

What's really in your morning

by
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The Wellness Column

There is something deeply comforting about the first cup of tea or coffee of the day. The sound of the kettle, the smell of coffee, anticipation for that first sip - a few quiet minutes before the messages begin. I am not about to suggest we abandon that ritual. But during my deep dive into all areas of wellness living, I have become increasingly curious about what, besides tea leaves or coffee beans, might be making its way into my cup.

We hear plenty about caffeine and sugar. We hear far less about where the leaves were grown, how the beans were handled, what materials surround them, or what happens when those materials meet hot water.

Tea - the leaf and the land

Tea begins as an agricultural crop, which means its growing conditions matter. **Pesticide residues and metals absorbed from the environment are legitimate subjects for testing.** Yet a finding in dry leaves is not necessarily the amount we drink: substances transfer into an infusion at different rates. Testing brewed tea gives a more useful picture of what reaches the cup.

Organic certification gives us useful information about growing practices. But it does not guarantee environmental contaminants are absent, and it says nothing about the material of the actual tea bag. Similarly, a named estate or region helps us understand provenance and flavour, but does not replace a laboratory result.

I would welcome more brands telling us both where their leaves come from and what they test for. If a company cites testing, I want to know the product, date and result rather than simply seeing the word "pure".

The bag in the brew

Here is an easily overlooked point: the bag is steeped along with the leaves. **Some bags use polypropylene to form a heat seal. Others use PLA, a plastic made from plant material** and sometimes marketed as "plant based" or "compostable". Those descriptions concern its origin or disposal; they do not mean that no polymer touches the hot water.

In a widely reported 2019 laboratory study, a plastic mesh tea bag released an estimated 11.6 billion microplastic and 3.1 billion nanoplastic particles when steeped at 95°C. Other researchers have questioned aspects of those counts, but studies of different bags also find particle release. A 2024 experiment found that particles released by tested tea bags could be taken up by human intestinal cell models. That does not of course establish what drinking tea from those bags does to a person's health.

Packaging can be confusing. A pyramid shape, a pale paper bag or the word "silken" cannot does not tell you what ends up in the water. Check the manufacturer's description



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of the mesh, seal and string.

There were three that came up trumps in my research - **Pukka, Yogi Tea** state they use unbleached paper or plant-cellulose bags with no polypropylene heat-seal and no nylon, polypropylene mesh or glue.

Hampstead Tea says its unbleached-paper bags are folded and cotton stitched, without glue or plastic in the brewing bag. These are manufacturer descriptions of bag construction, not independent proof that every bag or brew is particle-free.

The simplest way to take the bag out of the equation is loose-leaf tea or herbs in a stainless-steel infuser.

What about coffee?

Studies associate moderate coffee drinking with several favourable health outcomes, including for type 2 diabetes and liver health. Coffee contains caffeine and other bioactive compounds, including polyphenol anti-oxidants. But a reassuring headline about coffee cannot tell us the quality of an individual jar, bag or capsule.

Coffee is another crop whose growing, drying and storage matter. **Coffee is one of the most chemically treated crops in the world.** The global MRL database lists 42 pesticides used in coffee and according to CS Monitor over 113kgs (250 pounds) of chemical fertilisers are sprayed per 4000 m2 (1 acre) of normal conventional (non-organic) coffee. These are rather frightening figures! Thankfully in Europe there are limits for pesticide residues in coffee beans and for ochratoxin A in roasted and soluble coffee.

Ochratoxin A is made by certain moulds under poor handling or storage conditions. Acrylamide, meanwhile, forms during roasting; European rules also require food businesses to take steps to reduce it. Meeting a standard matters, but a dated product-specific laboratory report tells us more about the sample in question than an unqualified "clean coffee" claim.

I once assumed a slowly roasted bean must be the healthier choice because the heat would be gentler. The science is less tidy. Acrylamide can peak early in roasting and decline as roasting continues; variety, temperature and duration all affect the finished result.

The type of bean also is important - with Arabica seen as higher quality, compared to Robusta - which is more mass produced and often found in a cheaper jar of Instant coffee. "Slow roasted", "100% Arabica" and "organic" can each tell us something, but none independently establishes the finished coffee's contaminant levels.

"Instant" describes a preparation method, not proof of additives or unsafe coffee. But for coffee connoisseurs instant is not on their list. And decaf need not be dismissed: if you prefer to avoid solvent-based extraction, look for a process identified by the producer, such as Swiss Water. The point is to make an informed choice, not assume that an unfamiliar method is automatically harmful.

The capsule question

Single-serve capsules put another material in contact with hot water and coffee. In a 2025 UK study, researchers detected microplastics in coffee brewed from capsules. Their analysis linked some particles to the type of plastic in pods; parts of the machine also appeared to contribute. The study cannot tell us that every capsule releases the same amount, or what a particular exposure means for our health. It does give us a concrete reason to consider the materials in our brewing setup.

There are choices for those who love the convenience. Some capsules are aluminium with other materials in the lid or lining; reusable stainless-steel versions are available for some machines. Compostable pods may reduce waste when they reach an appropriate composting facility, but "compostable" does not mean plastic-free, nor does industrial certification mean a pod will break down in a home compost heap. Check the whole pod, and its certification.

Choosing your cup

If you drink coffee regularly and are watching LDL cholesterol, paper filtering removes much of the coffee oil associated with higher LDL in unfiltered brews. I might choose freshly ground beans, a paper filter and a glass or stainless-steel vessel. Someone else may favour a capsule for its ease. Either way, transparent sourcing and specific, dated tests are more persuasive than a superlative on the packet.

The **British brand Balance Coffee**, for example, publishes an accredited laboratory report for a sample received in August 2026, covering pesticides, mycotoxins and selected metals. Its ochratoxin A result was below that laboratory's quantification limit of 0.3 µg/kg. That is a result for the tested sample, not a lifetime guarantee for every bag; I would welcome comparable reports from more roasters.

In the United States there are numerous organic brands claiming to be tested for mould, pesticides, toxins and metals - too many to list but Purity, Biodynamic and Thrive Market are three top recommendations.

But sometimes I want neither tea nor coffee. A few slices of fresh ginger and lemon need no tea bag at all, and a few sprigs of lemon balm (Melissa) from the garden make a fragrant evening infusion. The aim is not a perfect, worry-free cup. It is to keep the pleasure of the ritual while knowing a little more about the choices inside it.

Detailed research references and product disclosures accompany the expanded version on MallorcaWellnessLiving.com