Water pH for Tea: Bright or Dull

From the teas.co.uk wiki

> **Water pH for tea, in summary:** Acidity versus alkalinity shapes how bright or dull the cup looks and tastes. Most UK tap water is slightly alkaline; a touch of acidity brightens, but there is no need to over-engineer it at home.

pH is the second hidden water variable after mineral content. This sits in the brewing cluster beside water TDS.

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

What pH does to tea

pH measures how acidic or alkaline the water is on a scale where 7 is neutral, below 7 acidic and above 7 alkaline. Tea's polyphenols (the theaflavins, thearubigins and catechins) are pH-sensitive, so the water's acidity changes both the colour and the flavour balance. Slightly acidic water, around pH 6 to 6.8, keeps those compounds in a form that gives a brighter, cleaner cup; alkaline water, which is typical of much UK tap at pH 7.2 to 8.5, shifts them toward deeper colour and can mute the bright top notes. The effect is real but generally subtler than the TDS (hardness) effect, and the two overlap because hard water is often alkaline. One quirk worth knowing: boiling drives off dissolved CO2, which raises pH slightly, so brewing water tends to be a touch more alkaline than cold tap. See water TDS.

pH range	Answer
What pH is	Acidity/alkalinity scale; 7 is neutral; below 7 acidic; above 7 alkaline
Why it matters for tea	pH affects tea compound extraction and visible cup colour
Acidic (below 6)	Lemon juice tea demonstration: tea colour brightens dramatically
Slightly acidic (6-6.8)	Often considered ideal range for tea brewing; bright clean flavour
Neutral (7)	Distilled water target; works well for most tea
Slightly alkaline (7.2-7.8)	Most UK tap water; usable but slightly mutes some flavours
Alkaline (above 8)	Some hard UK water; can produce dull dark tea; suppresses brightness
UK tap water typical	Slightly alkaline (7.0-8.5); varies by region and treatment
Why London water dark	Higher pH combined with hardness produces visibly darker tea
Lemon brightening	Lemon juice lowers pH dramatically; tea liquor brightens visibly

pH range	Answer
How to test	pH strips (£5 cheap), pH meter (£15-40); water company reports
How to adjust	Filtration (modest change), bottled spring water, RO + recipe adjustments
pH vs TDS	Related but separate; both matter; usually correlated in tap water
Framing	Real factor; modest practical effect; don't over-engineer at home

The lemon demonstration

The classic proof is worth doing yourself. Brew two identical cups of strong black tea and add a tablespoon of lemon juice to one: its colour shifts instantly from dark brown to amber or even light orange. That dramatic, immediate change is pure pH chemistry, the polyphenols responding to lower acidity, and it is the same mechanism running in reverse when hard, alkaline London water makes tea look dark. It does not mean tea needs lemon; this is an extreme pH demonstration, and the small pH shifts of ordinary brewing water produce subtle effects rather than that visible transformation. See best water for tea.

UK tap water by region

UK water pH varies with geology. Limestone and chalk regions (much of south England, London on the Thames, Cambridge and the Home Counties) tend to higher-pH water, while volcanic and igneous areas (Scotland, Wales, Cumbria) tend to lower, softer, slightly acidic to neutral water. Water companies also nudge pH slightly alkaline for distribution, to protect pipes from corrosion, so final tap water can differ from source. London's Thames water sits around pH 7.5 to 8.0 and, combined with its hardness, gives the characteristically dark, strong-looking British cup, whereas Highland Scottish water around 6.5 to 7.5 is both softer and lower in pH and suits delicate teas. As with TDS, your water company publishes the figures by postcode.

Test it, adjust it, don't over-engineer

Testing is cheap: pH strips cost £5 to £10, a pH meter £15 to £40, and many water companies publish pH alongside hardness, with freshly boiled water giving a more relevant reading than cold tap. On adjustment, restraint is the message, because small pH shifts give subtle tea effects, so basic carbon filtration is usually enough for everyday tea, and a near-neutral bottled spring water like Volvic (about pH 7.0) is an easy default for premium tea. Serious adjustment (reverse osmosis with a recipe, or a measured squeeze of lemon to brighten a specific cup) is for committed enthusiasts, not daily drinkers. Two cautions: do not conflate this with "alkaline water for health" marketing, which is a different context entirely, and note that pH barely affects caffeine, it mostly shifts polyphenol colour and flavour balance. See how to make tea properly.

Reference noted

- NHS: Water, drinks and your health

FROM THE CURATOR

teas · Start with an inexpensive tea while you experiment with water. Buy dearer leaf once your water is sorted and you know what you like.

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