

Portable Air Sampler for Agar Plates

Patent No. 8819423.8

A volumetric sampler for bacterial and other particles



A very portable, volumetric air quality monitor, much used in culture rooms, laminar flow cabinets and domestic environments for collecting bacterial and other particles direct on to culture medium in a 90mm petri dish through a sieve plate with 100 holes (1mm diam.). Almost silent air throughput of 10 or 20 min can be provided by a standard Burkard turbine powered by rechargeable 6v batteries to provide 3-4 hours continuous running (mains models available for 110 or 240v). A sliding air control is fitted under the sampling chamber to allow rapid closure during sampling. The base of the device bears an 'on-off' switch and interval timer enabling operation time to be selected for 1-9 minutes. When the selector is set to '0' the turbine runs continuously.

The 700 ma.h⁻¹ nickel cadmium batteries supply a fully compensating electronic control circuit to ensure correct motor speed so long as voltage is adequate. A red LED indicator fitted in the front of the base flashes when the sampler is running and indicates that air flow is correct. At the end of the timed cycle the flashing LED

stops but the audible bleep will sound every 4 seconds, indicating that the test is successfully completed but the switch should now be moved to the 'off' position. An intermittent audible bleep sounds when batteries need recharge but airflow is still correct. Should the LED show red and the alarm sound continuously then the instrument should be switched off because the voltage is inadequate. Two alternative intake covers are provided. The open type operates as a sealing ring for the grid plate and petri dish allowing maximum exposure of the sampling area. The coned cover enables culture plates to be prepared in the laboratory and fitted to the sampler before taking the unit on-site. A rubber sealing bung can be removed from the central hole and replaced after sampling.

Construction and Equipment Details

Manufactured from high quality materials, this sampler is designed for trouble free operation. The finest Swiss d.c. motors are



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selected using precious metal brushgear. Lightweight aluminium and plastic construction makes it convenient for use in remote or confined areas. Easily removable retaining covers allow quick interchange of the petri-dish. An alternative unit for mains use only is available using an external mains 6v d.c. adaptor.

General Specification

Air throughput	10-20 l min (max)
Overall height	148mm
Overall diameter	114mm
Diameter of petri-dish	90mm
Voltages	110v60Hz/240v50Hz
Nett weight	690grms

The following equipment is supplied as standard:

Mains adaptor for recharging the Ni-Cad batteries at a controlled rate. An alternative mains adaptor will be supplied when the sampler is required for continuous use, and Ni-Cad batteries are not fitted.

Models available:

Standard unit
with Ni-Cad batteries PASA/B
Sampler for mains operation PASA/M

When ordering please state voltage and model required.

The Company reserves the right, without notice, to make such improvements to equipment as may be considered necessary.



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Underside view of air sampler illustrating the timer unit and 'on-off' switch.