

# Cyclone Surface Sampler

A portable suction sampler  
for collecting dry particles or microbial  
propagules from surfaces

Patent No. 9106335.4



The high efficiency of small cyclones in retaining particles from an air stream has been adapted to provide a convenient means of collecting dry surface deposits from a wide variety of materials. For applications in medicine the house dust allergen, pollens; or in agriculture, spores of plant pathogens, dusts from animals or in animal houses; in industry for routine sampling of surfaces to ensure hygiene and help detect deleterious contaminants; for forensic and environmental pollution where it is necessary to sample substrates for particular microscopic contaminants.

Effectiveness of the orifice in sampling surface deposits depends largely on a very fast intake velocity to provide strong 'rip-off'. For this reason the standard orifice has been decreased in cross section to 1x9mm. Effective operation of this cyclone requires a powerful pump capable of maintaining at least 7in. (c180mm) mercury pressure difference while displacing 16.5 l/min of air through the cyclone via a critical orifice installed in the handle.

For dry powders where almost all the deposit is collected in the catchpot, samples from equal areas should be

quantitatively comparable (even gravimetrically from dense deposits). The retention efficiency of the cyclone means that very little escapes but it is possible to install an ultimate filter stage. The cyclone has been designed with a stub-intake in order to fit alternative sampling orifices as required. Burkard will be pleased to advise or construct other orifices that may be found best for particular purposes. Samples are collected in small tubes which are readily detached capped and replaced by releasing a spring plunger in the base of the handle. This action also releases the cyclone unit which is easily taken to pieces for cleaning or replacement.

## General Specification

Overall height	230mm
Overall width	110 x 45mm
Nett weight	520grms
Collecting vessel	25 x 50mm
Cyclone orifice	9 x 3 or 9 x 1mm
Vacuum hose	6mm bore



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and Exporters

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