmed values
SELECT MULTI-CYC	The air sampler can be programmed (8 programmable configurations) to extend the total sampling time using "sequential interval time" sampling.
SELECT SITE	The sites of aspirating air can be selected according to a maximum of 20 programmed positions
SELECT OPERATOR	The operators of aspirating air can be selected according to a maximum of 20 programmed IDs
SET DELAY	The air sampler can be programmed to start sampling after a programmable delay (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60 minutes)
OPTIONS	To change general settings of the device. See description below
BATTERY	Press to see the battery status
OPTIONS	Press OK to change general settings of the device
	EDIT VOLUMES Volumes can be added, modified or deleted, to a maximum of 20 values
	EDIT MULTI-CYC Multiple cycles can be added, modified or deleted, to a maximum of 20 values, parameters are INTERVAL TIME, NUMBERS OF RUN, SINGLE RUN VOLUME and TOTAL RUNS

EDIT SITES Sampling sites can be added, modified or deleted, to a maximum of 20 positions
EDIT OPERATORS Operators can be added, modified or deleted, to a maximum of 20 users
DISPLAY RECORD To show the recorded sampling data
STORE PDF To store the recorded sampling data in a PDF file on an USB stick
STORE XML To store the recorded sampling data in a XML file on an USB stick
CLEAR RECORD To clear the recorded sampling data
SET TIME To programme date and time
SET AUTOSWITCH To disable the auto switch off
PASSWORD ADMIN To lock the device, still possible to start and stop a sampling procedure
PASSWORD PDF To lock exported PDF
LOGIN To use a user management for data integrity
LANGUAGE To display text in different languages
STORE CONFIG To store all configuration (Volume, Muli-Cycl, Sites, Operators) on a USB stick
LOAD CONFIG To load a config file of an existing Air sampler to implement all setting (Volume, Multi-Cycle, Sites, Operators,) on a new device

# Troubleshooting

Review the information in the table below to troubleshoot operating problems.

Problem	Cause	Solution
Unit does not start	Instrument is not turned on	Touch the OK button for at least two seconds
	Battery is low	Recharge battery
	Battery charger is not working	Check battery charger and if it needs replacing order Cat. No. 710-0993
	Battery is too old	Check battery and replace it
Unit does not react	Malfunction or USB Error	Press "C" + "OK" + "Up" simultaneously to switch of device
Battery discharges after few minutes working	Battery is low	Recharge battery
	Battery charger is not working	Check battery charger and if it needs replacing order Cat. No. 710-0993
	Battery is too old	Check battery and replace it
"LOW BATTERY" message	Battery is low	Recharge battery
"CALIBRATION EXPIRED" message	Instrument needs to be calibrated	Send the instrument to VWR International or an authorised dealer
MOTOR ERROR	Motor not working or not connected	Connect the motor
USB ERROR	USB Stick detection failed	Format the USB stick to the FAT32 file system
		Check USB Stick and replace it
Infrared remote switch doesn't switch the unit on	Remote control battery is low	Replace infrared remote battery
Microbiological media is dehydrated after sampling	Media is damaged	Control expiration date of media and check that the agar is not dehydrated before sampling
	Sampling time is too long	Shorten the sampling time

# Accessories

Description	Cat. No.
Aspirating heads for contact plates, Ø 55 mm	
Stainless steel	710-0880
Aluminium	710-0892
Sterile daily	710-0890
Aspirating heads for Petri dishes, Ø 90 mm	
Stainless steel	710-0878
Aluminium	710-0886
Sterile daily head	710-0891
Other accessories	
Soft carrying case	710-0896
Aluminium carrying case	710-0875
Bio-Transport autoclavable carrying case	113-8185
Handle for Bio-Transport carrying case	113-8186
Floor tripod	710-0889
SAS-Holder table and wall stainless steel	710-0963
Battery charger with universal plug for both models	710-0993
Adapter* to convert contact plate model to accept 90 mm Petri dishes	710-0882
SAS stainless steel Petri head + adaptor	710-0877
SAS aluminium Petri head + adaptor	710-0879
IQ OQ PQ validation protocols for SAS Super ISO USB 100 and 180	710-0956
Infrared remote control for SAS Super ISO USB	710-0969



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