

High Throughput 'Jet' Spore Sampler

Schwarzbach 1979, Pat. App. No. P27 54 528·4
(Phytopath Z., 94, 165-171, 1979)



Burkard

A portable high throughput trap for quantitative and non-destructive sampling of spores and other airborne particles from an air volume in excess of 850 litres per minute.

The instrument is completely portable operating on a voltage of 12V·DC. Manufactured from clear Perspex material the trap is light in weight and simple to operate.

The sampling efficiency for Lycopodium and other spores of similar size is of the order of 99%. The sampled air is accelerated in a precision Jet and forced against the orifice of a tapered tube containing still air.

This configuration is mounted above a hermetically sealed chamber in which the trapped particles fall under gravity and are evenly distributed on the base. The base of the chamber can hold an appropriate medium or detached leaf pieces of susceptible host plants.

After incubation, the colonies of the pathogen can be evaluated quantitatively. In this way, the aerial concentration of spores from cereal mildew, leaf rust and net blotch can be estimated, as well as the proportions coming from different varieties, and the frequency of particular races of each pathogen.

Burkard Manufacturing Co Ltd

Woodcock Hill Industrial Estate
Rickmansworth Hertfordshire WD3 1PJ
Telephone Rickmansworth 773134/5



Construction and Equipment Details



Barley leaf segments on agar in petridish after 15 minutes exposure. This sample was incubated for one week at 18°C under fluorescent light. The even distribution of the developing colonies is clearly visible.

General Specification

Overall height of the trap: 17½" 44.45cms
Overall length: 16¼" 41.28cms
Diameter of the Settling Chamber: 5½" 13cms
Width of the trap: 10½" 26.67cms
Chamber & Suction Unit: 10" 25.50cms
Total weight: 11.250 Kilos
Total weight packed: 20 Kilos
Operating voltage - 12vDC 4½/5amps
Air throughput at Jet - 850 ltrs/min