



# Letter to the editor on respiratory mask using a combination of spunbond, meltblown, and activated carbon materials for reducing exposure to CO: an in vivo study

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The *Environmental Science and Pollution Research* 2020 released an article entitled Respiratory mask using a combination of spunbonds, meltblown, and activated carbon materials for reducing exposure to CO: an in vivo study. This article has broad implications for readers with their discoveries. Researchers tested the addition of respiratory mask media using activated carbon.

The addition of media to the breathing mask in principle increases the ability of the mask as an air filter in the form of particles, bacteria, and gas (Akduman and Akçakoca Kumbasar 2018; Wen et al. 2013; Lai et al. 2012; Wang et al. 2016). There is an addition of activated carbon in the granular form with a size of 325–350 mesh and dust content of less than 10%, by the Indonesian National Standard. The test method uses a Wistar rat experiment placed on the box. The box is filled with a breathing mask material to be tested (Khayan et al. 2019, 2020).

In the method carried out by researchers, the concept of installing activated carbon is not explained in the spunbond and meltblown layers. The nature of activated carbon has the ability as adsorption on CO gas. The method used needs to explain the concept of gluing or combining activated carbon with spunbond and meltblown without eliminating the function of activated carbon.

The discovery of the media in improving the function of respiratory masks as personal protective equipment needs to be done in length so that the expected function can be optimal. Carbon monoxide (CO) is a poisonous gas. For this reason, further study is needed in the form of an ergonomic mask

design that takes into account the level of gas leakage from the gaps of the mask, the concept of gluing the activated carbon media without eliminating function.

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