



SAS SUPER 100/180

A portable microbial air sampler for cleanroom monitoring. Hand-held, light weight, and reliable samplers. They may be adapted to use petri or contact plates and are sold globally. These air samplers can be used in pharmaceutical cleanrooms, operating theatres and food manufacturing.



SAS SUPER DUO 360

Twin headed microbial air samplers for quicker monitoring. Hand-held, twin headed samplers for increased sampling capacity or dual monitoring with two media types. Suitable for pharmaceutical cleanroom monitoring applications and can be used with either petri or contact plates.



SAS SUPER 100/180 ISOLATOR

A microbial air sampler for monitoring isolators and grade A facilities. Developed from the hand-held SAS air sampler units, the isolator features a separated sampling head from the control unit. The result is an extremely accurate, reliable and flexible monitoring solution for isolator cabinets and filling lines.



AIR SAMPLERS FEATURES:

- Choice of multi-point or slit-to-agar impaction sampling methods
- Portable or installed options
- Delay start or remote control available

SELECTING THE RIGHT AIR SAMPLERS FOR YOUR BUSINESS:

- Active air sampling methods use sieve or slit to agar impactors.
- The covering head contains perforations allowing for the impact of appropriately sized particles onto an agar plate.
- Air is pulled across the plate by a calibrated impeller.
- The slit to agar air sampler draws air through while the plate is rotated.
- This method offers time against microorganism deposition information and allows for maximum collection efficiency (low D50).

WHAT SAMPLE SIZE DO YOU NEED?

- Sample size has been defined by the **GMP Annex 1** and states a measured sample should be 1m³ per sample location on active air samplers in high risk environments,

for example grade A areas.

- The resulting incubation would then provide a **CFU/m³**.
- Settle plates are also stated in the GMP Annex 1 with an exposure of 4 hours on a 90mm petri dish.

CLEANROOM SIZE/AREA FOR MONITORING

- Cleanroom size plays a very small role in the type of air sampler you use.
- The type of sampler required depends more on specific locations and processes, rather than the total size of facility.
- Size of facility rather affects the number of different air samplers needed – the type and placing of the air sampler should be defined by a risk assessment.
- Risk assessment considerations are around the grade of cleanroom, the critical processes that happen in

the area and whether the room is 'in operation' or 'at rest'.

DOES YOUR BUSINESS TYPE HAVE ANY BEARING ON AIR SAMPLER SELECTION?

The short answer is YES.

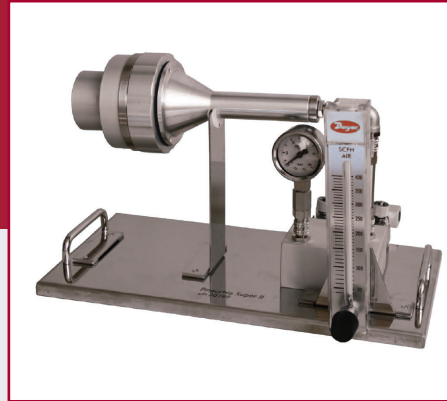
- Your industry has a direct bearing on which samplers you should use.
- Food industry, pharmaceutical industry, sterile and non-sterile products – all these criteria factor in to which product you need.
- A risk assessment of your manufacturing plant will identify various factors. You may be a general cleanroom with low classification making the SAS 180/100 the best fit for taking infrequent samples.
- You may manufacture critical products in an isolator, making ImpactAir or an SAS Isolator your best solution.





SAS ISOLATOR SAMPLING HEAD

A microbial air sampling head for monitoring isolators and grade A facilities - free standing or installed using tri-clover fittings. Stainless-steel sampling heads housed in isolator cabinets and connected to external control units reducing contamination risk. These bespoke heads reduce aseptic transfers during environmental monitoring procedures.



SAS SUPER PINOCCHIO II

A portable microbial air sampling device for monitoring compressed air. Non-powered samplers used to test compressed air or gas. Adapted for petri dishes or contact plates. Air supply is regulated through a flow meter, most components can be autoclaved.



IMPACTAIR

A high-performance microbial air sampler, adaptable and specialised for highly regulated industries. ImpactAir ISO has modular design for a range of formats to suit specific deployment. Touch screen LCD and plate height adjustment, the fully automatic unit collects **28.3L air flow per minute**, sampling anywhere from **1 minute to 9 hours**.

SIZE OF AIR SAMPLES AND TIME

- Time is often of the essence when collecting samples - the quicker the better.
- Specific time needed depends on your individual risk assessment.
- According to GMP, **1000 litres** is the standard air sample size, your risk assessment may identify a need for extended sampling to cover a defined process and/or time period.

Questions can arise around **CFU** count for that area. If the usual count is **300 CFU** after taking **1000 litres**, would it be more efficient to take a **200 litre** sample and then calculate the **CFU** for 1000 litres?

- Yes, this saves time and resources.
- However, you cannot determine that no growth from a 200 litre sample will still be no growth from a 1000 litre sample.
- The **SAS 180** will collect **1m³** of air faster - actually under 6 minutes - than the **SAS 100**.

Considerations need to be made if it takes up staff resources on slow sampling times.

Are your samples taken during 'in operation' or 'at rest' periods?

- The number of samples taken 'at rest' affects start of production - quicker collection is preferred.
- Other methods of sampling, such as settle plates, can give a better representation of the environment over an increased period due to prolonged exposure during operations.

TYPES AND NUMBER OF SAMPLES REQUIRED

- Your type of air sampler relates directly to the result of your risk assessment
- This informs the best placement for your air sampler, or if settle plates are your best option.
- Your sampler choice should be based on your processes and requirements.
- If your environmental monitoring requires two media samples, the **SAS Duo** is the best option for capturing air samples on to **TSA** and **SDA** plates at the same time.
- If compressed air or gas forms part of your process, then the **SAS Super Pinocchio II** would be the best choice for sample collection.

No two cleanrooms are the same. Use mapping to identify locations, appropriate sampling and frequency to program your environmental monitoring to correspond to your risk assessment.

- The **SAS** range has been used successfully within "at rest" periods in conjunction with settle plates used "during operation".
- **SAS** samplers can be programmed to take sequential interval time samples during operations in multi-mode

Some samplers collect continuously for over four hours onto a single agar plate.

- The **ImpactAir** range is a suitable model for longer sampling in regulated industries.
- Its design means no particle shed and allows for operation in environments alongside particle counting devices without influencing readings.
- These samplers use **14cm Petri dishes** for larger volume air samples.
- Sensors control plate height adjustment for constant collection efficiency (**d50**).

