APPLICATION NOTE

By AROUND LAB NEWS

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N.134 CORRECT PLACEMENT OF SETTLE PLATES FOR PASSIVE ENVIRONMENTAL MONITORIG IN CLEAN ROOM

KEY WORDS

Air-borne, Cleanroom, Passive air sampling, Settle plate

ABSTRACT

Settle plate stands are essential tools to carry out consistent passive microbial monitoring in line with cleanroom regulatory standards. They come in diverse configurations—height-adjustable floor models, compact wall mounts, single or dual plate capacity. Material finish, airflow design, and automation compatibility are key decision drivers.

HOW TO CHOOSE THE RIGHT STAND

CLEANROOM GRADE	Use 316 SS and electropolished surfaces for critical aseptic zones
MOUNT TYPE	Floor/table adjustable for multi-height sampling; wall mounts for fixed points
PLATE COUNT	Single for routine room monitoring; twin-lid shelves for bacteria & fungi differentiation
AIRFLOW FRIENDLY	Look for mobile tops to avoid turbulences and incorporated timer to facilitate the timing.

LOCATION PRINCIPLES

- At least 1 m away from walls, floors, and other obstacles to avoid turbulence and ensure representative air sampling.
- Outside critical airflow zones but near contamination risk areas, such as:
  - Adjacent to doors
  - Pass-through hatches
  - Low level return air grilles
  - Airflow convergence zones or "dead spaces"

HEIGHT & ORIENTATION

- Place at working height (e.g. bench level or about riser mid-height) so they reflect operator exposure and activity.
- Optional slight 45° slope of the plate holder ensures unobstructed airflow over the agar surface, improving accuracy and minimizing turbulence.
- Ensures representative sampling of airborne contaminants in zones where product is exposed or personnel activity occurs.
- Prevents turbulence artifacts caused by placement too close to walls or in high airflow areas .
- Aligns with regulatory expectations from ISO 14644 1, EU GMP Annex 1, USP & EP guidelines for environmental monitoring.

NUMBER AND DURATION

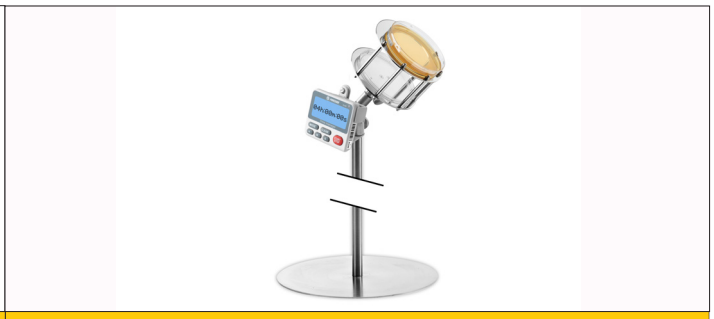
- Typically 2 plates are used per session in critical zones.
- Expose throughout the operational session (up to ~4 hours max, depending on humidity and drying risk).

TIPS FOR IMPLEMENTATION

- Use dedicated settle-plate stands that hold the plate securely at the correct height and angle
- Mark only the base of each plate (not the lid) to avoid mix-ups.
- Open lids gently, rest lids on the plate edge, and close carefully at end of sampling.
- Clean or replace plates if excessive drying occurs, maintaining validated exposure times.
- Ensures representative sampling of airborne contaminants in zones where product is exposed or personnel activity occurs.
- Prevents turbulence artifacts caused by placement too close to walls or in high airflow areas .
- Aligns with regulatory expectations from ISO 14644 1, EU GMP Annex 1, USP & EP guidelines for environmental monitoring.
- Implement with robust SOPs, proper labeling, and installation of stable plate stands.



TRIO SETTLE FOR TABLE - CODE 387



TRIO SETTLE FOR FLOOR - CODE 368



TRIO SETTLE WITH OPERATOR