# Article information:

Soil particle size fractions affect arsenic (As) release and speciation: Insights into dissolved organic matter and functional genes - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0304389422018945?via%3Dihub>

# Article summary:

1. Soil particle size fractions (PSFs) are important for arsenic (As) partitioning, migration, and speciation transformation.

2. As was enriched in the coarse sand fraction, which was primarily affected by the content of organic carbon (OC), followed by iron (Fe), aluminum (Al), and manganese (Mn) (hydr)oxides.

3. The dynamics of As fractions in soils indicated the potential formation of secondary minerals and re-adsorption of As in the PSFs.

# 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:

The article “Soil Particle Size Fractions Affect Arsenic (As) Release and Speciation: Insights into Dissolved Organic Matter and Functional Genes” is a well-researched article that provides valuable information on the effects of soil particle size fractions on arsenic release and transformation. The authors have provided detailed information on the sampling process, extraction methods, physico-chemical characteristics, batch assays, and microbial regulation of arsenic reduction, oxidation, and methylation. The article also provides insights into dissolved organic matter and functional genes related to arsenic release and transformation.

The article is generally reliable as it is based on thorough research conducted by experienced researchers in the field. However, there are some potential biases that should be noted when considering its trustworthiness. For example, the authors do not provide any information about possible risks associated with arsenic contamination or how to mitigate them. Additionally, they do not explore any counterarguments or present both sides equally when discussing their findings. Furthermore, some claims made in the article are unsupported or lack evidence to back them up.

In conclusion, while this article is generally reliable due to its thorough research methods and detailed analysis of data collected from two different sites with serious arsenic contamination issues, there are some potential biases that should be taken into consideration when assessing its trustworthiness such as lack of discussion about possible risks associated with arsenic contamination or how to mitigate them; lack of exploration of counterarguments; unsupported claims; lack of evidence for certain claims made; not presenting both sides equally; etc.

# Topics for further research:

* Arsenic contamination risks
* Mitigation strategies for arsenic contamination
* Counterarguments to arsenic release and transformation
* Evidence for arsenic release and transformation
* Microbial regulation of arsenic reduction, oxidation, and methylation
* Functional genes related to arsenic release and transformation

# Report location:

<https://www.fullpicture.app/item/f1a3aeb4875bcab9073e958eb7ef6615>