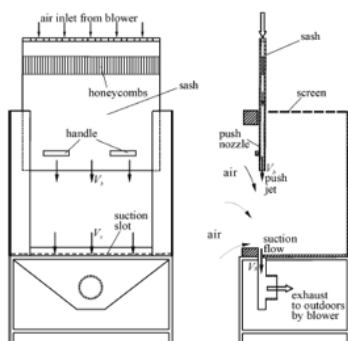
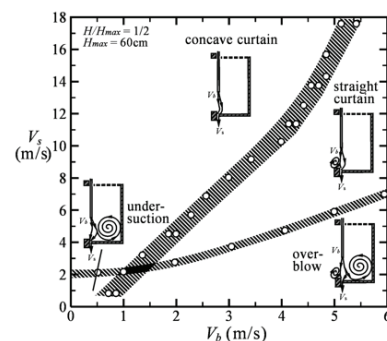


Title	AIR-ISOLATOR FUME HOOD			
Abstract	<p>1. The conventional fume hood is also subject to serious influences of recirculation areas which may be induced around the doorsill, the side poles, interior of the cabinet or area behind the sash, because the interaction occurs inevitably between the flow and the hood structures.</p> <p>2. The new hood applies a specially designed air curtain (which is generated by a narrow planar jet and a suction slot flow at low velocities) across the sash plane. The air curtain properly setup across the sash opening allows almost no sensible exchange of momentum and mass between the flowfields of the cabinet and the outside environment.</p>			
Description	<p>Four characteristic air-curtain flow modes are identified in the domain of jet and suction velocities when the sash remains static. Some of these characteristic flow modes have much improved flow patterns when compared with those of the conventional fume hoods. The leakage of the tracer gas can approach almost null if the jet and suction velocities are properly adjusted.</p>			
Applicable Targets	Laboratories			
Remark				
Patent Status	Approved by	Type	Patent No.	Filed
	U.S.	Invention	7318771B2	2005/7/19
	R.O.C.	Utility	M279718	2005/7/8
	Japan	Invention	4704284	2006/7/6

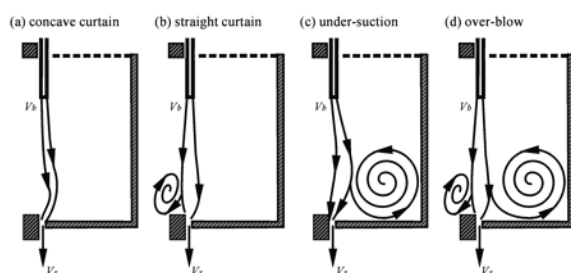
Discription & Figures



▲ Arrangement of air-curtain fume hood



▲ The flow patterns of the vertical cross-section of the air curtain in the air-isolator fume hood



▲ Characteristic flow regimes of air-curtain fume hood at different characteristic flow modes