Engineering Case Reports:

Evaluation of a Local Exhaust Ventilation System for Controlling Exposures During Liquid Flavoring Production

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New ventilation controls for weighing and pouring flavoring chemicals on the bench top and mixing batches of flavorings in portable mixing tanks were installed at a flavoring production company. Two main types of local exhaust ventilation hoods were assessed: 1) a ventilated, back-draft, workstation used to control worker exposure to chemicals during small batch mixing and 2) a booth-type hood that allowed for the containment of portable mixing tanks. The results of the evaluation showed good overall performance for both controls. The capture efficiency ranged from 89%-100% for the ventilated workstations and from 96% to 100% for the booth-type hoods. This article describes the evaluation methods and results and discusses important design considerations for the proper installation and use of these controls.