

Abstract

Fume cupboard with guided wall jet streams

The present invention relates to a fume cupboard 1 available for a laboratory space, which has a housing 60, in which a work space is located, which is limited on its front side by a front sash 30, on its base by a base plate 34 and by a side wall 36 on each of its sides. Furthermore, the fume cupboard comprises a first hollow profile 10, 10' arranged on a front side of each side wall 36, wherein each hollow profile 10, 10' has a first pressure chamber 10b, 10b', which is fluidically connected to a plurality of first openings 10d, 10d', out of which air jet streams in the form of wall jet streams 100 consisting of pressurised air can be emitted along the respective side wall 36 into the work space. The fume cupboard is characterized in that at least one of the first openings 10d, 10d' is fluidically connected to the first pressure chamber 10b, 10b' via a first longitudinal duct 10c, 10c', and that the first duct 10c, 10c' has a length L in the direction of flow that is at least three times the hydraulic diameter of a cross-sectional surface of the first opening 10d, 10d', from the perspective perpendicular to the direction of flow in order to prevent flow displacement of the wall jet stream 100 coming out of the first opening 10d, 10d' of the side wall 36 in an area of the front side of the work space up to at least 25% of the depth of the work space.

Furthermore, the present invention relates to a fume cupboard, where such a hollow profile 20, 20' is arranged on a front side of the base plate 34.

Fig. 1