



ICP-MS

Mass spec ICP test

Easy, fast and accurate
Detection level 1000 times higher
than ICP-OES test



Tested in partnership with **ICP ANALYSIS**

Less Interference

The mass spectrometry approach used in ICP-MS is less prone to spectral interferences that can affect ICP-OES. This is because ICP-MS measures the mass of ions, which can be distinguished more precisely than the wavelength of light measured in ICP-OES.

Consistency

ICP-MS operates effectively across a broad range of concentrations, maintaining accuracy and precision even in samples with highly variable element concentrations. The method used allows for a much higher degree of consistency even between different samples of the same batch.

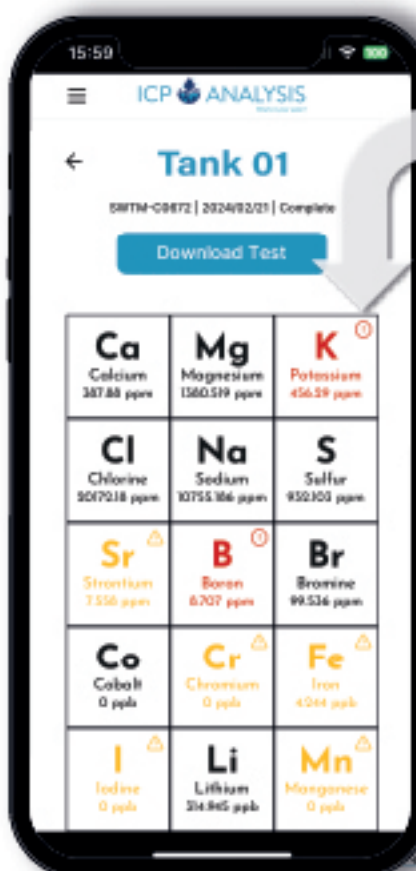
Lower Detection Limits

ICP-MS can detect elements at much lower concentrations (parts per trillion) compared to the parts per billion typically achievable with ICP-OES. This sensitivity allows for more accurate measurements of trace elements even in very dilute samples.



FAVIA

Compatible!

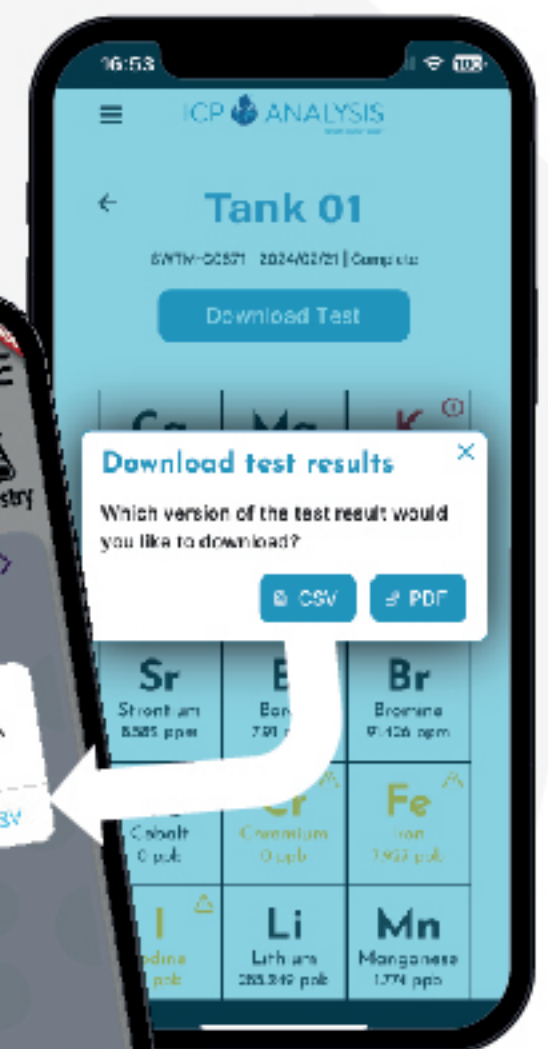


Simple to understand results with easy-to-read traffic light system



If a value is highlighted yellow, the element is under the recommended levels. If it is highlighted in red the element is over the recommended levels.

View the composition of your water samples broken down by each element including personalised recommendations and alerts through a simple interface to track your elements' levels overtime.



Designed for all aquaria

How water is tested

A water sample is injected into a plasma chamber that is approximately 10,000 degrees. This extreme temperature breaks everything in the sample apart into the basic elements. Every element is released at a specific wavelength.

With ICP-OES (Optical Emission Spectroscopy) we can then tell the concentration of the element by how much energy is released at that specific wavelength. ICP-MS goes further and measures the mass of ions in each element making it 1000x more precise and reliable than basing results on measuring energy released at specific wavelength. ICP-MS is generally considered more reliable and consistent than ICP-OES. It is more precise due to the more advanced technology used.



Q&A

How many and which elements does ICP-MS test for?

13+ Ca, Mg, K, Cl**, Na, S, Sr, Br**, Fe, I**, P, As, Cu, [PO4]*



OPTION TO UPGRADE YOUR TEST VIA THE APP

If you decide you need more information after reviewing your data, you can unlock the remaining 45 elements online via an in-app purchase.

50+ Ca, Mg, K, Cl**, Na, S, Sr, B, Br**, Co, Cr, Fe, I**, Li**, Mn, Mo, P, Ni, V, Zn, Ag, Al, As, Au, Ba, Be, Cd, Ce, Cs, Cu, Dy, Er, Eu, Ga, Ho, Ir, La, Nb, Nd, Os, [PO4]*, Pb, Pd, Pr, Pt, Rb, Re, Ru, Sb, Se, Si**, Sm, Sn, Ta, Te, Th, Ti, U, W, Zr

*PO4 is calculated on the Phosphorus value
**Elements not tested in freshwater RO DI

What are the detection levels?

Detection limits are the smallest amount of the element being tested that the ICP can see. For example, in a Fresh Water sample, we can find Calcium, Ca, at 3.349 ppb or micrograms/l ($\mu\text{g}/\text{l}$) whereas in ICP-OES you are only going to get mg/l (ppm). That means we can tell you how much Calcium is in your water down to 3.3 parts per billion.

When will I get the results?

TMC ships to the ICP-Analysis certified lab in the US several times a week from both London and Lisbon. We aim to provide you the results via the app or online area in the shortest possible time. Results should be visible within 4-7 working days after the sample is received by TMC.