



Spice Purity Checklist

A GUIDE

A guide to what's actually in your spice jar.
7 label checks, 7 spice-by-spice home tests,
and the adulterant glossary you should know.



Did you know this?

31%+

of food samples failed FSSAI safety standards in its most recent annual report, spices among the worst offenders.

26-40%

of spice samples failed quality standards across various state-level FSSAI surveys.

14.5%

average failure rate for a major Indian spice exporter's US shipments since 2021, per regulatory data analysis.

60,000kg

of adulterated spice seized in a single Gujarat enforcement drive, April 2025.

3

spices flagged as having the highest adulteration rates in India: chilli, turmeric, and coriander

7

most-adulterated everyday spices covered with step-by-step home tests in this guide. Go ahead and test your spices.



PART 1 - BEFORE YOU BUY

7 things to check on every spice label.

Most of us judge spices by smell and color the two things that are easiest to fake.

Here's what regulators and food-testing labs actually look at first.

1 Look for a certified organic seal, not just the word "organic".

Anyone can print "organic" on a pack. A real certification mark (India Organic / NPOP, USDA, or Jaivik Bharat) means an independent, accredited body actually audited the farm and supply chain.

2 Ask if batch-level lab reports are available.

Brands confident in their purity will show you heavy-metal, pesticide-residue, and microbial test results on request. If a brand can't tell you when a batch was last tested, that itself is information.

3 Be suspicious of unnaturally bright, uniform color.

Vivid, flat, poster-paint yellow or fire-engine red can signal added dye (metanil yellow, lead chromate, Sudan dyes). Genuine spice color has natural variation, batch to batch.

4 Read the ingredient line, not just the front label.

Pure turmeric should say "turmeric"-nothing else. Anything listing starch, rice flour, or "permitted color" high up the ingredient list is being cut with filler.

5 Don't equate a stronger smell with a stronger spice.

Aroma depends on freshness, storage, and variety-not purity. An overpowering smell can just as easily mean a spice is oxidizing, not that it's more potent.

6 Feel the texture.

Clumping, grittiness, or a faint waxy feel can indicate moisture damage or added starch/chalk/soapstone-especially common in turmeric and Asafoetida (Hing).

7 Check how the spice was sterilized.

Look for "steam sterilized" on the pack. If it isn't mentioned, the spice may have been treated with Ethylene Oxide (EtO)-a fumigant banned in the EU and flagged in India's own 2024-25 Spices Board and FSSAI enforcement drives.



PART 2 - DO THIS AT HOME

Spice-by-spice purity tests.

FSSAI's own consumer-testing guidance and independent food-safety labs point to the same handful of kitchen-table tests.

None need special equipment just water, a clear glass, and a few minutes.

Turmeric Powder

Method Drop a teaspoon of turmeric into a glass of room-temperature water. Do not stir. Let it sit undisturbed for 15-20 minutes.

PURE : Settles at the bottom. Water above stays only lightly tinted and clear.

ADULTERATED : Water turns cloudy or a deep, immediate yellow before you've even stirred it.

(Detects: metanil yellow dye, chalk/starch filler)



Chilli Powder

Method Sprinkle a quarter teaspoon onto the surface of a glass of room-temperature water. Do not stir. Watch for 30-60 seconds.

PURE : Floats and colors the water slowly and evenly, no dramatic streaking.

ADULTERATED : Vivid red/orange streaks disperse immediately, or gritty sediment sinks fast to the bottom.

(Detects: Sudan dyes, brick powder, sawdust)



Black Pepper (Whole)

Method Press a peppercorn firmly between your thumbnail and index finger.

PURE : Hard and woody. Resists nail pressure, doesn't crush easily.

ADULTERATED : Softer seeds indent or crush under light pressure and look slightly rounder than true peppercorns.

(Detects: dried Papaya seeds - the #1 Pepper adulterant)





PART 2 - CONTINUED

Cumin Seeds / Powder

Method Add a teaspoon to a glass of water and stir once, gently. Let it settle.

PURE : Settles cleanly at the bottom. Color is even, light brown, no floating debris.

ADULTERATED : Husk, grass seed, or filler visibly floats to the surface and stays there.

(Detects: grass seed, husk, low-density filler)



Coriander (Seed & Powder)

Method For powder - spread a thin layer on a white plate and examine under a magnifying glass or phone macro lens. For whole seeds - rub a handful firmly between your palms.

PURE : Consistent brown-ochre color, no fibrous bits. Seeds leave no color on your palms.

ADULTERATED : Dark spots, fibrous specks under magnification, or black/colored streaks left on your palms after rubbing.

(Detects: sawdust, dung powder, artificial color)



Asafoetida (Hing)

Method Drop a small pinch into a cup of warm water and stir.

PURE : Dissolves into a smooth, milky-white emulsion with a strong, persistent aroma.

ADULTERATED : Leaves a gritty, gummy residue at the bottom, or the aroma fades unusually fast.

(Detects: excess gum arabic, rice flour, chalk filler)



Cinnamon

Method Look closely at a whole stick. This isn't adulteration, but it is routine substitution and cassia contains far more coumarin, a compound best limited in regular, high-dose use.

TRUE (CEYLON) : Soft, easily broken by hand, made of many thin, tightly rolled layers.

CASSIA : Hard, dense, curls from a single thick layer of bark. Sold as "cinnamon" almost everywhere by default.

(Harm: contains a lot of coumarin, which can be toxic to the liver in large quantities)





PART 3 - KNOW YOUR ADULTERANTS

The names worth remembering.

These are the adulterants regulators and testing labs flag most often in Indian spices. Recognizing the name on a lab report or news story is half the battle.

Metanil Yellow

An industrial dye used to brighten turmeric.
Not approved for food use in India; linked to organ toxicity with repeated exposure.

Sudan Red / Sudan Dyes

Industrial azo dyes (also used in shoe polish) added to chilli powder for a deeper red.
Classified Group 3 (possible carcinogen) by IARC.

Lead Chromate

A heavy-metal pigment used to intensify turmeric's yellow.
One of the most dangerous adulterants found in Indian spice testing.

Brick Powder, Sawdust & Chalk

Cheap, inert bulking agents added to increase weight in chilli and turmeric powder without adding any actual spice.

Papaya Seeds

Dried and mixed into whole black pepper the single most common pepper adulterant, due to near identical size and shape.

Starch & Rice Flour

Common low-cost fillers in ground spices and asafoetida, diluting both potency and nutritional value.



Where this guide comes from?

Compiled from FSSAI's public consumer adulteration-testing guidance and enforcement reports (2024-25 nationwide spice drives), the FSSAI Manual of Methods of Analysis of Foods (Spices & Condiments), peer-reviewed research on spice adulteration detection, and reporting on India's 2024 ethylene oxide spice-export findings.

This guide simplifies lab-grade indicators into safe, at-home checks it does not replace certified lab testing.



Certified organic. Steam sterilized. Zero chemicals. Start to finish.

Harela is India's first certified-organic spice brand to use steam sterilization instead of chemical fumigants like Ethylene Oxide, the same shift regulators in India, the EU, and the US are now pushing the entire industry toward. No added color. No filler. No shortcuts on anything this guide just taught you to look for.

Purity, Potency, Proof.
That's Harela for you.
Explore more at www.justgoodfood.shop