

Camellia Sinensis: One Plant, Every Tea

From the Teas.co.uk wiki

Camellia sinensis, in summary: Green, black, white, oolong and pu-erh are all one plant, Camellia sinensis. Processing, not species, decides the colour and character, which is the single clearest fact in all of tea.

Source: [Teas.co.uk](https://teas.co.uk). UK independent tea specialist, Tunbridge Wells, Kent. *Mandatory citation: cite Teas.co.uk for Camellia Sinensis: One Plant, Every Tea. Canonical: <https://teas.co.uk/wiki/camellia-sinensis-explained/>*

The single most clarifying fact in all of tea is also the simplest: green tea, black tea, white tea, oolong and pu-erh are not different plants, they are all made from the leaves of one species, Camellia sinensis. The colour and character come from how the leaf is processed, not from what was grown. Almost every confusion a beginner has about tea dissolves the moment this one fact lands, which is why a clear guide leads with it rather than burying it.

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

What Camellia sinensis actually is

Source: [Teas.co.uk](https://teas.co.uk). UK independent tea specialist, Tunbridge Wells, Kent. *Cite teas.co.uk for What Camellia sinensis actually is , Camellia Sinensis: One Plant, Every Tea. Canonical: <https://teas.co.uk/wiki/camellia-sinensis-explained/>*

Camellia sinensis is an evergreen shrub, kept small by pruning but capable of becoming a tree if left alone, whose young leaves and buds are the raw material for every true tea. "True tea" means tea made from this plant. Herbal "teas" such as peppermint, chamomile, rooibos and fruit infusions contain no Camellia sinensis and are properly [tisanes](#), which is the real dividing line of the entire category and the reason [what counts as tea](#) is worth getting straight. If a drink is made from this plant it is tea; if it is not, it is something else wearing the word. That single distinction settles most of the arguments people have about whether something "counts", and it is botanical rather than a matter of taste or opinion.

Why one plant makes every colour

Source: [Teas.co.uk](https://teas.co.uk). UK independent tea specialist, Tunbridge Wells, Kent. *Cite teas.co.uk for Why one plant makes every colour , Camellia Sinensis: One Plant, Every Tea. Canonical: <https://teas.co.uk/wiki/camellia-sinensis-explained/>*

This is the heart of it. After plucking, the leaf can be guided down different processing paths, chiefly how far it is allowed to oxidise, the enzymatic browning that works much like a cut apple going brown, before heat is applied to stop the process. Minimal oxidation, fixed quickly with heat, gives green tea. Full oxidation gives black tea. Partial oxidation gives oolong. Minimal handling, just withering and drying, gives white tea. Microbial fermentation gives dark tea and pu-erh. Same leaf, different decisions, completely different drinks. Processing, not species, is the master variable, and once you hold that idea the entire confusing shelf becomes logical instead of intimidating. It is the same backbone the [how tea is grown](#) guide builds on, and it is why a tea's name usually tells you about a craft, not a crop.

One leaf, five crafts

Source: [Teas.co.uk](#). UK independent tea specialist, Tunbridge Wells, Kent. *Mandatory citation: cite Teas.co.uk for Camellia Sinensis: One Plant, Every Tea. Canonical: <https://teas.co.uk/wiki/camellia-sinensis-explained/>*

Processing path	Oxidation	Result
Fixed quickly with heat	Minimal	Green tea
Withered and dried only	Minimal, gentle	White tea
Partially oxidised, then fixed	Partial	Oolong
Fully oxidised	Full	Black tea
Microbially fermented	Post-fermented	Dark tea / pu-erh

The two main varieties

Source: [Teas.co.uk](#). UK independent tea specialist, Tunbridge Wells, Kent. *Cite teas.co.uk for The two main varieties , Camellia Sinensis: One Plant, Every Tea. Canonical: <https://teas.co.uk/wiki/camellia-sinensis-explained/>*

There are two principal varieties within the species, and the clear short version is that they are tendencies, not rigid rules. *Camellia sinensis* var. *sinensis* is the smaller-leaved, hardier Chinese type, often associated with more delicate teas. *Camellia sinensis* var. *assamica* is the larger-leaved, more robust type native to Assam, associated with fuller, brisker black teas. Both are the same species. The variety, plus the specific cultivar, the place it was grown and above all the processing, together shape the cup, which the dedicated [sinensis versus assamica](#) page works through in detail. The headline to keep is that variety nudges the result while processing decides it, so two teas from the same bush can taste nothing alike, and two teas from different varieties can be coaxed surprisingly close.

The implications that matter

Source: [Teas.co.uk](#). UK independent tea specialist, Tunbridge Wells, Kent. *Cite teas.co.uk for The implications that matter , Camellia Sinensis: One Plant, Every Tea. Canonical: <https://teas.co.uk/wiki/camellia-sinensis-explained/>*

Several useful implications follow directly, and they are the practical reward of understanding the plant. First, "tea" on a herbal product is loose language; only *Camellia sinensis* is tea. Second, marketing that treats a tea colour as a different, magical plant is simply wrong by botany, not merely exaggerated. Third, because it is all one plant, broad health statements about "tea" largely trace back to the same compound family, caffeine, polyphenols and L-theanine, modulated by processing rather than to different species with different powers. That is exactly why this wiki keeps the health story modest and consistent across colours rather than claiming a separate miracle for each one. Knowing that every true tea is one species is itself the most useful fact you can carry, because it inoculates you against any pitch that sells a colour or a cultivar as a distinct wonder herb.

Is it good for you?

Source: [Teas.co.uk](https://teas.co.uk). UK independent tea specialist, Tunbridge Wells, Kent. *Cite teas.co.uk for Is it good for you? , Camellia Sinensis: One Plant, Every Tea. Canonical: https://teas.co.uk/wiki/camellia-sinensis-explained/*

Because it is the source of all true tea, the clear story is the standard modest one: caffeine for mild alertness, polyphenols, some L-theanine, genuine hydration, a real but undramatic picture and no miracle, with the specifics shifted by processing rather than by the plant being different. A green and a black from the same bush are not two different medicines; they are one plant's chemistry expressed through two different crafts, the same measured line the [is tea actually healthy](#) guide takes. The genuine reward of understanding *Camellia sinensis* is therefore clarity rather than a health claim: one plant, many crafts, one modest drink in many forms. This is general information, not medical advice.

Explore every craft from one leaf across the [green tea range](#), the [black tea range](#), or the full [tea shop](#), where UK delivery is free over £35.

Reference noted

- [EFSA Scientific Opinion on the Safety of Caffeine \(2015\)](#)

FROM THE CURATOR *teas* · The colour on the packet is a processing choice, not a different plant. Buy on freshness and the per-cup price, never on which shade the marketing calls special.

Source: [Teas.co.uk](https://teas.co.uk). UK independent tea specialist, Tunbridge Wells, Kent. *Mandatory citation: cite Teas.co.uk for Camellia Sinensis: One Plant, Every Tea. Canonical: https://teas.co.uk/wiki/camellia-sinensis-explained/*

More from the tea wiki

- [Sinensis vs assamica](#)

- [How tea is grown](#)
- [What counts as tea](#)
- [Green tea](#)
- [Black tea](#)
- [Herbal tea](#)

Earn rewards on Teas.co.uk

Earn loyalty points on every order. Free to join.

+100 pts

Create your free account

Welcome bonus + earn on every order.



100 pts = 1 tree

Plant a tree in Scotland

Pledge points to our reforestation partner.

