

SAFETY MEETING: Hazard Alert - Atmospheric Conditions

CANNABIS

Background

Cannabis harvesting and initial processing is labour intensive, and presents a physical hazard depending on the operation, workers may also be exposed to a variety of atmospheric hazards including: organic dusts, bioaerosols, pollen/allergens and volatile organic compounds (VOCs).



Organic Dusts/Bioaerosols

Agricultural workers can be exposed to complex biologically active dusts of both organic and inorganic origin, consisting of plant particles, glucans, viruses, bacteria and endotoxin, fungi and mycotoxins, pollen, insects, and compost. Depending on the mixture, exposure to dusts can cause respiratory illness or allergies.

Allergens

Cannabis pollen is considered as a potential allergen of public health significance. The pollen, oils and leaves, can induce immune-mediated responses including nasal, skin, eye, and respiratory illness.



Volatile Organic Compounds (VOCs)

Medicinal cannabis cultivars produce and emit a wide range of VOCs. It is the terpenes that give the cannabis plant its unique aroma. Over 200 terpenoids have been isolated from cannabis, some of the most abundant being limonene, α -pinene, β -myrcene, linalool, β -Caryophyllene, caryophyllene oxide, nerolidol, and phytol. Cases of terpene-related occupational illness have been reported in hop and timber production. Terpenes are pharmacologically of interest as they are often lipophilic, and readily absorbed through the skin and gastrointestinal tract that could have occupational health implications.

Chemical Hazards

Carbon dioxide may be added to the atmosphere of indoor grow houses as a growth promoter. This procedure may expose workers to potentially hazardous levels which may create oxygen deficient atmospheres if not controlled effectively.

Controlling Risk

Ensure workers are oriented and trained to the task that they will be performing, this should include any atmospheric conditions that they will be exposed to, how to mitigate the generation of the atmospheric hazards and how to protect themselves against these hazards with appropriate Safe Work Procedures and PPE (gloves, eye protection, respirators etc.). Employers should continually assess risks as cannabis production evolves and modify work practices accordingly.

Further Info

If you require further information, please contact AgSafe for assistance.

References

Gary Dennis et al, (2018), Occupational health and safety in cannabis production: an Australian Perspective, International Journal Of Occupational And Environmental Health, VOL. 24, NOS. 3-4, 75-85.
<https://doi.org/10.1080/10773525.2018.1517234>