Water TDS for Tea: The Mineral Lever

From the teas.co.uk wiki

> **Water TDS for tea, in summary:** Mineral content (total dissolved solids) shapes how tea brews. UK water varies sharply by region, and a filter or a soft bottled spring water (Volvic, 60ppm) transforms delicate teas.

Water is most of the cup, and TDS is the lever most people ignore. This sits in the brewing cluster beside water pH.

Last reviewed by the teas.co.uk team in May 2026.

What TDS is, and how it affects tea

TDS, total dissolved solids, is roughly the mineral content of the water, measured in parts per million (ppm), and it interacts with tea's flavour compounds during brewing. Get it too low, as with distilled or very soft water, and the tea tastes flat, hollow and lifeless even with flawless technique, because some minerals are needed for proper extraction and body. Get it too high, as with very hard water, and excess minerals bind with tea polyphenols and precipitate them out (that surface "scum" on black tea is exactly this), dulling aroma and letting a chalky mineral character dominate. Calcium in particular suppresses brisk astringency, which can suit sensitive drinkers but also dampens subtle notes, while a little magnesium is generally favourable and high bicarbonate tends to flatten the cup. A moderate level, somewhere in the tens to low hundreds of ppm, suits most tea: treat it as a guide range, not a magic number. See best water for tea.

TDS range	Answer
What TDS is	Total Dissolved Solids; mineral content of water; measured in ppm or mg/L
Why it matters	Minerals interact with tea compounds; affect extraction, flavour, mouthfeel
Distilled (0-10 ppm)	Too low; tea tastes flat/lifeless; minerals are needed for proper extraction
Soft (10-50 ppm)	Sweet spot for many delicate teas (Chinese green, Japanese green)
Medium (50-150 ppm)	Versatile range; good for most tea types; UK soft water typical
Hard (150-300 ppm)	Black tea suits this; UK hard water; mineral character contributes
Very hard (300+ ppm)	Too high for most tea; mineral character dominates; chalky mouthfeel
UK water variation	Soft in west/north (Scotland, Wales); hard in south/east (London, Cambridge)

TDS range	Answer
UK tea blend history	UK black tea blends optimised for UK hard water; that's why "English breakfast" works on London tap
Chinese green tea	Often disappointing on UK hard water; benefits from softer filtered water
How to test	TDS meter (£10-20 cheap; £30-50 quality); local water reports; taste comparison
How to adjust	Filter (reduces); bottled spring water (controlled mineral); RO + remineralise (precise)
Calcium vs magnesium	Both contribute; calcium more dominant in UK hard water; affects tea differently
Framing	Real factor; UK water varies by region; matching water to tea improves quality noticeably

UK water by region, and why English breakfast works

UK water varies dramatically. Soft regions (roughly 50 to 120 ppm) include most of Scotland, the Welsh valleys, Cornwall, parts of Devon and the Lake District, and they suit delicate green, white and oolong well. Much of northern England and the Midlands is medium and versatile, while the south-east (London's Thames Water especially, plus Cambridge and parts of East Anglia) is hard at 200 to 300+ ppm, where delicate teas often disappoint without filtration. The UK has relatively hard water by global standards, and that history matters: UK breakfast blends evolved alongside it, using strong Assam, Ceylon and Kenya leaf that can stand up to mineral rich water, where the mineral binding balances what would otherwise be too astringent and gives the bright, brisk cup that takes milk well. It is why the same tea bag tastes different in Edinburgh and London, the water, not the tea. Your water company publishes hardness by postcode.

Matching water to tea

The pattern is simple: the more delicate the tea, the lower the ideal TDS. Delicate green, white and matcha are happiest around 30 to 80 ppm, where soft filtered or bottled water reveals their subtle character. Premium oolong sits around 50 to 100 ppm, and premium black such as a first-flush Darjeeling or single-estate Assam around 80 to 150, supporting complexity without the minerals dominating. Classic breakfast blends are the exception that proves the rule, comfortable at 150 to 250 ppm because they were designed for hard water in the first place. Match the water to the tea and any tea improves; force a delicate green through hard London tap and it falls flat. See Chinese green tea, the clearest test of your water.

Practical fixes

You do not need laboratory precision to get most of the benefit. A carbon filter jug (Brita or similar) is a cheap, accessible improvement that reduces chlorine and modestly softens, and it suits most teas. For delicate teas, a soft bottled spring water is the easy win: Volvic at 60 ppm is excellent, while Evian at 309 ppm is too hard for most tea and sparkling waters are best avoided. Bringing water to the boil precipitates some calcium as scale and slightly reduces hardness, and at the serious-enthusiast end, reverse osmosis with remineralisation gives precise control. A pragmatic habit is to keep a bottle of Volvic for delicate teas while using tap for everyday black.

How to test it

A short investigation reveals your starting point. Check your water company's report by postcode for hardness and TDS, and consider a cheap handheld TDS meter (around £10 to £30) for ongoing monitoring. The most useful step is a side-by-side taste: brew the same tea with tap, filtered and Volvic water and see what your tap actually does to it. Then adjust by tea type, a filter for moderate change, soft bottled water for delicate teas, and bear in mind UK water TDS shifts a little seasonally as sources change, so an occasional re-check helps. See water pH for the partner variable.

Reference noted

- NHS: Water, drinks and your health

FROM THE CURATOR

teas · Begin your TDS tests with a cheap everyday tea. Upgrade the leaf only after you like what your water does to it.

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