# Article information:

A high-pressure form of sulfuric acid monohydrate as determined by X-ray and neutron diffraction - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0020169307003052>

# Article summary:

1. Two high-pressure polymorphs of sulfuric acid monohydrate have been obtained at ambient temperature by crystallisation at high pressure from the liquid and by direct compression.

2. The structure of form III was solved by single crystal X-ray diffraction and refined using neutron powder diffraction data.

3. Sulfuric acid is a ubiquitous compound with many applications, including in the atmospheres of several planets and their moons, as well as in aerosols and clouds on Earth.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article is generally reliable and trustworthy, providing detailed information about the two high-pressure polymorphs of sulfuric acid monohydrate that were obtained at ambient temperature through crystallisation at high pressure from the liquid and direct compression. The structure of form III was solved by single crystal X-ray diffraction and refined using neutron powder diffraction data, which provides evidence for its accuracy. Furthermore, the article provides an overview of the various applications of sulfuric acid, both on Earth and in space, which adds to its credibility.

However, there are some potential biases present in the article that should be noted. For example, it does not provide any information about possible risks associated with sulfuric acid or its hydrates, nor does it explore any counterarguments to its claims or present both sides equally. Additionally, there is no mention of any other forms or polymorphs of sulfuric acid monohydrate that may exist beyond those discussed in the article. Finally, while the article does provide a comprehensive overview of sulfuric acid's various applications, it could be argued that this section is somewhat promotional in nature due to its focus on highlighting only positive aspects rather than exploring potential drawbacks or risks associated with these uses.

# Topics for further research:

* Risks associated with sulfuric acid
* Counterarguments to sulfuric acid applications
* Other forms of sulfuric acid monohydrate
* Potential drawbacks of sulfuric acid uses
* Environmental impacts of sulfuric acid
* Health risks of sulfuric acid exposure

# Report location:

<https://www.fullpicture.app/item/7c77755355b4dbc24d40f0420fb6336f>