

Banana Peel Can Remove Heavy Metals Polluting In Water – Study

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A new study suggest that banana peels are not just ordinary agricultural wastes or only good for composting but they can now remove heavy metals polluting in water.

Gustavo Castro, a researcher at the Biosciences Institute at Botucatu, Brazil and his team dried and ground banana peels, then combined them in flasks of water with known concentrations of metals. They also built water filters out of peels and pushed water through them.

In both scenarios, “the metal was removed from the water and remained bonded to the banana peels,” Castro said, adding that the extraction capacity of banana peels exceeded that of other materials used to remove heavy metals.

Metals such as lead and copper are introduced to waterways from a variety of sources, including agricultural runoff and industrial wastes. Once there, heavy metals can contaminate soils and pose health risks to humans and other species. Lead is known to affect the brain and nervous system.

Traditionally, water quality engineers have used silica, cellulose, and aluminum oxide to extract heavy metals from water, but these remediation strategies come with high price tags and potentially toxic side effects of their own. They work as extractors due to the presence of acids such as those found in the carboxylic and phenolic groups, which attract metal ions.

Bananas, on the other hand, appear to be a safe solution. Banana peels also outperform the competition.

Castro doesn't advise the use of banana peels for home water purification. For starters, the concentration of heavy metals in tap water is usually negligible. Also, while putting banana peels in contact with water will likely remove some metals, the average person isn't likely to be able to measure success.

Castro said his study findings are most likely to be useful in industrial settings. The new study appears in *Industrial & Engineering Chemistry Research*, a journal of the American Chemical Society.

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