

Call for posters - “International conference on the E-Cigarette: patterns of use and health impacts”



Call for posters

“International conference on the E-Cigarette: patterns of use and health impacts” - Paris, on 5-6th December 2022

Submission form

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NB: Please fill out one form for each abstract

Contact details of the corresponding author or organiser

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Background information

Theme of conference

Health impact

Keywords (please select 3 keywords to confirm your choice)

Harm reduction

Regulation composition

Toxicants

Abstract title

Effect of glycerin concentration on levels of toxicants emissions from water-pipe tobacco smoking (WTS)

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Abstract details

Background, method, results and conclusions

BACKGROUND: Glycerin, flavorings and sweeteners constitute up to 70% of water-pipe tobacco smoking (WTS) mixtures. Combustion of such ingredients produces smoke toxins and carcinogens including nicotine and carbonyl compounds. Type and quantity of toxic emissions are highly dependable on tobacco composition. Glycerin combustion produces known toxic and carcinogenic emissions such as acrolein. Recent evidence indicate that increasing glycerol concentrations in e-cigarette liquid lead to significant increase in toxicant emissions. However, the literature is lacking evidence regarding glycerin addition effects in WTS mixtures. According to World Health Organization (WHO), there are no currently approved international upper limits regulations in WTS. Therefore, this study aims to assess toxicant emission levels in response to increasing glycerin concentration in WTS mixtures. **METHODS:** Experimental study measuring levels of toxicant emissions from WTS using mixture samples with varying glycerin concentrations and fixed other main ingredients. Samples were prepared by an experimental lab and two leading brands in the WTS industry.

RESULTS: Acrolein emission was associated with glycerin addition in WTS mixture indicated by lab-made samples throughout all glycerin concentrations (10%, 20%, 40% and 60%), and brand samples with glycerin concentrations 10% to 20%. In contrast to lab-made samples, brand samples showed no increase in acrolein emissions corresponding to the increase in glycerin concentrations from 20% to 60%. **CONCLUSION:** Two brand products showed increased glycerin concentration 20% to 60% does not increase acrolein emission, while lab-made sample shows significant correlation between glycerin addition and increased acrolein emission. Regulatory recommendations for water-pipe smoking products require further investigations regarding potential confounders in acrolein emissions and health effects of glycerin concentrations with corresponding toxicant emissions.

Main messages

Two brand products showed increased glycerin concentration from 20% to 60% did not increase acrolein emission, while lab-made product showed significant correlation between acrolein emission and glycerin concentration in WTS mixtures.

Type of study / research

Original study

Geography of the study

International (including Europe)

Funding of study

Federal source

No

State source

No

Nonprofit Grant Funding Entity Source

No

Nonprofit Grant Funding Entity Source

No

Academic Institution Source

No

Pharmaceutical Industry Source

No

Tobacco/E-Cigarette Industry Source

No

Declaration of interest

The submitter declares that during the past 5 years have a direct nor indirect link (professional*, personal or financial) with the tobacco and e-cigarette companies**

No