



Science of Spices: Turmeric

To Be Quite honest...

Turmeric is one of those things I didn't really pay any attention to. I pretty much ignored it until very recently. In 2020 during the height of the COVID – 19 pandemic, Turmeric was one of the natural remedies that could possibly have some protective or even curative effect. When I started my eating clean journey, I came across Turmeric very often as part of various recipes, I started to take notice.

Often called, “an anti-inflammatory Spice”, Turmeric is a powerful antioxidant due to its active ingredient Curcumin (don't confuse with Cumin), the chemical found in Turmeric and is thought to offer many health benefits including stress reduction, acid reflux, osteoarthritis and even cancer.

Most often consumed in tea form, the spice has a low side effect profile with documentation of potentiation of diabetic meds and blood thinners being reported.

Mysterious yet tasty, let's take a look at the science of this spice.

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TURMERIC

Woody • Floral • Bitter

Turmeric is a leafy tropical plant in the ginger family, which grows as a perennial in the wild.



General Facts

BOTANICAL NAME

Curcuma longa

MAJOR FLAVOR COMPOUND

Turmerone & ar-turmerone

PARTS USED

Rhizomes (fresh, dried, or powdered).

REGION OF CULTIVATION

Turmeric is thought to be native to India. It is cultivated mainly in that country (which produces 90% of all turmeric powder), but also in China, Thailand, Cambodia, Malaysia, Indonesia, and the Philippines.

METHOD OF CULTIVATION

This annual crop is grown in heavily manured furrows; rhizomes are harvested when the leaves turn yellow.

PREPARATION

Rhizomes are boiled and dried; they are then sold whole or ground to a powder

NON-CULINARY USES

Fabric dye, coloring agent in cosmetics; in traditional medicine as an anti-inflammatory and antimicrobial agent.

POWDER

There are two main types: Madras is brighter yellow and sweeter in taste than the pungent, earthy, ochre colored Alleppey turmeric, which is more prized.

FRESH

Zesty flavors are more prominent in raw rhizomes. Peel and then chop or grate them, like ginger.



Turmeric





Kitchen Creativity



Turmeric works well in complex blends, where its pungent earthiness acts as a base to help to bind other flavors together. Add sparingly if it is to be used on its own, so that the bitter notes do not overwhelm.

RELEASING THE FLAVOR

Frying in fat causes flavor compound molecules to disperse and form new compounds. This only happens above 266°F (130°C), so does not occur in boiling water.



Food Partners



White fish.

Stir together turmeric, yogurt, and crushed garlic, and then spoon over fish fillets before grilling.



Lamb and pork.

Combine with paprika, lightly crushed cumin, and oil for a meat rub, and massage into the skin before roasting.



Squash and cauliflower.

Mix a teaspoonful with oil and honey, and toss with vegetables before roasting.



White chocolate.

Add a good pinch to cupcake batter along with chunks of white chocolate.



Pickles.

Include this slices of fresh rhizome in fish and vegetable pickles.



Blends to Try

Hawaij

A curry-like Yemeni blend, popular in slow-cooked meat dishes and soups and as a spice rub.

- 1 tbsp. black peppercorns
- 7 tsp. cumin seeds
- 1 tbsp. cardamom seeds
- 1 tbsp. coriander seeds
- 2 tbsp. ground turmeric

Grind the whole spices and combine with the turmeric.

Niter kibbeh

This spiced clarified butter is used as the flavorful base fat for many regional African dishes, including hearty wat meat stews.

- 1 lb. 2 oz. (500g) unsalted butter
- 1 medium onion, finely chopped
- 2 garlic cloves, finely chopped
- 1 tbsp. grated ginger
- 1 tsp. fenugreek seeds
- 1 tsp. ground cumin
- 1 tsp. cardamom seeds
- ½ tsp. turmeric powder
- 1 tsp. dried oregano
- 6 basil leaves
- 4 sage leaves

Melt the butter in a pan over medium-low heat. Add the remaining ingredients and cook, stirring, for 20 minutes. Strain through muslin into a sterilized jar.



Blends to Try

Malaysian fish curry paste

This classic fusion paste can be used to make a quick fish curry by mixing it with coconut milk and simmering with chunks of any firm white fish.

- 2 tsp. coriander seeds
- 1 tsp. cumin seeds
- ½ tsp. fennel seeds
- ½ tsp. black peppercorns
- 4 medium dried chillies
- ½ tsp. turmeric powder
- thumb-sized piece of galangal, peeled and chopped
- 3 garlic cloves, chopped
- 5 tbsp. shallot, chopped

Lightly roast the whole dry spices in a frying pan, leave to cool, then grind to a powder along with turmeric. In a food processor or using a hand blender, blitz together the galangal, garlic, and shallots with a splash of water to form a puree. Mix the dry masala with the fresh puree to form curry paste.



Source: Dr. Stuart Farrimond 'The Science of Spices'.