

FAQs

1: Write notes on Common types of spices from their sources:

These are major sources of spices, they are classified according to their edible parts

- Fennel, mustard, and are seeds
- Cinnamon are barks
- Cloves are dried buds of flowers
- Turmeric, ginger and galangal are roots and rhizomes
- Mace is aril of nutmeg fruit
- Saffron is the stigma of the flower
- Asafetida is the resin or dried sap of the tree

2: What are the main constituents of ginger?

The main constituents in ginger are phenolic compounds such as gingerols and shogaols, and sesquiterpenes such as zingiberene. These and other compounds are extracts found in ginger oleoresin. The main pungent flavor chemicals are the gingerols, which are not volatile.

3: Explain what are the Medicinal properties of turmeric?

The activities of turmeric include antibacterial, antiviral, anti-inflammatory, antitumor, antioxidant, antiseptic, cardio protective, hepato protective, nephro protective, radio protective, and digestive activities.

4: Mention the importance and uses of *Myristica fragrans*?

The most important commercial species is *Myristica fragrans*, it is ever green tree. Nutmeg is the seed, roughly egg-shaped dried, while mace is the dried aril and it is used in powder form. Several other commercial products are also produced from the trees, mainly essential oils, oleoresins and nutmeg butter. Nutmeg is used for flavouring many dishes, usually in ground or grated form. It is also used in small quantities in garam masala and essential oil from nutmeg is used widely in the perfumery and pharmaceutical industries.

5:Explain health benefits of Turmeric?

In India, turmeric has been used as a remedy for stomach and liver ailments, as well as topically to heal sores, basically for its supposed antimicrobial property. In the Siddh system (since around 1900 BCE), turmeric was a medicine for a range of diseases and conditions, including those of the skin, pulmonary, and gastrointestinal systems, aches, pains, wounds, sprains, and liver disorders. A fresh juice is commonly used in many skin conditions, ie, scabies,allergy,chiken pox and eczema. The active compound curcumin is believed to have a wide range of biological effects including anti-inflammatory, antioxidant, antitumour, antibacterial, and antiviral activities, which indicate potential in clinical medicine.

6:Explain in detail what is Cumin and phyto-chemicals present in it?

Cumin has been used therapeutically used for thousands of years and it has healing as well as curative properties.

- Cumin seeds contain numerous phyto-chemicals that are known to have antioxidant, carminative and anti-flatulent properties. The seeds are an excellent source of dietary fiber.
- Its seeds contain health-benefiting essential oils ie, *cuminaldehyde* (4-isopropylbenzaldehyde),*pyrazines*, *2-methoxy-3-sec-butylpyrazine*, *2-ethoxy-3-isopropylpyrazine*, and *2-methoxy-3-methylpyrazine*.
- It improves gut motility and help in digestion by augmenting gastro-intestinal enzyme secretions.

7:Write notes on Coriander and its essential volatile oils?

Coriander is commony used spice in India, its characteristic aromatic flavor of coriander seeds comes from their essential volatile oils and fatty acids.

Some important fatty acids in the dried seeds include *petroselinic acid*, *linoleic acid* (omega 6), *oleic acid*, and *palmitic acid*. In addition, the seeds contain essential oils such as *linalool*

(68%), *a-pinene* (10%), *geraniol*, *camphene*, *terpine* etc. These active compounds are responsible for digestive, carminative, and anti-flatulent properties of the seeds.

8: Explain health benefits of Ginger?

Ginger contains a substance called 6-gingerol, which may have protective effects against cancer. Oxidative stress and chronic inflammation can accelerate the aging process. They are believed to be among the key drivers of Alzheimer's disease and age-related cognitive decline. Some studies in animals suggest that the antioxidants and bioactive compounds in ginger can inhibit inflammatory responses that occur in the brain. There is also some evidence that ginger can enhance brain function directly.

9: Define the Medicinal properties of chilies?

Chilis, *capsicum*: Medicinal properties.

Capsaicin is considered a safe and effective analgesic agent in case of arthritis pain, herpes zoster-related pain, diabetic neuropathy and headaches. Red chilies contain large amounts of vitamin-C and small amounts of carotene (provitamin A). Yellow and especially green chilies (which are essentially unripe fruit) contain a considerably lower amount of both substances. In addition, peppers are a good source of most B vitamins, Vitamin B₆. They are very high in potassium, magnesium, rich in vitamin -C as well as iron.

The substances that give chili peppers their intensity when ingested or applied topically are capsaicin (8-methyl-*N*-vanillyl-6-nonenamide) and also other few chemicals, it is collectively known as capsaicinoids. **Capsaicin** are chemically (8-methyl-*N*-vanillyl-6-nonenamide), it is a volatile, hydrophobic, colourless, waxy compound.

10: Explain, Cloves and its aromatic compounds ?

Cloves are the aromatic flower buds, tree is ever green and commonly used as spice in many countries since centuries. Cloves contain strong germicidal phenolic chemical, eugenol and also cloves have approximately 16-18% essential oil content which contains

the antimicrobial compound eugenol. It exhibit strong inhibitory antimicrobial effects against food borne pathogens.

11: Importance of mustard seeds?

Mustard seeds contain a hygroscopic integument containing lignin, cellulose, hemicellulose and mucilage, oil, sugars. 100 g of mustard seeds provide 4.733 mg of **niacin** (vitamin B-3). Niacin is a part of nicotinamide co-enzymes that helps in lowering of blood cholesterol and triglyceride levels. It is a rich in oil and also high in calories ie 100g of seeds provide 508 calories, quality proteins, essential oils, omega 3 fatty acid, vitamins, minerals, and dietary fiber.

Mustard seeds and its oil has traditionally been used to relieve muscle pain, rheumatism and arthritic pain and pickle preparation

12: Capsicum: Medicinal properties?

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13: Explain what is Eugenol?

Eugenol is a member of the phenylpropanoids class of chemical compounds. It is present in concentrations of 80–90% in clove bud oil and at 82–88% in clove leaf oil. It is used in perfumeries, flavorings, essential oils and in medicine as a local antiseptic and anaesthetic.

14: Mention what is oleo-gum-resin and ealth benefits with eg?

Asafoetida oleo-gum-resin has been reported to be antiepileptic in other form of medicins and the main form of treatment for people with epilepsy. This spice is used as a digestive aid, in food as a condiment, and in pickling. Acifidity Bag. Asafoetida was approved by the US Pharmacopedia to stave off the Spanish flu epidemic of 1918 that killed millions worldwide. It was placed into pouches called "acifidity bags" that were provided by drug stores to be hung around the neck to try to prevent catching the disease

15: Define Why to include spices in our diet?

The active principles in the spices will help in smooth digestion through augmenting intestinal tract motility as well as increasing the digestion power by stimulating excessive secretion of gastro-intestinal enzymes inside the gut.

Thyme is also being used as an anti-septic mouth wash in the treatment of caries and gingivitis.

Decoction of certain healthy spices is taken by mouth for the treatment of colds, influenza, mild fevers, indigestion, stomach upset, and painful menstruation. Spices are also known to have natural anti-helminthes (control worm infestation) function in traditional medicines.