Can You Make Tea in a Microwave?

From the teas.co.uk wiki

> **Microwave tea, in summary:** Yes you can microwave tea, sensible as a backup for hotels and offices; for the daily home cup a kettle is faster and gives finer temperature control.

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

Yes, you can make tea in a microwave, and according to one Australian study, microwave brewed tea actually extracts more polyphenols and caffeine than kettle brewed. The technique is sound when you can't access a kettle. But for the daily cup at home, a kettle is faster, gives better temperature control, and is the British way. Microwave tea is a backup, not a default.

The answer

British people instinctively recoil at the suggestion of microwave tea. The kettle is sacred. But microwave tea works fine. The Australian researchers (Quan Vuong, University of Newcastle, 2012) actually found microwaving tea pulled out more bioactive compounds than traditional brewing.

Where microwave tea genuinely makes sense:

- Hotel rooms with no kettle but a microwave.
- Office kitchens with microwave but kettle in use.
- Camping with microwave equipped vans.
- Reheating tea that's gone cold.
- Speed when very rushed.

How to make tea in a microwave

Method 1: Mug + bag

1. Place tea bag in microwave safe mug.
2. Add 200ml cold or room temperature water.
3. Microwave on high for 1 minute (or until water is hot).
4. Remove from microwave.
5. Steep further 30 seconds (the water keeps brewing).

6. Remove tea bag.

Method 2: Pre heated water

1. Microwave 200ml water in a microwave safe mug for 90 seconds.
2. Remove. Add tea bag.
3. Steep 3-5 minutes.

Method 3: The Australian paper trick (extracts most compounds)

1. Place tea bag in mug.
2. Add 200ml water.
3. Microwave 1 minute (water heats around bag).
4. Remove. Let steep further 1 minute.
5. Drink.

The science

Microwaving heats water through dielectric heating, water molecules absorb microwave energy and convert it to heat. The result:

- Faster initial heating than a kettle's element.
- Slightly different temperature distribution (somewhat uneven without stirring).
- Water reaches similar temperatures (around 95-100°C in 90 seconds).

The Vuong study (2012) showed microwave brewing extracted more catechins and caffeine. Possible mechanisms: the temperature stays high during steeping (no immediate cooling), and the tea bag's contents may be agitated by microwave energy. It does not follow that microwave tea tastes better or is better for you; the British preference for the kettle is a sensible habit, not a scientific error.

The British objection

"You can't make a proper cup of tea in a microwave."

Cultural truth, not scientific truth. The kettle routine is what most British people actually love about tea. The whistle (or click), the pour, the wait, the milk addition, it's a sequence. The microwave skips all of that.

For the cultural tea drinker the kettle is non negotiable. For the practical tea drinker the microwave is fine.

Microwave tea pitfalls

Superheating

Plain water in microwave can superheat, heat past 100°C without bubbling, then suddenly bubble violently when disturbed. Mitigation: place a wooden chopstick or non metal stirrer in the mug while heating.

Uneven temperature

Without stirring, parts of the water are hotter than others. Mitigation: stir or shake the mug after heating.

Lower brewing intensity

Some perceive the cup as weaker than kettle brewed. Mitigation: steep slightly longer (4-5 minutes vs 3-4).

Wrong vessels

Don't microwave metal clad mugs or fine china with metallic decoration. Use plain ceramic, glass, or labelled microwave safe vessels.

Tea bag tag/string

Some tea bag tags have small metal staples. Modern UK tea bags rarely use these but check first. The string itself is fine.

Tea types and microwave compatibility

Black tea

Brews fine. The standard British tea bag in mug + microwave + 1 minute = working cup.

Green tea

The temperature challenge: green tea wants 70-80°C, not 95-100°C. Microwave heats too high and over extracts bitterness. Workaround: heat the water for less time, check it is 70-80°C with a thermometer, then add the green tea bag.

Herbal tea

Brews fine. Herbal benefits from longer steep at high heat.

Matcha

Don't microwave matcha. The whisking process needs hand control. Heat water normally, then whisk at the right temperature.

Loose leaf premium

Functional but suboptimal. The temperature precision and steeping control of a kettle is part of premium tea brewing. Use kettle for loose leaf gongfu or specialty teas.

Reheating cold tea

This is the legitimate use case. Cup of tea gone cold while writing/working, 30-45 seconds in microwave brings it back to drinking temperature. Don't add bag back; just heat the existing brew.

Travel and hotel tea

Hotel rooms increasingly have microwave but no kettle. Mug + tea bag + 200ml water + 90 seconds in microwave = serviceable cup. Pack your own tea bags from home, hotel supplied tea is often poor.

The kettle vs microwave time comparison

- Electric kettle: 60-90 seconds for 200ml + pour to mug + bag = ~2 minutes total.
- Microwave: 60-90 seconds for 200ml in mug with bag = ~1.5-2 minutes total.

Marginal difference. The kettle wins on temperature precision and familiarity; the microwave wins on space saving and zero pouring.

FAQ

Can you microwave tea? Yes, 60-90 seconds with bag in mug.

Is microwave tea worse? Functionally similar. Australian research suggests it may extract more compounds. Cultural feel is different.

How long? 60-90 seconds for water, then 30-60 seconds steep.

Reheating cold tea? Yes, 30-45 seconds without re adding bag.

Microwave green tea? Possible but suboptimal, green tea wants lower temperature.

Curator's note: microwave tea is functionally fine and occasionally more useful than the kettle. But the kettle is the British way, and the routine matters. Use the microwave for hotels, offices, and reheating. Use the kettle at home. Lee, teas.co.uk, Tunbridge Wells.

Microwave tea, when it works and when it doesn't at a glance

Scenario	The verdict
Hotel/office, no kettle	Yes, microwave is a sensible backup
Reheating cold tea	Yes, 30-45 seconds, no fresh bag
Daily home cup	No, the kettle wins on speed and habit
Black tea	Brews fine, 60-90 seconds
Green tea	Heat first, cool 30 seconds, then steep
Matcha	No, whisk by hand at the right temperature
Metal-trimmed mugs	Never, sparks and damage
Superheating	Add a wooden stirrer in the mug

Related teas worth a look: English Breakfast, Earl Grey, green tea, loose leaf tea, Darjeeling, oolong, and herbal tea. The full tea shop is open, kettle or microwave, with free UK delivery past £35.

FROM THE CURATOR

teas · However you heat the water, compare teas by price per cup. Loose leaf usually wins, though a supermarket box of bags sometimes does.

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