# Article information:

An investigation into the leaching of micro and nano particles and chemical pollutants from disposable face masks - linked to the COVID-19 pandemic - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0043135421002311?via%3Dihub>

# Article summary:

1. This study investigates the environmental impact of disposable plastic face masks (DPFs) on the environment, due to their increased production and improper disposal during the COVID-19 pandemic.

2. Micro and nano particles emitted from DPFs were identified as silicon-based and plastic fibres, with traces of concerning heavy metals such as lead, cadmium, antimony and various organics species detected in the leachate.

3. There is a potential human health concern around the presence of micro silica particles (SiMP) and nano silica particles (SiNP), which can cause lung irritation and silicosis if inhaled, as well as other adverse effects on aquatic organisms and terrestrial animals if ingested.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

This article provides an investigation into the leaching of micro and nano particles and chemical pollutants from disposable face masks linked to the COVID-19 pandemic. The article is well written with clear explanations of the research methods used, results obtained, and conclusions drawn. The authors have provided a comprehensive overview of the potential risks associated with disposable face masks, including both environmental impacts and human health concerns.

The article appears to be unbiased in its reporting; it presents both sides of the argument equally by discussing both potential benefits (mitigating spread of SARS CoV-2 virus) as well as potential risks (plastic pollution problem). The authors have also provided evidence for their claims by citing relevant studies in support of their arguments.

However, there are some points that could be further explored in future research. For example, while this article discusses potential risks associated with disposable face masks, it does not provide any information on possible solutions or mitigation strategies that could be implemented to reduce these risks. Additionally, while this article focuses on environmental impacts related to plastic pollution caused by disposable face masks, it does not discuss other forms of pollution that may be caused by these products such as air pollution or noise pollution.

In conclusion, this article provides a comprehensive overview of potential risks associated with disposable face masks linked to the COVID-19 pandemic; however there are some areas that could be further explored in future research such as possible solutions or mitigation strategies for reducing these risks as well as other forms of pollution caused by these products.

# Topics for further research:

* Mitigation strategies for disposable face masks
* Air pollution caused by disposable face masks
* Noise pollution caused by disposable face masks
* Human health risks associated with disposable face masks
* Plastic pollution caused by disposable face masks
* Solutions to reduce environmental impacts of disposable face masks

# Report location:

<https://www.fullpicture.app/item/60567cfcc94ec19888e5efa5d148af8f>