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.

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

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

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

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

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, sturdier 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

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?

Because it is the source of all true tea, the clear story is the standard modest one: some caffeine, polyphenols, a little L theanine, fluid, 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 real reward of understanding Camellia sinensis is therefore clarity rather than a claim about the body: 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 comes free with orders over £35.

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.

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- Sinensis vs assamica
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