**HERBALPEDIA**

**TURMERIC**

*Curcuma longa*

[KER-koo-muh LONG-uh]

**Pharmaceutical Name:** Rhizoma Curcumae

**Family:** Zingiberaceae

**Names:** Indian saffron; Indian Yellow Root; curcuma, Safran des Indes, Terre-mérite, Souchet des Indes (French); Kurkuma, Curcuma, Indischer Safran, Gelbwurz, Gelbwurzel (German); Curcuma (Italian); Ukon (Japanese); Arishina (Kannada); Romiet (khmer); Khi min kun (Laotian); Kunyit basah (Malay); Huva (Malayalam); Halede (Marathi); Gurkemeie (Norwegian); Zard-choobag (Pahlawi); Zarchoba (Pashto); Klacze kurkumy (Polish); Açafraão da India, Curcuma (Portuguese); Haldi (Punjabi); Zholty imbir (Russian); Haridra, Marmari (Sanskrit); Kaha (Singhalese); Haldi (Hindi); curcuma, Azafrán arabe (Spanish); Manjano (Swahili); gurkmeja (Swedish); wong geung, Yu chin, Yu jin, Jiang huang (Chinese); kunjit, kunyit, Daun kunyit-leaves (Indonesian); kamin (Thai); Gurkemeje (Danish); Geelwortel, Kurkuma (Dutch); kanghwang (Korean); kyoo (Japanese); Ird (Amharic); Kurkum (Arabic); Halodhi (Assami); Halud (Bengali); Hsanwen, Sa nwin, Sanae (Burmese); Harilik kurkuma (Estonian); Keltajuuri (Finnish); Halad, Sal dar (Gujrati); Kurkuma, Sárga gyömbérgyökér (Hungrian); Türmerik (Icelandic); Dilaw (Tagalog); Manjal (Tamil); Pasupu (Telugu); Kha min (Thai); Zerdeçal (Turkish); Haladi (Urdu); Cu nghe (fresh), Bot nghe (dried and ground) (Vietnamese)

**Description:** Tender perennial native to India, Chine, the East Indies. Grows to 2 feet high. Has a multi-rhizomatous rootstock each of which is cylindrical and varies in size from 2 to 3 in. tapering at each end. Large, fragrant, ovoid roots, with deep orange flesh, send up large lance-shaped leaves in tufts. Clusters of pale yellow flowers in dense spikes appear from late spring to midsummer.

**Cultivation:** Grows in rich loamy soil in humid conditions. It is propagated by small pieces of root planted 4 in deep and 12 in apart. To harvest: the whole clump of the rhizome is lifted carefully to prevent any damage, and the fingers are broken off from the larger rhizomes. The turmeric is boiled or steamed, then dried. The outer skin is removed and the rough brown fingers become orange-yellow and waxy to the touch. About 180,000 tons of cured turmeric are produced in India annually of which 92% is consumed within the country.

**History:** In some languages, the names of turmeric just mean “yellow root”. English (turmeric) derives from the French terre-mérite meaning “meritorious earth” probably because ground turmeric resembles mineral pigments (ocher). Turmeric was used in Biblical times as a perfume as well as a spice. The earliest record of turmeric comes from an ancient Assyrian herbal in about 600 BC. Some say it came into use in the West through the sun-
worshippers of Persia when their supply of saffron ran out.

Turmeric held a place of honor in India’s traditional Ayurvedic medicine. A symbol of prosperity, it was considered a cleansing herb for the whole body. Medically, it was used as a digestive aid and treatment for fever, infections, dysentery, arthritis, and jaundice and other liver problems. In Hindu ceremony it represents fertility. Turmeric boiled with milk and drunk last thing before going to bed is considered to be the best medicine for an irritating dry cough.

Traditional Chinese physicians also used turmeric to treat liver and gallbladder problems, stop bleeding, and treat chest congestion and menstrual discomforts.

In the 1870s, chemists discovered turmeric’s orange-yellow root powder turned reddish brown when exposed to alkaline chemicals. This discovery led to the development of “turmeric paper,” thin strips of tissue brushed with a decoction of turmeric, then dried. During the late 19th century, turmeric paper was used in laboratories around the world to test for alkalinity. Eventually, it was replaced by litmus paper. In the Middle Ages it was called “Indian or Eastern saffron.”

The shepherds of Nepal cook their rice in turmeric. Before they set out to herd their sheep high in the mountains, they daub the turmeric paste upon the chakra between their eyebrows. It is believed that this will provide blessings, success and protection when driving their sheep on long, perilous journeys through the mountain path.

In Indonesia, rice dyed with turmeric has traditionally formed part of the wedding ritual feast, and it was the custom for the bride and groom to tinge their arms with the coloring also. In the same country, it was traditionally smeared on the abdomen of women after childbirth and applied as an ointment to the cut cord of the baby, both for healing and as a protection against evil spirits.

In India they say that the external application of turmeric suppresses the unwelcome growth of hair on female skin. In parts of Asia turmeric water is used as a cosmetic, to lend a golden glow to the complexion. It was once widely used as a body paint. In India, they also believe that sometimes tree spirits leave their homes and enter into human beings, in which case they have to be exorcised. The exorcist detects the presence of the spirit by lighting a piece of turmeric root, because no ghost can stand the smell of burnt turmeric.

**Nutritional profile.** One teaspoon ground turmeric has 8 calories. It provides 0.2 g protein, 0.2 g fat, 1.4 g carbohydrates, 4 mg calcium, 0.9 mg iron and 0.6 mg vitamin C

** Constituents:** mainly turmerone (60%), with ar-tumerone, artlantones, zingiberene, cineol, borneol, sabinene, and phellandrene

**Properties:** cholagogue, choleretic, emmenagogue, aromatic stimulant, alterative, analgesic, astringent, antiseptic

**Energetics:** spicy, bitter, warm

**Meridians/Organs Affected:** heart, liver, lung

**Medicinal Uses:** Turmeric is a choleretic, an agent that stimulates the liver to increase its production of bile. This yellow brown or green fluid helps emulsify fats in your duodenum and increases peristalsis, the rhythmic contractions that move food through your gastrointestinal tract.

Turmeric is also a cholagogue, an agent that stimulates the gallbladder and biliary duct to discharge bile and increases your body’s excretion of cholesterol. Turmeric is useful for preventing and treating cholesterol, according to Commission E. In one study, mice with experimentally induced gallstones were placed on special feed containing a modest amount of curcumin, and within five weeks their gallstone volume had dropped 45%. After ten weeks they had 80% fewer gallstones than untreated mice. Choleretics and cholagogues are ordinarily beneficial for healthy people but may pose some problems for people with gallbladder or liver disease. Some other
choleretic herbs are ginger, oregano and peppermint.

The fleshy tuber-like rhizome is used. It contains a volatile oil and a water-soluble yellow pigment. Its usefulness as a gallbladder remedy in the narrower sense has been demonstrated. The cholagogue and choleretic action is quite powerful, and recent investigations have shown it to be primarily due to the yellow pigment. The drug is prescribed as a tea or infusion: Curcuma rhizome, chopped....Add 1 tablespoonful to a glass of water and boil briefly. 3 glasses per day. Curcuma infusion DRF: curcuma rhizome infusion 6.0/180.0 and Peppermint water to make 200.0.....1 tablespoonful three times daily.

A daily dose of ¼ tsp of turmeric strengthens the body’s immune defenses in as little as one week. The credit goes to turmeric’s antioxidants, which stimulate immune cells to divide rapidly during viral attacks.

The people of Java call this plant temoe lavak. In India and other Asian countries it has a long tradition as a popular remedy for jaundice and liver disease. There is no doubt that it can be effective, particularly where bile flow needs to be thoroughly stimulated, but it is doubtful if it achieves more than our native drugs, and indeed unlikely, as it is not always indicated. Above all it lacks spasmylytic and carminative properties. The yellow pigment has a marked irritant effect on the gastric mucosa, so that caution in indicated where there is a tendency to hyperacidity or where there is simple irritable stomach.

To treat minor wounds, wash them with soap and water, then sprinkle on some powdered herb and bandage. For an infusion to help aid digestion and possibly help promote heart health, use 1 teaspoon of turmeric powder per cup of warm milk. Drink up to 3 cups a day. These infusions may also offer a measure of protection to the liver and help ease the inflammation of arthritis. Turmeric tastes pleasantly aromatic, but in large amounts, it becomes somewhat bitter.

Turmeric regulates the menses, relieves menstrual pains and helps reduce uterine tumors. Used externally or internally, turmeric promotes healing in cases of trauma or injury. In India, it’s a traditional ulcer treatment and in animal studies it’s been shown to stimulate the stomach lining to produce more protective mucus.

In Chinese medicine, turmeric invigorates the blood and unblocks menstruation; for chest or abdominal pain, amenorrhea, or dysmenorrhea due to blood stasis caused by cold from deficiency. Also used for pain and swelling due to trauma. It promotes the movement of qi and alleviates pain; for epigastric and abdominal pain due to stagnant qi. It expels wind and promotes the movement of blood; for wind-dampness painful obstruction with blood stasis, especially in the shoulders. Contraindicated in cases of blood deficiency without stagnant qi or blood stasis.

Research shows: Turmeric is a powerful anti-inflammatory. It has an even stronger action than hydrocortisone, according to research studies conducted between 1971 and 1991.

When applied to the skin and exposed to sunlight, turmeric is strongly antibacterial. Curcumin is the constituent responsible for this action. Curcumin is also more strongly antioxidant than vitamin E. In lab and animal studies, it’s been shown to protect LDL cholesterol from being “oxidized. In India, in 1992, researchers gave ten healthy volunteers a half a gram of turmeric a day for seven days. That’s an amount you might get in your diet if it includes curry. They measured the level of oxidative by-products of blood cholesterol. After a week, it fell 33%. Blood cholesterol fell, too, by 12%. Turmeric can also dilate blood vessels, so it may lower blood pressure as it’s done in animal studies. Research is also being done with HIV.

Turmeric may be a valuable preventive remedy for those at risk of developing cancer.

Aromatherapy:
EXTRACTION METHOD: by steam distillation from the ‘cured’ rhizome – boiled, cleaned and sun-dried. An oleoresin, absolute
and concrete are also produced by solvent extraction.

CHARACTERISTICS: a yellowy-orange liquid with a faint blue fluorescence and a fresh spicy-woody odor.

BLENDS WELL WITH: cananga, labdanum, elecampane, ginger, orris, cassie, clary sage, mimosa

ACTIONS: analgesic, anti-arthritic, anti-inflammatory, anti-oxidant, bactericidal, cholagogue, digestive, diuretic, hypotensive, insecticidal, laxative, rubefacient, stimulant

USES:
*Circulation, Muscles and Joints:* arthritis, muscular aches and pains, rheumatism
*Digestive system:* anorexia, sluggish digestion, liver congestion
*Other:* employed in perfumery work for oriental and fantasy-type fragrances. The oleoresin is used as a flavor ingredient in some foods, mainly curries, meat products and condiments

Toxicity: Turmeric’s potential anticlotting effect might cause problems for those with clotting disorders. If you have a blood-clotting problem, discuss this herb’s effect with your physician before using medicinal preparations. Unusually large amounts of turmeric may cause stomach upset.

Other Uses: It is a substantive dye that gives bright colors on wools, basketry materials, cottons, and silks. It is also a good, clear yellow to mix with other colors when top dyeing. The use of mordants may make turmeric more fast. Put the turmeric powder in the soft water and stir well while bringing to hand-heat. Enter the clean, thoroughly wetted wool. Slowly bring the bath to simmer and simmer gently for 2 minutes, stirring lightly to move the wool about. Remove a skein and hold it to drip over the dyebath for a few moments. Rinse the wool in hot soft water and squeeze gently; then rinse in cooler water and squeeze gently again. Label the skein and hang it to dry in the shade. Continue simmering the wool still in the bath or another 2 minutes, and remove a second skein. Rinse, label, and dry as before. Simmer remaining wool in the bath for another few minutes and remove another skein, and continue as before until all the wool has been dyed. Ten minutes will give a brilliant yellow. Although turmeric needs no mordant, chrome and tin will both give interesting colors. The yellow can also be used for top-dyeing with walnut. Turmeric is a very strong, brilliant dye, but it does not last well over the years.

Culinary uses: Turmeric has a mild, slightly bitter, peppery flavor and aroma that comes from oil of turmeric, which contains peppery-scented, mint-flavored borneol; spicy eucalyptol, which smells like camphor; and zingerone, the spicy sweet flavoring in ginger. Turmeric reaches the West partly in pure form, which becomes coloring for sauces and syrups, an ingredient of some liqueurs and cheeses; and formerly also of butter and margarine. But its role in ready-made curry powder is the primary one. Turmeric is very sensitive to sunlight and should, like curry powder, be stored in darkness. Avoid using turmeric when cooking green vegetables as they will turn grey and bitter. The leaves of the turmeric plant can be dried and used to flavor ghee. The leaves can also be used to wrap foods like fish or sweets before steaming. The leaves are an important ingredient in Malay and Indonesian cooking, especially in rending, the spicy, tasty meat dish particular to these regions. They are shredded finely and added to curries and other dishes. Shredded turmeric leaves can also be used as a garnish. The leaves smell rich and sweet.

Recipes:
*Crisp Fried Eggplants*
1 tsp turmeric
1 tsp cayenne powder
1 tsp coriander powder
1 tsp cumin powder
salt
4 Tbsp semolina
2 large eggplants
corn oil for frying
Mix together the spices, salt and semolina. Then cut the eggplants into discs, ¼ inch thick. Heat a little oil in a skillet. Coat each disc with the spiced semolina and sauté in hot oil, turning over until both sides are crisp and golden. Remove with a slotted spoon and drain on a paper towel. Serve immediately. Discs tend to become soggy when cold so do not sauté in advance. (The Indian Spice Kitchen)

Spiced Potatoes and Carrots
1 lb potatoes, diced and parboiled
1 lb carrots, diced and parboiled
1 tsp cumin seeds
1 tsp ground coriander
½ tsp turmeric
1 little lemon juice
1 Tbsp fresh cilantro, chopped
oil
salt

Heat the oil and put in the cumin seeds. Stir these round for a few seconds before quickly adding the potatoes, stirring as you do so. Now add the ground coriander and turmeric and cook on a medium heat for 3 minutes or so, stirring continuously. Put in the carrots and salt at this point, and turn down the heat to low. Give the mixture a good stir and then cover and cook for 10-15 minutes. Check that the potatoes and carrots are cooked and then squeeze on some lemon juice. Served garnished with the cilantro leaves. (The Spices of Life)

Cold Spiced Chicken
3 T plain yogurt
½ tsp garam masala
½ tsp ground turmeric
salt
6 chicken breasts, skinned
2 ½ cups chicken stock
4 green cardamoms
1 curry leaf or bay leaf
Sauce
1 oz butter
1 T gram flour
½ T plain flour
½ tsp garam masala

½ tsp ground turmeric
2 cups reserved chicken stock
½ tsp ground mace
¼ tsp ground cardamom
¼ cup heavy cream or thick yogurt

Blend together the yogurt, garam masala, turmeric and salt to taste. Rub the chicken breasts with the mixture and marinate for 1 hour. Heat the stock with the cardamoms and curry leaf. Put in the chicken breasts and simmer for 15-20 minutes or until tender. Lift out the chicken and transfer to a serving dish. Strain and reserve the stock. Leave to cool while making the sauce. Melt the butter in a pan and stir in the flours until smooth. Add the garam masala, turmeric and a little salt, then whisk in the reserved stock. Bring to the boil and simmer for 15 minutes, stirring occasionally. Stir in the mace, cardamom and cream or yogurt. Spoon over the chicken and chill before serving. (The Complete Book of Spices, Jill Norman, Dorling Kindersley, 1990)

Classic Indian Curry Powder
6 dried red New Mexican chiles, seeds and stems removed, or 4 small hot dried red chiles, such as piquant seeds and stems removed
¼ cup cumin seeds
¼ cup coriander seeds
2 Tbsp whole black peppercorns
1 Tbsp mustard seeds
1 tsp cardamom seeds
1 tsp whole cloves
1 tsp fenugreek seeds
1 Tbsp ground turmeric
1 Tbsp dried powdered curry leaves

Preheat the oven to 250 degrees. Place the chiles, cumin and coriander seeds, peppercorns, mustard and cardamom seeds, cloves, and fenugreek seeds in a baking pan and place in the oven. Roast for 15 minutes, taking care that none of the spices burn. Grind these spices in a spice mill to a fine powder. Mix the ground spices with the turmeric and the curry leaves and seal in an airtight jar. (A World of Curries, Dave Dewitt & Arthur Pais, Little Brown)

Golden New-Potato Salad
1 ¾ lbs new potatoes (about 12), scrubbed
½ tsp whole cumin seeds
2 tsp ground turmeric
½ tsp yellow or brown mustard seeds
1/3 cup plain nonfat yogurt
1/3 cup low-fat mayonnaise
¼ cup fresh lemon juice
1½ Tbsp snipped chives
Kosher salt and freshly ground pepper
2 celery stalks, diced
1 medium bell pepper, seeded and diced
1 small red onion, peeled and diced

Put potatoes in a large pot, and cover them with cold water. Cover the pot and bring it to a boil over high heat. Reduce the heat to a high simmer, and cook, uncovered, until the potatoes are easily pierced with the tip of a knife, but not mushy, 20-30 minutes. Drain and set aside to cool. Heat a dry skillet over high heat for 30 seconds. Add the cumin, turmeric, and mustard seeds, and reduce the heat to medium. Toast, shaking the pan and moving it on and off the heat as necessary to prevent scorching, until the spices are aromatic, 3-5 minutes. Transfer to a spice mill, and grind into a fine powder. In a medium bowl, combine the yogurt, mayonnaise, lemon juice and chives. Stir in the ground spices, and salt and pepper to taste. Put the potatoes in a large bowl, cutting any large ones in halves or quarters. Add the celery, bell pepper, onion, and dressing. Toss gently so that potatoes don’t fall apart until all the ingredients are well combined. Cover and chill for at least an hour for the flavors to combine. The salad may be made a day ahead. (Tonics)

**Monkfish sofrito**
2 Tbsp sunflower oil
1 clove garlic, minced
juice of 1 lemon
1/2 tsp turmeric
a cardamom pod, cracked
6 Tbsp fish stock or water
salt and pepper to taste
1 ½ lb monkfish, cut into four pieces
parsley or coriander leaves to garnish

Heat the oil in a pan large enough to hold the fish in a single layer. Add the garlic, lemon juice, turmeric, cardamom, stock and seasoning. Slowly bring to boil. Add the fish pieces, cover and cook gently for 10-15 minutes or until the fish is cooked, turning the pieces frequently and adding a little water if the liquid evaporates. Transfer the fish to a warmed serving dish, pour over the sauce and sprinkle with chopped parsley or coriander. (The MacMillan Encyclopedia of Spices and Natural Flavorings)

**Kedgeree**
1 medium onion, finely chopped
2 Tbsp oil
1 tsp turmeric
1 ½ tsp Garam Masala
6 oz long-grain rice
1 pt fish stock or water
10 oz cooked smoked fish, roughly flaked
salt and white pepper
2 oz butter, melted
2 hard-boiled eggs, roughly chopped
fresh parsley, chopped

Fry the onion in the oil until it begins to brown. Add the spices and rice and cook for a minute more, stirring well to coat the grains. Pour in the stock or water, bring to the boil and simmer, covered, for 20 minutes or so, until all the water is absorbed and the rice is al dente. Add the fish and season. To serve, stir in the melted butter and chopped eggs over a moderate heat for a minute or two, correct seasoning and sprinkle with parsley. (The Hot and Spicy Cookbook)

**Krupnikas (Liqueur)**
2 rhizomes dried ginger
2 rhizomes dried turmeric
1 Tbsp caraway seeds
10 whole cloves
10 whole allspice
3 sticks cinnamon
1 vanilla bean
10 cardamom pods
½ whole nutmeg
rind from one fresh orange
rind from one fresh lemon
pinch of saffron
4 cups water
2 lbs honey
1 quart 190-proof alcohol

Crack rhizomes of ginger and turmeric with a kitchen mallet or other heavy object. Add with the rest of the spices to the 4 cups of water and bring to a boil in a saucepan. Turn the heat to low and simmer, uncovered, for about an hour. It should be reduced by half. Turn off the heat and allow to steep while you prepare the honey. In another large heavy saucepan bring the honey slowly to a boil while skimming off the foam. Strain the spice water into the honey and remove from the heat. Slowly stir in the alcohol. Bottle and allow to age six months. (Ginger: East to West)

Gobi Dum (Cauliflower)
2 lb cauliflower
5 Tbsp ghee, mustard oil or any other cooking oil
1 pinch of asafetida
1 tsp cumin seeds
salt to taste
½ tsp chili powder
1 inch piece fresh root ginger, peeled and cut into slivers
½ tsp ground turmeric
1 ½ tsp ground coriander
½ tsp garam masala
1 Tbsp lemon juice
2 Tbsp natural yogurt
2 Tbsp fresh coriander leaves, finely chopped

Wash and cut the cauliflower into small florets with long, thin stems. Heat the ghee or oil in a wok or a non-stick frying pan. If using mustard oil, heat to smoking point, then reduce the heat. This takes away the pungency and gives the oil a sweet flavor. Add the asafetida and cumin seeds. Fry for 20 seconds and then add the cauliflower florets and cover tightly and leave for 1-2 minutes. Remove the lid and stir-fry again for 1-2 minutes. Cover tightly and leave on a medium heat for a further 1-2 minutes. The cauliflower should now have a brownish appearance. Repeat this process until the cauliflower is a golden brown, taking care not to burn it. Lower the heat, add the salt, chili powder, ginger, turmeric, coriander, garam masala, lemon juice and yogurt, if used. Mix well, cover tightly and cook on a low heat until the cauliflower is tender, about 10-15 minutes. Serve sprinkled with the fresh coriander. (A Taste of Kashmir)

Roast Turkey
9 lb turkey
1 green pepper, finely chopped
2 tsp ginger
2 onions, finely chopped
2 cups half-cooked brown rice
2 Tbsp vinegar
2 tsp turmeric
2 tsp black pepper
2 tsp garam masala

Preheat oven to 325F. Wash the turkey and remove its skin. For the stuffing, mix together the green pepper, ginger, onions, and rice, 1/2 tsp vinegar and pack it into the bird. Prepare a paste of turmeric, black pepper, garam masala and the rest of the vinegar. Rub it onto the bird. Cover with foil and bake in the oven for 20 minutes for each pound. Baste frequently with butter and the turkey's own fat. Remove the foil to brown the turkey 20 minutes before taking it out of the oven. (Creative Cooking with Spices)

References:
Chinese Herbal Medicine Materia Medica, Dan Bensky & Andrew Gamble, Eastland Press, 1993
Dyes from Plants, Seonaid Robertson, 1973, Van Nostrand Reinhold
Exotic Spices, Rosamond Richardson, Salem House, 1985
Ginger East to West, Bruce Cost, Aris, 1984
Herbal Medicine, Rudolf Fritz Weiss, MD, 1988
Herbs and Spices: A guide to culinary seasoning, edited by Waverley Root, 1985
The Healing Herbs, Michael Castleman, Rodale Press, 1991
The Hot and Spicy Cookbook, Sophie Hale, Quintet Publishing, 1983
The Illustrated Encyclopedia of Essential Oils, Julia Lawless, Element, 1995
The Indian Spice Kitchen, Monisha Bharadwaj, Dutton, 1997
The Spices of Life, Troth Wells, Second Story Press, 1996
A Taste of Kashmir, Geeta Samtani, Merehurst Ltd, 1995