# Article information:

Use of a novel pH indicator extracted from petals to investigate the carbonation behavior in cementitious materials - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S0958946522003973>

# Article summary:

1. A novel pH indicator, formulated from anthocyanin extracted from petals of Orychophragmus violaceus (O. violaceus), is presented as a potential replacement for phenolphthalein in carbonation tests.

2. The experimental results confirmed that the O. violaceus indicator is reliable in detecting the carbonation fronts and can include the partial carbonated zone due to its higher discoloration pH compared to phenolphthalein.

3. This work promotes the application of natural dye in the durability tests of civil engineering and contributes to a deeper understanding on the carbonation mechanism of cementitious materials.

# 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 presents a novel pH indicator, formulated from anthocyanin extracted from petals of Orychophragmus violaceus (O. violaceus), as a potential replacement for phenolphthalein in carbonation tests. The experimental results are presented to confirm that the O. violaceus indicator is reliable in detecting the carbonation fronts and can include the partial carbonated zone due to its higher discoloration pH compared to phenolphthalein.

The article appears to be well-researched and provides evidence for its claims, such as citing previous studies on phenolphthalein's effectiveness and toxicity, as well as providing experimental results based on the new indicator which contribute to a deeper understanding on the carbonation mechanism of cementitious materials. However, there are some points that could be further explored or considered in order to make this article more trustworthy and reliable, such as exploring possible risks associated with using this new indicator or providing more detailed information about how it was developed and tested. Additionally, it would be beneficial if both sides were equally presented when discussing potential risks associated with using phenolphthalein or other indicators, rather than just focusing on one side of the argument without considering any counterarguments or alternative perspectives.

# Topics for further research:

* Risks associated with using pH indicators
* Alternative indicators to phenolphthalein
* Carbonation mechanism of cementitious materials
* Anthocyanin extraction from Orychophragmus violaceus
* Testing of new pH indicators
* Comparison of phenolphthalein and O. violaceus indicators

# Report location:

<https://www.fullpicture.app/item/78c2fb831a23ff108af0c08fe7e5e58b>