

## Common Spices used in North Indian Kitchens and Their Medicinal Importance

Sanjive kumar, Manish K Srivastav

Department of Chemistry K A P G College, Allahabad, India

### Abstract

Spices are very important part of food. They provide aroma, taste, colour and flavour to the food materials. Current study is based on the common spices used in North Indian kitchens like Cumin, Coriander, Fennel, Fenugreek, Ajwain, True Cardamom, Black Cardamom, Clove, Curry Leaves, Nutmeg, Cinnamon, Black pepper, Chilli Pepper, Asafoetida, Black Caraway and Bay Leaves . Our objective was to study the medicinal importance of these spices. The study showed that these spices have several medicinal properties like Anti Bacterial, Anti Fungal, Antioxidant, Anti Diabetic, Anti Carcinogenic, Anti Viral, Anti Inflammatory, Analgesic, Cardio Protective, Hepatoprotective, Hypotensive, Hypolipidemic, Hypocholesterolemic, Anti Hypertensive, Anti Diarrheal, Anti depressant, Gastro protective and Anti ulcerogenic.

**KEYWORDS-** spices, antioxidant, Hypocholesterolemic, Hepatoprotective

### Introduction

Spices are very important part of Indian food. In North Indian Kitchens several types of spices are used like Cumin, Coriander, Fennel, Fenugreek, Ajwain, True Cardamom, Black Cardamom, Clove, Curry Leaves, Nutmeg, Cinnamon, Black pepper, Chilli Pepper, Asafoetida, Black Caraway and Bay Leaves etc. Spices provide colour, taste, flavour and aroma to the food materials. In addition these spices have several medicinal properties. These spices are widely used in the traditional methods of medicines and also the part of several preparations used to treat different diseases in India. The objective of this study is to compile the studies related to the medicinal properties of spices used in daily households in North India.

### Methodology

In the current study first the spices commonly used in North Indian kitchens were recognized with the study of nearby kitchens. In the next step the literature related to these spices are collected with the help of organized search. The searches were performed using various data base including PubMed (<http://www.ncbi.nlm.nih.gov/pubmed>), Scopus (<http://www.scopus.com>), Scirus (<http://www.scirus.com>), Science Direct (<http://www.sciencedirect.com>), Google Scholar (<http://www.scholar.google.com>).

### Medicinal Properties of spices

#### Cumin

Cumin (botanical name- *Cuminum Cyminum*) is belongs to family Apiaceae. It is commonly known as Jeera in Hindi. Its seed are very popular spice used in almost every dish of north Indian kitchens. It is the main constituent of several ayurvedic medicines used to enhance digestion (59). It also has Antimicrobial (17), Anti cancer (15), Anti Diabetic (49) Hypolipidemic (28), Antioxidant (17) and Diuretic (51) properties.

### **Coriander**

*Coriandrum Sativa* is commonly known as dhania in Hindi and Coriander in English. It belongs to family Umbelliferae. Its leaves as well as seeds and seeds powder is used as spices in Indian kitchens. It has several medicinal properties like Antioxidant (10), Antifungal (51), Anti bacterial (51), Hepatoprotective (85), Anti Diabetic (25), Hypo lipidemic (5) and Anti diarrheal (37) properties.

### **Fennel**

*Foeniculum Vulgare*, Which is commonly known as saunf in Hindi and Fennel in English is a very common spice used in Indian Kitchens for aroma and as a mouth freshener. It belongs to Apiaceae family. It is found to be useful as Antioxidant (60), Antifungal (51), Anti bacterial (51), Hepatoprotective (68), Anti diabetic (32), Anti-inflammatory (23), Analgesic (23) and Anti carcinogenic (60) agent.

### **Fenugreek**

*Trigonella Foenum-graecum* is known as fenugreek in English and methi in Hindi. It belongs to family fabaceae. Its leaves and stem is used as a vegetable while seeds are used as spice in Indian Kitchens. It is used traditionally in Indian households to treat stomach problems. Several studies showed its Antioxidant (7), Anti Carcinogenic (58), Hypo Cholesterolic (77), Hypo Glycaemic (77), Hepato protective (18), Gastro protective (58), Anti bacterial (74) and Anti diabetic (81) properties.

### **Ajwain**

*Trachyspermum Ammi* is commonly known as ajwain in Hindi As well as in English. It belongs to apiaceae family. Its seeds are commonly used to treat gas and stomach pain in Indian houses. It is proved to be useful in Bacterial infections (47), fungal infections (47), Hypertension (16), fever (16), Liver problems (16), Gastric problems(17) , reduce plasma lipid (16) and as Insecticide (70).

### **True Cardamom**

*Elettaria Cardamomum* is known as True Cardamom in English and Elaichi in Hindi. Its seeds are used as flavouring and aromatic agent in Indian food. It is also used as a mouth freshener by Indians. It belongs to Zingiberaceae family. Several Studies showed its Anti Microbial (14), Gastro protective (45), Anti Inflammatory (12) , Analgesic (12), Antioxidant (13) and Insecticide (39) properties.

### **Black Cardamom**

*Amomum Subulatum* is also known as black Cardamom in English and Badi Elaichi in Hindi. It belongs to family Zingiberaceae. It is found to be useful as Anti Microbial (14), Antioxidant (29), Hepato protective (72), Hypo lipidemic (35), Anti Inflammatory (7), Analgesic (83), Cardio Protective (93) and Anti Ulcer (42) agent.

### **Clove**

*Syzygium Aromaticum* is commonly called clove in English and Laung in Hindi. It is a member of myrtaceae family. It is commonly used to treat tooth ache in Indian households. It is proved by several studies that clove can be used as Antioxidant (27), Anti fungal (75), Anti bacterial (27) and Anti Carcinogenic (31) agent.

### **Curry Leaves**

*Murraya Koenigii* is called curry leaves in English and Curry Patta in Hindi. It belongs to family rutaceae. Its leaves are the main Ingredient of several dishes of north and south India. It is useful to protect from liver diseases (69), High Blood Pressure, Diabetes (30), Cancer (94), Microbial infections (76), Ulcer (82) and Diarrhoea (56). It is also used as antioxidant (51), Analgesic (36), Anti Inflammatory (36), Skin Protector and Memory Enhancer (90).

### **Nutmeg**

*Myristica Fragrans* is known as Nutmeg in English and Jaiphal in Hindi. It is from myrtaceae family. Its seeds are used as spices. Several studies proved its medicinal properties like Anti microbial (26), Anti diabetic (38), Antioxidant (63), Anti inflammatory (67), Hypo lipidemic (78), Hypo Cholesterolemic (80), Hepto protective (61), Memory Enhancer (71), Sexual Power enhancer (89) and Insecticides (44) activities.

### **Cinnamon**

*Cinnamomum Verum* is commonly called Cinnamon in English and Dalchini in Hindi. It belongs to Lauraceae family. It is used as mouth freshener in common household. It has several medicinal properties like Anti microbial (22), Anti inflammatory (53), Anti diabetic (46), Hypo lipidemic (48), Hypo Cholesterolemic (48), Antioxidant (29), Hepto protective (62) and Anti Carcinogenic (19). It is also useful to treat cardiac (40) and neurological problems.

### **Black pepper**

Black pepper is commonly known as kali mirch in Hindi. Its botanical name is *Piper Nigrum*. It belongs to piperaceae. Several studies showed its medicinal properties like Antioxidant (36), Antibacterial (21), Anti fungal (91), Gastro protective (54), Anti inflammatory (84), Anti carcinogenic (87), Hepto Protective (41), Analgesic (73) and Anti Diarrheal (50) properties.

### **Chilli Pepper**

*Capsicum annum*, which is commonly known as Lal Mirch in Hindi and Chilli Pepper in English is used to add flavour and taste in food. It belongs to family. It has Anti oxidant (57) and Anti microbial (24) properties.

### **Asafoetida**

Asafoetida is the dried latex excluded from the rhizomes of *Ferula Assafoetida* plant. It is commonly known as Hing in Hindi. Several studies showed its Antifungal (35), Anti Diabetic (1), Anti Carcinogenic (52), Anti Ulcerogenic (3), Cancer Chemo preventive (52), Hypotensive and Anti viral (52) properties. It is also useful in Digestive (71) problems.

### **Black Caraway**

Black Caraway is also known as Kalongi in Hindi. Its Botanical name is *Nigella Sativa* and it is related to Ranunculaceae family. It shows several medicinal properties like Anti microbial (64), Anti Inflammatory (9), Hypo Glycemic (8), Gastro protective (6), Anti Carcinogenic (88), Antioxidant (35), Cardio Protective (2) properties and also used to treat respiratory problems.

### Bay leaves

Its botanical name is *Laurus Nobilis* and common name in Hindi is Tez Patta. It belongs to family Lauraceae. It is the main ingredient of garam masala which is the main spice used in north Indian kitchens daily. Several studies showed that it has Antioxidant (62), Anti Bacterial (21), Anti cancer (11), Anti inflammatory and Analgesic properties.

S. No.	Medicinal property	Spices used
1.	Antioxidant	Cumin(17), Coriander(10), Fennel(60), Fenugreek(7), True Cardamom(13), Black Cardamom(29), Clove(27), Curry Leaves(51), Nutmeg(63), Cinnamon(29), Black pepper(36), Chilli Pepper(57), Black caraway(35), Bay leaves(62).
2.	Anti bacterial	Cumin(38), Coriander(51), Fennel(51), Fenugreek(74), Ajwain(47), True Cardamom(14), Black Cardamom(14), Clove(27), Curry leaves(76), Nutmeg(26), Cinnamon(22), Black pepper(21), Chilli Pepper(24), Black Caraway(64), Bay leaves(21)
3.	Anti fungal	Cumin(38), Coriander(51), Fennel(51), Ajwain(47), True Cardamom(14), Black Cardamom(14), Clove(75), Curry leaves(76), Nutmeg(26), Cinnamon(22), Black pepper(91), Chilli Pepper(24), Black Caraway(64), Asafoetida(35)
4.	Anti viral	Asafoetida(52)
5.	Anti septic	Black caraway(9), Bay leaves(64)
6.	Anti diabetic	Cumin(49), coriander(25), Fennel(32), Fenugreek(81), Curry Leaves(30), Nutmeg(38), Cinnamon(46), Asafoetida(1)
7.	Anti cancer	Cumin(15), fennel(60), Fenugreek(58), Clove(31), Curry leaves(94), Cinnamon(19), Black pepper(87), Asafoetida(52), Black Caraway(88), Bay leaves(11)
8.	Anti ulcer	Black Cardamom(42), Curry Leaves(82), Asafoetida(3)
9.	Anti inflammatory	Fennel(23), Ajwain(16), True Cardamom(12), Black Cardamom(7), Curry leaves(36), Nutmeg(67), Cinnamon(53), Black pepper(84), Black Caraway(9)
10.	Analgesic	Fennel(23), True cardamom(12), Black cardamom(83), Curry leaves(36), Black pepper(73), Black Caraway(9)
11.	Cardio Protective	Black Cardamom(93), Cinnamon(40), Black Caraway(2)
12.	Hypolipidemic	Cumin(28), Coriander(5), Ajwain(16), Black Cardamom(35), Nutmeg(78), Cinnamon(48)
13.	Diuretic	Cumin(51), Ajwain(16)
14.	Hepatoprotective	Coriander(85), Fennel(68), Fenugreek(18), Ajwain(16), Black Cardamom(72), Curry

		Leaves(69), Nutmeg(61), Cinnamon(62), Black Pepper(41)
15.	Anti diarrheal	Coriander(37), Curry Leaves(56), Black Pepper(50)
16.	Gastro protective	Fenugreek(58), Ajwain(17), True Cardamom(45), Black Pepper(54), Black Caraway(6)
17.	Hypocholesterolemic	Fenugreek(77), Nutmeg(80)
18.	Hypoglycemic	Fenugreek(77), Curry leaves(43), Black Caraway(8)
19.	Memory Enhancer	Curry leaves(90), Nutmeg(71)
20.	Sex power Enhancer	Nutmeg(89)
21.	Digestion Enhancer	Cumin(59), Asafoetida(71)
22.	Insecticide	Ajwain(70), True Cardamom(39), Nutmeg(44)

## Conclusion

The above studies showed that there are several spices commonly used in North Indian Kitchens daily like Cumin, Turmeric, Coriander, Fennel, Fenugreek, Ajwain, True Cardamom, Black Cardamom, Clove, Curry Leaves, Nutmeg, Cinnamon, Black pepper, Chilli Pepper, Asafoetida, Black Caraway and Bay Leaves etc. These spices has several medicinal properties like Anti Bacterial, Anti Fungal, Antioxidant, Anti Diabetic, Anti Carcinogenic, Anti Viral, Anti Inflammatory, Analgesic, Cardio Protective, Hepatoprotective, Hypotensive, Hypolipidemic, Hypocholesterolemic, Anti Hypertensive, Anti Diarrheal, Anti depressant, Gastro protective and Anti ulcerogenic. They are also useful to treat skin, eye, respiratory and neurological problems. They are also useful in Memory, Digestion and Sex power enhancer. The current study discussed about the medicinal properties of spices however there is a further scope for comparative studies.

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