

## CURCUMIN USE FOR HEALTH BENEFITS

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### ABSTRACT

Turmeric (*curcuma longa*) is a flowering plants of the ginger family with a long history of medicinal use due to its potent anti-inflammatory properties. Its most active constitutes is curcumin which has been put to use as a foodstuff, cosmetics & medicines. It is widely used as a spice in south Asian & middle eastern cooking, it lends curry it's distinctive yellow color and flavor. It is used as a coloring agent in cheese butter & other foods. Turmeric, a spice that has long been recognized for its medicinal properties, has received interest from both the medical/scientific world and from culinary enthusiasts, as it is the major source of the polyphenol curcumin. It aids in the management of oxidative and inflammatory conditions, metabolic syndrome, arthritis, anxiety, and hyperlipidemia. It may also help in the management of exercise-induced inflammation and muscle soreness, thus enhancing recovery and performance in active people. In addition, a relatively low dose of the complex can provide health benefits for people that do not have diagnosed health conditions. Most of these benefits can be attributed to its antioxidant and anti-inflammatory effects. Ingesting curcumin by itself does not lead to the associated health benefits due to its poor bioavailability, which appears to be primarily due to poor absorption, rapid metabolism, and rapid elimination. There are several components that can increase bioavailability. For example, piperine is the major active component of black pepper and, when combined in a complex with curcumin, has been shown to increase bioavailability by 2000%. Curcumin combined with enhancing agents provides multiple health benefits. The purpose of this review is to provide a brief overview of the plethora of research regarding the health benefits of curcumin.

**KEYWORDS:** It is widely used as a spice in south Asian & middle eastern cooking, it lends curry it's distinctive yellow color and flavor.

### INTRODUCTIONS

Curcumin is a component of the India spice turmeric (*curcumin longa*) a type of ginger. Curcumin is one of three curcuminoids present in turmeric, the other two being desmethoxycurcumin and bisdesmethoxycurcumin. These curcuminoids give turmeric it's yellow color and curcumin is used as a yellow food colorant and food additive.

The Arthritis Foundation cites several studies in which turmeric has reduced inflammation. This anti-inflammatory ability might reduce the aggravation that people with arthritis feel in their joints. The foundation suggests taking turmeric capsules of 400 to 600 milligrams (mg) up to three times per day for inflammation relief.<sup>[1]</sup>



### Synonyms

Indian Saffron; Haldi; Curriculum; Rhizoma curcumae.

### Biological Source

Turmeric is the dried rhizome of *curcuma longa* linn. Belonging to Family Zingiberaceae.

### Geographical source

The plant is a native to southern asia & is cultivated extensively temperate regions. It is grown on a larger scale in india, china. east indies & pakistan.

### Organoleptic Characters

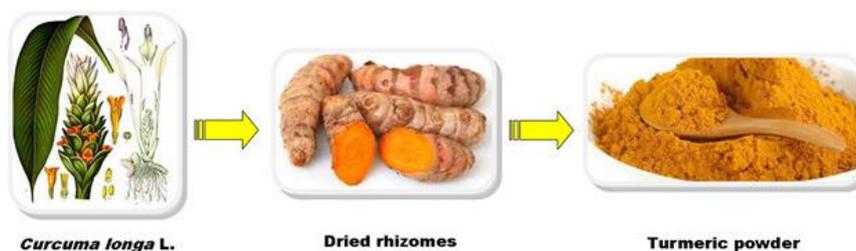
- External-Yellowish to Yellowish-brown
- Internal-Yellowish-orange
- Odour- Characteristics
- Taste-Slightly bitter

- Size- 2 to 5 cm in length & 1 to 2 cm thickness
- Shape- Ovate or oblong

### Cultivation and collection

Early Varieties mature in 7-8 months & medium Varieties in 8-9 months. When leaves turn. Yellow & starts drying it means that the Crop is ready for harvesting. At maturity, leaves are closely cut to the ground, the land is plowed well & rhizomes are collected. By handpicking or with spade clumps.

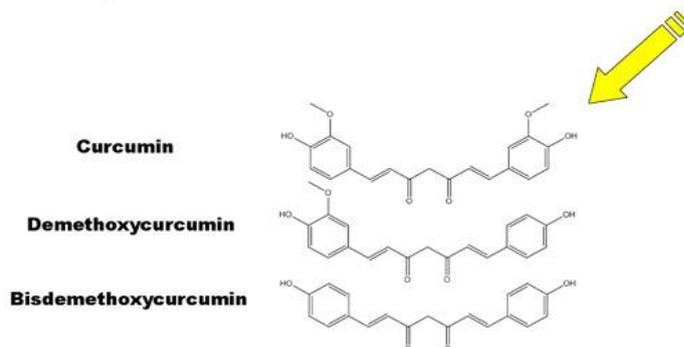
The land is ploughed and the rhizomes are gathered by hand picking or the clumps are carefully lifted with a spade. Harvested rhizomes are cleaned of mud and other extraneous matter adhering to them. The average yield per hectare is 20-25 tonnes of green turmeric.



*Curcuma longa* L.

Dried rhizomes

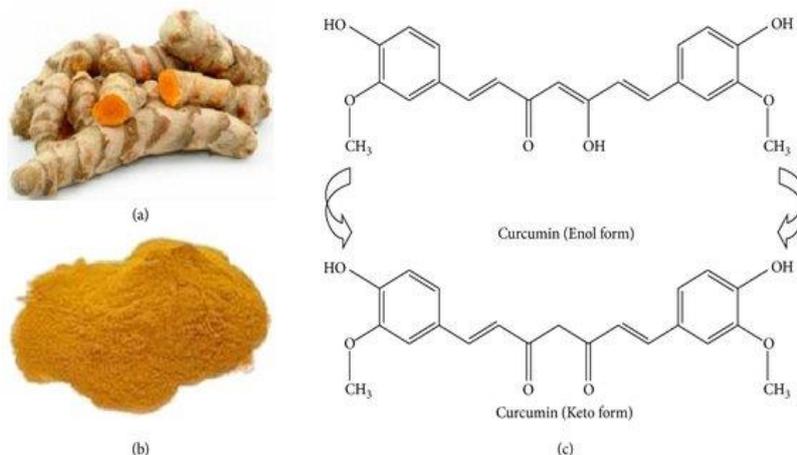
Turmeric powder



**Chemical constituent**

Turmeric contains about 5%. Curcumanoids as a colouring matter. The curcumanoid contains curcumine – I. Curcumin – II, Curcumin – III. Turmeric contains about 5%. Volatile oil, Their Volatile oil Contains

sesquiterpenes, alcohol & ketone & monoterpene example, zingiberone, turmerone, artemerone, alcohol-p-tylmethyl Carbenol, cineole, borneole etc. It also contains arabinose, Fructose, glucose. & starch grains.<sup>[3]</sup>



According to the United States department of agriculture, National nutrient database one tablespoon of turmeric powder contains source:-29 calories, 0.91grams (g) of protein fiber, 0.3 g of sugar etc.

**Uses**

In india, it was traditionally used for disorder of the skin, upper respiratory tract joints, & digestive system. Today, turmeric promoted as a dietary supplement for a variety of conditions, including arthritis, digestive disorders, respiratory infections, allergies, liver disease, depression & many other.<sup>[5,6]</sup>

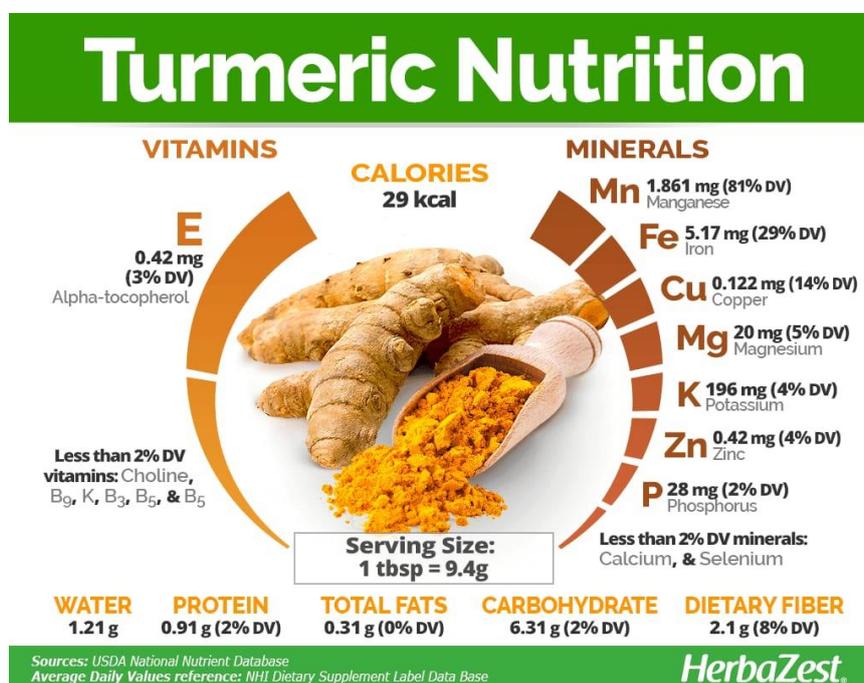
**Property**

The Arthritis Foundation cites several studies in which turmeric has reduced inflammation.

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**Variety**

These are Roma, Swarna, Sudarshana suguna, Sugandham, Ranga, Rasmi, Lakadong turmeric etc.



**Nutritional value of turmeric**

Spices, turmeric, ground, 1 tsp Protein (g) 0.17 Fiber, total dietary (g) 0.46 Calcium, Ca (mg) 4.03 Iron, Fe (mg) 0.91 Magnesium, Mg (mg) 4.25 33 more rows Nutrients per Serving Calories: 19. Protein: 0.6 grams. Fat: 0.2 grams. Carbohydrates: 4 grams. Fiber: 1.4 grams. Sugar: 0,2 grams.<sup>[7]</sup>

**CONCLUSION**

Curcumin has received worldwide attention for its multiple health benefits, which appear to act primarily through its anti-oxidant and anti-inflammatory mechanisms. These benefits are best achieved when curcumin is combined with agents such as piperine, which increase its bioavailability significantly. Research suggests that curcumin can help in the management of oxidative and inflammatory conditions, metabolic syndrome, arthritis, anxiety, and hyperlipidemia. It may also help in the management of exercise-induced inflammation and muscle soreness, thus enhancing recovery and subsequent performance in active people. In addition, a relatively low dose can provide health benefits for people that do not have diagnosed health conditions.

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