



## IS BOTTLED BETTER?

*In an era where convenience often takes precedence, bottled water has become a staple for many, symbolising purity and health in a portable package. Yet, as the market for bottled water continues to grow, so do the questions surrounding it.*

*Is bottled water truly better, and can we trust what we drink?*



## CAN YOU TRUST WHAT YOU'RE DRINKING?

A survey conducted in Queensland by CHOICE showed that 69% of customers who trust bottled water do so because of its taste and quality (see below)<sup>1</sup>:



**Taste:** Did you know that tap water tastes the same as bottled water right after the treatment process? The difference in taste comes from the chlorine that operators add to the water afterwards. This chlorine is added to protect the water's integrity until it arrives safely at your home, ensuring it remains drinkable even after 24 hours.

**Quality:** Are you confident that the water quality parameters listed on your bottle are accurate? To verify, play around with the tool our team has developed for this article. This concept is widely used by the scientific community to assess the integrity of water tests and focus on the accuracy and transparency of labelling. Give it a go!

<sup>1</sup> Reference: [Is bottled water safer than tap water? | CHOICE](#)



## THE PERCEPTION OF PURITY

Bottled water is often marketed as a cleaner, safer alternative to tap water. Images of pristine mountain springs and untouched glaciers adorn the labels, evoking a sense of natural purity. This perception has been reinforced by clever advertising, leading consumers to believe bottled water is the gold standard of hydration.

However, the reality is more complex. While some bottled waters do come from natural springs, many are simply filtered tap water, often indistinguishable from what flows from your kitchen tap. A study by Griffith University, as part of the ABC series, War on Waste, revealed that many popular Australian bottled water brands are essentially treated tap water<sup>2</sup>.

This suggests that consumers pay more for the packaging rather than the water itself. A similar observation was reported in the U.S. where the Environmental Working Group revealed that more than 50% of bottled water in the U.S. was derived from municipal sources<sup>3</sup>.

The findings align with the broader critique that bottled water often comes from municipal sources and undergoes minimal treatment before being sold at a premium.

The question then arises: are we paying for the water itself, or merely the convenience and the brand?



## THE ENVIRONMENTAL IMPACT

The convenience of bottled water comes at a significant environmental cost. Each year, millions of plastic bottles are produced, transported, and discarded, contributing to the growing global plastic waste crisis. Even with recycling efforts, a large proportion of these bottles end up in landfill or polluting our oceans.

Indeed, 11 million tons of [plastic pollution](#) is estimated to be sitting on the ocean floor. This research was led by Australia's National Science Agency, CSIRO, in collaboration with the University of Toronto, Canada.

Moreover, the production and transportation of bottled water consumes vast amounts of energy and resources, further exacerbating environmental challenges. When you consider the carbon footprint of bottled water, the environmental implications become difficult to ignore. As cited by many, including the Earth Policy Institute and the Worldwide Fund for Nature (WWF), it's estimated that the production of bottled water requires up to **17-18 million barrels of oil annually**—enough to fuel over a million cars for a year<sup>4</sup>. This staggering figure underscores the hidden environmental cost of our bottled water habits.

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<sup>2</sup> Reference: [Tap water vs bottled water: Study reveals which is better for you - Starts at 60](#)

<sup>3</sup> Reference: [Bottled Water Lobby's Misinformation Campaign | Environmental Working Group \(ewg.org\)](#) and [What's In Your Bottled Water – Besides Water? | Environmental Working Group \(ewg.org\)](#)

<sup>4</sup> Reference: [Bottled Water and Energy Fact Sheet - Pacific Institute \(pacinst.org\)](#)

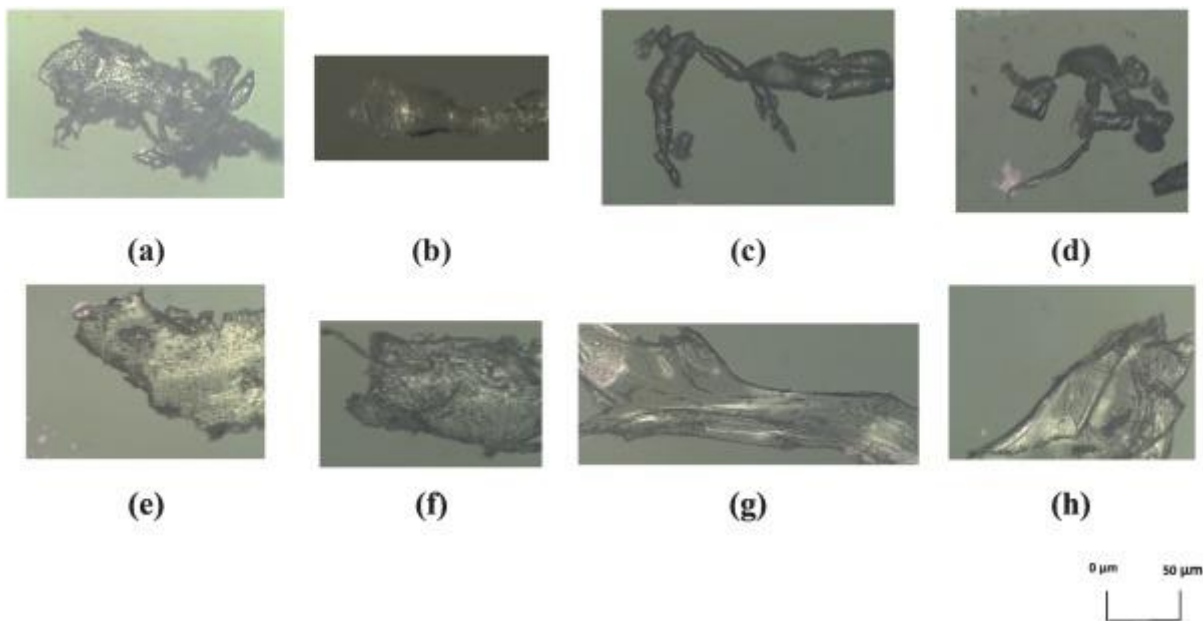
<sup>4</sup> [Bottled Water and Energy Fact Sheet - Pacific Institute \(pacinst.org\)](#)



## SAFETY AND REGULATION

One of the primary reasons consumers choose bottled water is the perceived safety it offers. But is bottled water safer than tap water? In many developed countries, tap water is subject to stringent regulations and frequent testing, ensuring it meets high safety standards. In contrast, the bottled water industry is often less regulated, with standards varying widely by region.

In some cases, bottled water has been found to contain contaminants at levels comparable to, or even exceeding, those in tap water. For example, a study conducted by Orb Media in 2018 found microplastics in 93% of the bottled water samples tested across nine countries<sup>5</sup>. In Australia, a 2022 study found that 94% of bottled water samples contained microplastics, with an average concentration of 13 microplastics per litre<sup>6</sup> (See below). The study also revealed that imported bottled water contained four times more microplastics than locally sourced brands, highlighting potential differences in contamination levels between domestic and imported products.



Additionally, the chemicals used in plastic bottles, such as BPA and phthalates, can leach into the water, raising potential health concerns<sup>6</sup>.

Australia has a broad definition of bottled water, which includes sparkling and flavoured waters—unlike in countries like the United States, where these are classified separately. Sparkling water, with its carbonation, is more acidic and can erode tooth enamel, making it less ideal for daily consumption compared to tap water.

A 2022 study by Schmidt and Huang found that 81% of bottled waters tested in Australia were erosive to tooth dentine and 74% to enamel, with flavoured and sparkling waters being the worst offenders<sup>7</sup>. These findings challenge the perceived purity of bottled water, suggesting that consumers may be paying more for a product that carries hidden health risks rather than true benefits.

<sup>5</sup> Reference: [Plus Plastic Text — Orb Media](#)

<sup>6</sup> Reference: Samandra, S., Mescall, O. J., Plaisted, K., Symons, B., Xie, S., Ellis, A. V., & Clarke, B. O. (2022). [Assessing exposure of the Australian population to microplastics through bottled water consumption](#), *Science of The Total Environment*, 837, 155329.

<sup>7</sup> Schmidt, Jeremiah, and Boyen Huang. "The pH of bottled water commercially available in Australia and its implications for oral health." *Journal of Water and Health* 20.5 (2022): 871-876.

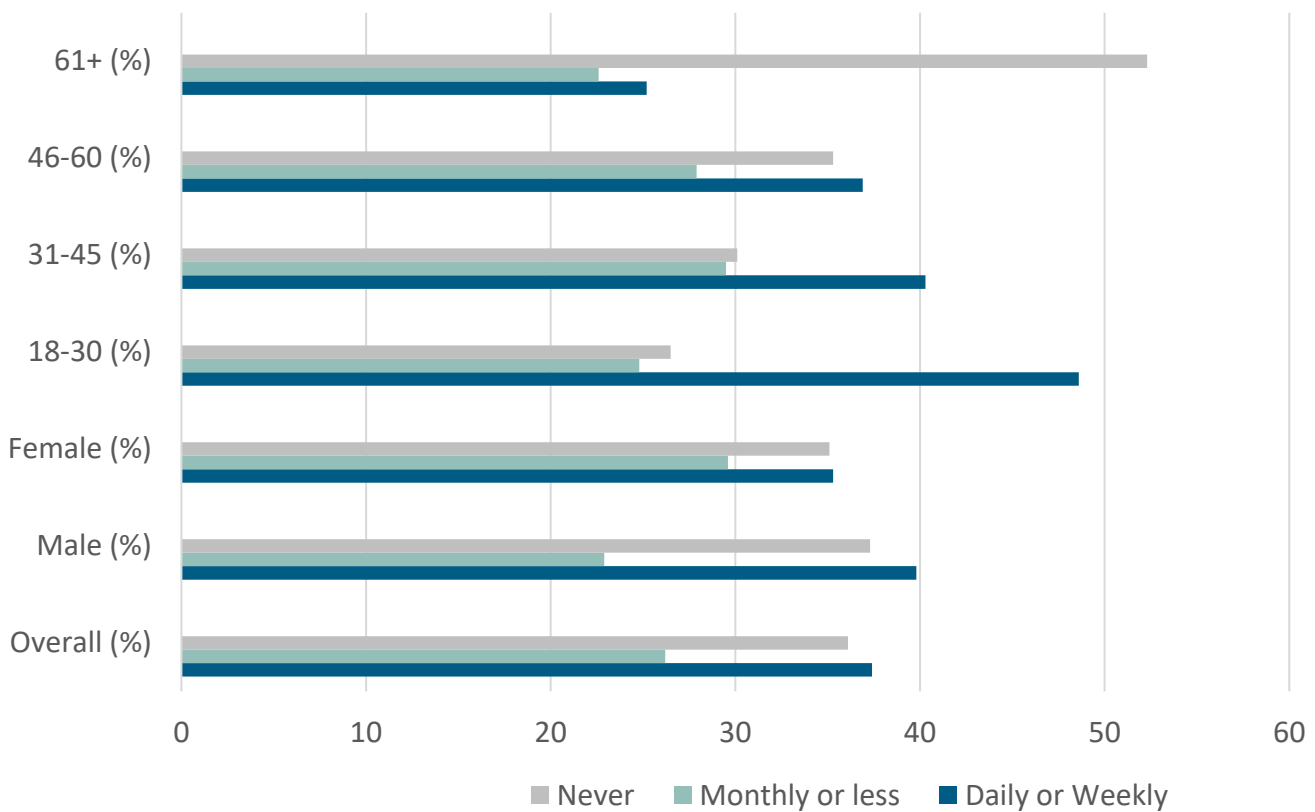


## THE COST OF TURNING ON YOUR TAP

Beyond environmental and safety concerns, the cost of bottled water is a significant factor. Bottled water can be up to 2,000 times more expensive than tap water, making it a costly choice for consumers. This raises the question: is the perceived convenience and safety worth the premium price?

For many, the answer may lie in the middle ground. Using reusable water bottles and investing in a good water filtration system can provide the convenience of bottled water while minimising environmental impact and ensuring safety.

### AUSTRALIAN'S BOTTLED WATER CONSUMPTION BY GENDER AND AGE



Reference: Miller, Caroline, et al. "Consumption of sugar-sweetened beverages, juice, artificially-sweetened soda and bottled water: An Australian population study." *Nutrients* 12.3 (2020): 817.

## THE TRUST FACTOR

Ultimately, trust plays a crucial role in our drinking water choices. Whether it's tap or bottled, consumers want to feel confident that what they're drinking is safe and of high quality. Building this trust requires transparency from both the bottled water industry and public water utilities.

Consumers should have access to information about the source of their bottled water, the treatment processes it undergoes,



and the results of safety tests. Similarly, public water utilities must continue to maintain rigorous standards and communicate openly with the public about water quality.

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*“There was a period in 2010 when a well-known water bottle brand ran a campaign in Cleveland (Ohio) portraying municipal tap water as unsafe and unhealthy. The company used the campaign to portray its products as healthier alternatives. At some points, the campaign even went to the extent of trying to warn people against consuming tap water. The Cleveland administrators took offence and conducted tests to determine if, indeed, they were providing unsafe water as claimed in the well-known water bottle brand adverts. The administrators found that their tap water was even better than Well-Known water bottle brand products in terms of quality. The well-known water bottle brand adverts indicates that water bottlers have no problem spreading falsehoods against tap water to sell their products. There is also little regard for the financial impact, especially on the communities who are unable to afford the products. The Cleveland campaign also demonstrates the unethical aspect of bottled water marketing that is least challenged in research.”*

**Adjusted quote from Silva, J. A. (2024). Ethics of Manufacturing and Supplying Bottled Water: A Systematic Review. Sustainability**

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## CALL TO ACTION

As consumers, we have the power to demand greater transparency from the bottled water industry and support initiatives that protect and improve our public water systems.

Here are a few things you can do:

- Play around with our Water Neutrality tool [here](#) and check the accuracy of the bottled water label!
- Stay informed by reading government updates and follow the initiatives led by your local council ([NSW](#), [VIC](#), [QLD](#), [SA](#))
- For initiatives and industry-related insights, follow organisations like WaterAid, Australian Water Association, Water Services Association of Australia
- Get involved with CSIRO and their Ending Plastic Waste campaign, Plastic Free July movement or Choose Tap initiative.

**By making informed choices, we can contribute to a more sustainable future where access to safe drinking water is a right, not a luxury.**



## ABOUT THE AUTHORS



### MELISSA THEK, DIRECTOR – STRATEGY, TRANSFORMATION & DELIVERY

Melissa Thek is a visionary leader with over 20 years of experience driving substantial business transformation, including the last half a decade in the water industry in executive roles. She has spearheaded strategy, innovation, and technology across various roles and organisations, significantly enhancing efficiency and productivity. Melissa is passionate about bringing awareness on issues that matter to our industry and community.



### SUHAIB MALKAWI, CIVIL ENGINEER

Suhaib Malkawi is a research specialist, and a PhD scholar who has gained an in-depth understanding of the water field through his work across three countries known for their water scarcity: Jordan, Australia, and India. Recently, he was awarded the Australian Government Research Training Stipend Scholarship in recognition of his academic achievements and research quality.

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