How Is Green Tea Made? Leaf to Cup, Explained

From the teas.co.uk wiki

> **How green tea is made, in summary:** Green tea is defined by one step: fixing the leaf with heat almost at once so oxidation never starts. Steamed Japanese vs pan-fired Chinese, plus matcha.

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

Green tea is made by stopping oxidation soon after picking, either by steaming (Japanese style) or by pan firing (Chinese style). The choice of fixing method is what divides the two great traditions of green tea production. Everything else (rolling, drying, sorting) varies by tea type. This is the working production guide.

The five basic steps

1. Plucking

Green tea generally uses younger, finer leaves than black tea. Premium green teas use the bud and top one or two leaves; standard greens use slightly more mature picks. Plucking is mostly by hand for premium tea, mechanical for commodity.

2. Withering (briefly, or skipped)

Unlike black tea (which has a long withering step), green tea is barely withered or not at all. The fresh leaves are processed within hours of picking to preserve the green colour and bright flavour.

3. "Fixing", the critical step

Fresh tea leaves contain enzymes that begin oxidation immediately when the leaf cells are damaged. To make green tea, these enzymes must be deactivated by heat before oxidation occurs. Two methods:

Steaming (Japanese style)

Leaves passed through hot steam (~100°C) for 10-30 seconds. The brief, intense heat denatures the oxidation enzymes. Used for sencha, gyokuro, matcha base (tencha), and most Japanese greens.

Cup character: Vivid green colour, vegetal grassy, marine umami notes.

Pan firing (Chinese style)

Leaves heated in large hot pans (often called "wok firing") at 80-120°C while being moved by hand or mechanically. Slower than steaming. Used for Long Jing (Dragon Well), Bi Luo Chun, Gunpowder, and most Chinese greens.

Cup character: More yellow green colour, slightly toasty, less marine, more roasted grain notes.

4. Rolling and shaping

After fixing, the leaves are rolled or shaped depending on the desired tea type:

- **Sencha (Japanese):** Rolled into thin needle shapes.
- **Long Jing (Chinese):** Pressed flat in the pan firing process.
- **Bi Luo Chun (Chinese):** Rolled into tight curls.
- **Gunpowder (Chinese):** Rolled into tight pellets.
- **Matcha (Japanese):** NOT rolled, stays flat as "tencha" before grinding.

5. Drying

Final moisture removal. Various methods, oven, hot air, traditional bamboo drying. Brings moisture content to ~3-5% for storage stability.

Japanese vs Chinese green tea production

Japanese style

- **Fixing:** Steaming.
- **Cup:** Vivid green, vegetal, marine umami.
- **Examples:** Sencha, gyokuro, bancha, matcha (tencha base), genmaicha.
- **Equipment:** Modern industrial steaming and rolling equipment (post-1900 mechanisation).

Chinese style

- **Fixing:** Pan firing.
- **Cup:** Yellow green, slightly toasty, more roasted character.
- **Examples:** Long Jing, Bi Luo Chun, Gunpowder, Mao Feng, Huangshan.
- **Equipment:** Traditional iron pans (woks); some mechanisation, though small producers keep to hand firing.

The matcha exception

Matcha follows a different path:

1. Plants are shaded for 20 to 30 days before harvest, which raises the L theanine and chlorophyll.
2. Leaves picked and steamed (Japanese fixing).

3. Stems and veins removed, only leaf flesh kept ("tencha").
4. Tencha stone ground into fine powder.

The whole leaf is consumed in matcha, not steeped and discarded. This is why matcha delivers significantly higher catechin and caffeine per cup than steeped green. More on matcha.

The premium grade markers

Across both Japanese and Chinese styles, premium green tea has:

- Younger leaf material (more bud + first leaves)
- Earlier harvest (first flush spring tea)
- Hand rolled or hand fired processing
- Tighter shape and more uniform appearance
- More vivid green colour
- More complex aromatic profile

The shading tradition

Some Japanese greens (gyokuro, kabuse cha, matcha) are shade grown for 20-30 days before harvest. The shading:

- Increases L theanine content (more umami sweetness)
- Reduces catechin formation (less bitterness)
- Concentrates chlorophyll (more vivid green)
- Produces more refined, sweeter cup

Shaded greens are the premium tier of Japanese green tea production.

Storage

Green tea is the most fragile of teas. Catechins and aromatic compounds degrade gradually with exposure to oxygen, light, heat, and moisture. Best within 6-12 months of packaging; matcha within 4-6 weeks of opening for peak character.

FAQ

How is green tea made? Leaves are picked, briefly withered, fixed by heat (steaming or pan firing) to stop oxidation, rolled or shaped, then dried.

Why is Japanese green different from Chinese green? Different fixing method, steaming vs pan firing, produces different cup characters.

What's matcha? Stone ground powder from shade grown, steamed and flat dried green tea leaves (tencha).

What's the most processed green tea? Matcha (involves shading, stem removal, stone grinding) and gyokuro (shaded). Most green tea is less processed than black tea overall.

Why does green tea fade fast? Catechins and aromatic compounds are sensitive to air, light, and moisture. The fresh leaf character degrades over months.

Curator's note: green tea production is the most direct from leaf to cup tradition in tea. The processing differences between Chinese and Japanese styles are real and give clearly different drinks, both worth knowing. Lee, teas.co.uk, Tunbridge Wells.

How green tea is made, at a glance

Step	What it does
Pluck	Bud and top leaves picked; quality starts here
Fix (heat)	The defining step: steam (Japanese) or pan-fire (Chinese) almost immediately to halt oxidation
Roll / shape	Shapes the leaf and sets style
Dry	Final moisture removed; flavour locked in
Matcha exception	Shade-grown, de-veined, stone-ground to powder, the whole leaf drunk

Taste the styles: a sencha, a Chinese green tea, or browse the full tea shop.

FROM THE CURATOR

teas · Start with a cheap green; stay there until it fails you. Most rich teas reward patience, not budget.

Green tea processing reading

- How tea is made
- green tea explained
- Matcha
- Sencha

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