The Pharma Innovation Journal 2019; 8(9): 503-506

www.ThePharmaJournal.com

The Pharma Innovation

ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.03
TPI 2019; 8(9): 503-506

www.thepharmajournal.com
Received: 24-07-2019
Accepted: 28-08-2019

Mohd Yasir
Assist Prof, Department of Moalijat, RUMCH, Jaipur, Rajasthan, India

Tarannum Khanam
Assist Prof, Department of Ilmul Advia, RUMCH, Jaipur, Rajasthan, India

M.H.M Hafeel
Senior Lecturer, Institute of Indigenous Medicine, University of Colombo

Correspondence
Mohd Yasir
Assist Prof,Department of Moalijat RUMCH, Jaipur, Rajasthan, India

A review on Kishneez (*Coriander sativum* Linn.): A potential herb

Mohd Yasir, Tarannum Khanam and M.H.M Hafeel

Abstract
Plants have been one of the inaugural sources of medicines since the beginning of human civilization. Now days there are an increasing demand for plant based medicines which pave way for the prevention of chronic diseases. One such plant with great potential is Coriander. Coriander is annual herb belonging to the family Apiceae is valued for its culinary and medicinal uses. Kishneez is the dried ripe fruit of *Coriander sativum*, the whole plant and especially unripe fruit is characterized by a strong disagreeable aroma when rubbed. It is cultivated throughout India. Coriander is mentioned in the Eberus papyrus and in the writings of Cato and Pliny. In Unani system of medicines it is indicated in *Sahr, Suda, Dawar, Zoaf-e-Qalab, Zoaf-e-Meda, Nafakh-e-Shikam, Zofa-e- Dimagh, Khafqan, Zaghtuddam Qawi, Tabkheer, Humuzat-e-Medi,* etc. The fruit (seed and pericarp) are the most widely used components of the coriander plant with the most important constituent being the essential oil and the fatty oil. Due to presence of many of bioactives, different pharmacological activities have been attributed to different parts of this herb. The aim of this review is to support the health benefits of Kishneez and to draw further awareness to the herbal plant.

Keywords: Kishneez, plants, dried ripe, medicinal uses, unani

Introduction
Kishneez is the dried ripe fruit of *Coriander sativum* Linn, of family Umbelliferae [4, 16]. It is indigenous to Italy but is widely cultivated in Netherland, Central and Eastern Europe, Mediterranean, (Morocco, Malta, Egypt), China, India and Bangladesh [4, 16, 17]. The whole plant and especially unripe fruit is characterized by a strong disagreeable odour, hence the name coriander (from the greekK'opis, a bug) giving characteristics aroma when rubbed [18].
It is cultivated throughout India for its seeds and leaves [6, 15], like Karnataka, Tamil Nadu, Maharashtra, Rajasthan, Madhya Pradesh, Bihar etc. [18, 19]. Coriander is mentioned in Eberus papyrus (111 BC) and in the writings of Cato and Pliny. It is well known in England before the Norman Conquest [16].
Coriander is generally grown as rain fed crops and of 92-105 days duration. The time of sowing varies in different localities, it may be grown-up in India from May to September or from October to January as second crop. Black soil, red or black loam and silt are best suited. Before sowing the fruits are rubbed till the two mericarps are separated and sown either broadcast or in rows [6, 21]. Seeds are thrashed and dried when ripe [17].
It has been used for a number of therapeutic purposes since ancient times and is mostly indiated in *Sahr, Suda, Dawar, Zoaf-e-Qalab, Zoaf-e-Meda, Nafakh-e-Shikam, Zofa-e-Dimagh* [7, 20], *Khafqan, Zaghtuddam Qawi, Tabkheer, Humuzat-e-Medi* [2] due to its *Munnawim, Mubarrid, Musakkin, Mohallil, Muqawwi, Muffreh, Habis wa Qabiz* actions [5, 7, 12].

Botanical name: *Coriander sativum* Linn [4, 7, 18, 23].

Family: Umbelliferae (Apiaceae) [4, 7, 18, 21, 23].

Table 1: Vernacular Names [5, 6, 11].

English	Coraiander, collender, coriander fruits
Italian	Coriandolo
Greek	Koriannon, Korion
Chinese	Yuan sui, Hu-sui
Turkish	Kisnis
Russian	Koriandr, Koljandra
Arab	Kuzbara, Kuzbura
Persian	Geshnes (Kishneez)
Spanish	Coriander, Collender, Coriander fruits
Hindi	Dhaniya, Dhania, Kottmir
Urdu	Kishneez, Dhania
Sanskrit	Dhanika, Dhania, Vitunnaka, Kustumbari
Kashmiri	Dhaniawal, Dhanawal
Oddiya	Dhania
Punjabi	Dhania
Marathi	Dhaue
Tamil	Kottamalli, Viral dhania
Telagu	Dhaniyalu
Kannad	Havija, Kothambaribija, Kothambri
Gujrati	Dhana, Kenphir, Dhanis

Description

Coriander is annual herb [4, 15] upto 90 cm tall or (20 to 140 cm) depending on Agro climatic condition [15, 23].

Leaves are oval, slightly lobed, lower leaves are broader while the upper ones are narrow [15, 23].

Stems are erect, thin, symbodial, monochasial, and branched with several side branches at the basal node [23].

Flowers are small, white often pinkish – purple tingled in terminal compound umbel and blooming in the month of February to March [15, 23].

Root spindle shape [23].

Fruits are globular or ovate, mericarps usually united by their margin forming a cremocarp about 2-4 mm in diameter, uniformly brownish-yellow or brown, glabrous, sometime crowned by remains of sepals and styles, primary ridges 10, wavy and slightly inconspicuous secondary ridges 8, straight. The fruit have an aromatic odour and a spicy taste [4, 5, 16]. The fruit (seed and pericarp) are the most widely used components of the coriander plant with the most important constituent being the essential oil and the fatty oil (Fatty oil is around 25% of the seed, essential oil is less than 1%) [23].

Parts Used

Berg-e-kishneez, Tukhme kishneez khushk [2, 4]

Table 2: *Afaal* (Action) of *Kishneez*

Munawwim (Hypnotic) [12]
Musakkin [14] (Sedative), *Musakkin Alam wa Harart* [1, 2, 5]
Mubarrid (Refrigerant) [4, 10]
Mohallil-e-Waram (Resolvent) [2, 3]
Mane/Dafe Tabkheer [10, 18]
Muffreh Qalb (Exhilarant) [5, 18]
Muffreh Dimagh [5, 18]
Muqawwi Qalb (Tonic to Heart) [11, 20]
Muqawwi Meda (Tonic to Stomach) [11]
Mudirr-e-Baul (Diuretic) [4]
Kasir-e-Riyah (Carminative) [7, 20]
Mushtahi (Appetizer) [11, 20]
Qabiz (Astringent) [5, 20]
Dafe Khafqan wa Waswas [11]
Habis (Styptic) [7, 10]

Table 3: *Istemaalat* (Uses) of *Kishneez*

Sahr (Insomnia) [18]
Suda (Headache) [1, 2, 11]
Dawar (Vertigo) [1, 2, 5]
Zoaf-e-Qalb (Weakness of Heart) [1, 2, 4, 5]
Zoaf-e-Meda (Weakness of Stomach) [1, 2, 4, 5]
Zoaf-e- Dimagh (Brain Weakness) [1, 2, 5]
Nafakh-e-Shikam (Flatulence) [1, 2, 4,7, 20]
Humuzat-e-Medi (Hyperacidity) [2]
Ishaal (Diarrhoea) [1, 2, 4, 20]
Tabkheer [1]
Kasrat-e-Shawat (Increase Libido) [20]
Khafqan (Palpitation) [4, 11]
Shiddat-e- Atash (Thirst) [10]
Qula (Stomatitis) [10]
Dard-e-Halaq (Pain in Throat) [10]
Sual-e-Atfaal (Cough) [10]
Dama (Asthma) [10]

***Miqdar* (Dose):** 5-7 gram [4, 10, 20].

***Mizaj* (Temperament)**

According to Buqrat its temperament is Cold and dry (2nd degree).

Cold and dry (2nd degree) or Cold (2nd degree) and Dry (3rd degree) [10].

Cold and Dry (2nd degree) or *Murakkabul quwah* [2].

Cold and Dry (2nd degree) [1, 11].

Hot (1 degree) [24].

***Muzarrat* (Toxicity)**

Zahan ko khrab karta hai [11].

Mojib-e-Nisyaan [11, 12].

Mohllil-e-Mani [9, 10, 11].

Sudad [10, 11].

Table 4: *Musleh* (Correctives) and *Badal* (Substitutes) of *Kishneez*

***Musleh* (Correctives)**	***Badal* (Substitutes)**
Biryan karna [10, 11]	*Tukhm-e-Kahu, Tukhm-e-Khashkhash* [4,10, 12]
Shahad (Honey) [10, 11]	*Barg-e-Sudab* [7]
Sikanjabeen Safarjali [11]	
Baiza-e-MurgNeem barisht [10]	
Maghz-e-Badam, Tukhm-e-Kahu [7]	

***Murakkabat* (Compound Formulation)**

Itreefal Kishneezi [11, 12].

Itreefal Zamani [20].

Itreefal Sanai [20].

Khameera Gauzaban [5, 20].

Jawarish Shahi [5, 20].

Qurs Ziabetes Sada [5, 20].

Arq-e- Musaffi Khoon [5, 20].

Tiryaq-e-Nazla [1, 2].

Sufoof-e-Tabkheer [2].

Sufoof-e Hazim [2].
*Dawa-ul-Misk Motadil Sad*a [5, 20].
Khameera Gauzaban Ambari Jawahar Wala [5, 20].

Table 5: Ethanobotanical Description

Sedative [15, 26]
Aromatic [13, 23]
Carminative [18, 19, 22]
Digestive [15]
Diuretic [18, 22]
Stimulant [15, 18, 21]
Tonic [6, 22]
Aphrodisiac [6, 22]
Astringent [15]
Diaphoretic [18]
Dyspeptic [23]
Antibilious [4, 19, 22]
Refrigerant [19, 22]
Stomachic [21, 22]
Antispasmodic [6]

Table 6: Ethanobotanical Uses

Insomnia [18, 26]
Headache [18, 19, 26]
Dysentery [18, 19, 23]
Chronic conjunctivitis [18]
Foul breath [6, 22]
Dyspepsia [6, 23]
Burning sensation of the body [18]
Cephalagia [6, 22]
Chronic ulcers [6]
Carbuncles [6]
Indigestion [17, 23]
Nausea [19]
Flavouring agent [19]
Loss of appetite [18]
Convulsions [18]
Anxiety [23, 26]
Urinary system [23]
Respiratory system [23]
Anorexia, Flatulence, Pain, Vomiting [26]

Major Active Constituents of *Coriander sativum* [4, 16, 19].

Essential oil	0.8-2.6%
Fatty oil	19-20% (mixture of glycerides of palmitic, oleic, linoleic, andpetroselenic acid)

Prominent constituents of the essential oil
Linalool 15-25%

Minor active constituents of the essential oil
Monoterpenes hydrocarbons (*Viz.* α- pinene, limpnine, ϒ–terpinene, p-cymene, citronellol, camphor, geraniol, and gerniol acetate, heterocyclic component like pyrazine, pyridine, thiazol, isocoumarins, coriandrin, dihydrocoriandrin, coriandrons A-E, flavonoids, pthlides, neochidilide, digustilide phenolic acid and sterols [16, 18, 19].

Pharmacological Activities
Sedative Hypnotic Activity: *Coriandrum sativum* L. has been suggested for relief of insomnia in Iranian traditional medicine. To establish sedative & hypnotic activity Aqueous and hydroalcoholic extract & essential oil administer to rat. The outcome of experiment shows that aqueous extract prolonged pentobarbital-induced sleeping time at 200, 400 and 150 mg/kg. Hydro-alcoholic extract at doses of 400 and 150 mg/kg improved pentobarbital- induced sleeping time compared to saline-treated group. The essential oil increased pentobarbital induced sleeping time only at 150 mg/kg. The extracts and essential oil of coriander seeds have sedative-hypnotic activity [34].

Anti-Anxiety Activity: *Coriandrum sativum* L. has been recommended for relief of anxiety and insomnia in Iranian folk medicine. The anxiolytic effect of aqueous extract (10, 25, 6, 100 mg/kg, i.p.) was examined in male albino mice using elevated plus-maze as an animal model of anxiety. The effects of the extract on spontaneous activity and neuromuscular coordination were assessed using Animex Activity Meter and rota rod, respectively. In the elevated plus-maze, aqueous extract at 100 mg/kg showed an anxiolytic effect by increasing the time spent on open arms and the percentage of open arm entries, compared to control group. Aqueous extract at 6, 100 and 15 mg/kg significantly reduced spontaneous activity and neuromuscular coordination, compared to control group. These results proposed that the aqueous extract of *Coriandrum sativum* seed has anxiolytic effect and may have potential sedative and muscle relaxant effects [35].

Hepatoprotective Activity: Ethanolic extract was found to be rich in alkaloids, phenolic compounds and flavonoids, isoquercetin and quercetin. *C. sativum* signify hepatoprotection against carbon tetrachloride (CCl4), by falling the liver weight, activities of SGOT, SGPT, and ALP, and direct bilirubin of CCl4 intoxicated animals. Administration of *C. sativum* extract at 300 mg/kg dose resulted in loss of fatty deposit, ballooning degeneration and necrosis, indicating antihepatotoxic activity [36].

Conclusion
There many herbal plants in the world and Kishneez is one of them considered to be having good medicinal value. The pharmacological action of Kishneez mentioned in Unani literature suggesting that this drug has huge potential in modern pharmaco-therapeutics. This review discuses and compiles the information about its morphology, temperaments, substitute, toxicity, chemical constituents, pharmacological action, uses and pharmacological studies which may be useful for future studies.

References

1. Kabiruddin H. Makhzanul-Mufridat, S. H Ofset Printer, 2007, 222.
2. Usmani MI. Tanqihul-Mufradat, Famous offset Press Delhi, 2008; 201:202.
3. Ali M. Textbook of Pharmacognosy, CBS Publishers and Distributors PVT. LTD, 2015, 175, 439.
4. Anonymous. Standardization of Single drugs of Unani Medicine, Part 1, CCRUM, Ministry of Health and Family Welfare, Govt. of India, New Delhi, 1987, 190-195.
5. Nadhkarni KM. Indian Plants and Drugs, Popular Prakashan Pvt. Ltd., Bombay. 1982; II:381-383.
6. Rafiquddin M. Kanzul-Advia Mufrada, University publication Unit, Sarfaraz House, A.M.U, Aligarh, 1985, 554.
7. Anonymous. Qarabadin Sarkari, CCRUM, New Delhi, 2006; II:113.

8. Anonymous. Qarabadin Hamdard, Hamdard Dawakhana. New Delhi, 1967, 30.
9. Fatima G, Siddiqui A, Chaudhary. "*Coriander sativum* Linn. Traditional, Biochemicaland Biological activities, Journal of Drug Delivery and Therapeutics. 2019; 9(3):513-516.
10. Ghani HN. Khazain-ul-Advia CCRUM, New Delhi, 2010, 704-706.
11. Hakeem MA. Bustan-ul-Mufradat, IdaraKitab-us-Shifa, New Delhi, 2002; 22-24, 138-39, 106.
12. Haleem HMA. Mufradat-e-Azizi, CCRUM, New Delhi, 2009; 13(16):18-32.
13. Kirtikar, Baso BD. Indian Medicinal Plants with Illustration, 2nded, Uttaranchal Oriental Enterprises. 2003; 5:1325-1327.
14. Amiri MS, Joharchi MR. Ethnobotanical Investigation of Traditional Medicinal Plants Commercialized in the Markets of Mashhad, Iran. Avicenna Journal of Phytomedicine, 2013; 3(3):254-71.
15. Sharma R. Medicinal Plant of India – An Encyclopedia, Daya Publishing House, New Delhi, 2003, 69, 70.
16. Evans WC, Trease EG. Pharmacognosy (16th Ed), WB Saunders-company Ltd. London UK. Pp. Elsevier Science Limited, New York, 2009; 274-275.
17. Bhattacharjee SK, Michael AM. Handbook of Medicinal Plants, Pointer Publishers 4th Revised & Enlarged Ed. Jaipur, 2004, 114.
18. Nimish P, Sanjay K, Nayna B, Jaimik R. Phytopharmacological Properties of Coriander Sativumas a Potential Medicinal Tree: An Overview. Journal of Applied Pharmaceutical Science. 2011; 1(04):20-25.
19. Bhattacharjee PSK. Handbook of Aromatic Plants, Pointer Publishers. Jaipur, 2011; 142, 143.
20. Lubhaya HR. Bayanul Advia, Kohe Noor Press, 1sted, 1984, 134.
21. Ainslie W. Materia Indica; LONDON, 1826; 11:1376
22. Dolidas, Agarwal VS. Fruit Drugs Plants of India, Ist Edi., kalyani Publishers, New Delhi, Ludhiyana, 1991, 65-68.
23. Sahib NG, Anwar F, Gani AH, Hamid AA. Coriander (*Corianrum Sativum* L.): A Potential Source of High-Value Components for functional Foods and Nutraceutical. Research Gate.2012; 27(10):1439-1456.
24. Rushd AM. Kitabul-Kulliyat, CCRUM, New Delhi, 1987, 289.
25. Lindley J. Flora Medica, Cambridge University Press, London, 1838, 58.
26. Emamghoreishi M, Hamedani GH. Sedative-Hypnotic Activity of extracts and Essential Oil of Coriander Seeds. Iran Journal of Medical Science), 2006; 31(1):22-26.
27. Gagnon C, DPSY, langer LB, Ivers H, Morin CM. Validation of the Insomnia Severity Index in Primary Care. JABFM. 2013; 27(6):701-10.
28. Houdenhove L van. Treating Primary Insomnia: Clinical Effectiveness and Predictors of Outcomes on Sleep, Daytime Function and Health-Related Quality of Life. Springer. 2011; 18(3):312-321.
29. Espie CA, Kyle SD, Hames P, Oxon MA, Cyhlarova E, Benzeva M. The Daytime Impact of DSM-5 Insomnia Disorder: Comparative Analysis of Insomnia Subtypes From the Great British Sleep Survey, The Journal of Clinical Psychiatry. 2012; 73(12):1478-84.
30. Lopes CS, Robaina JR, Rotenberg L. Epidemiology of Insomnia: Prevalence And Risk Factors. Intec Open Science, 2012, 3-22.
31. Chang JJ, Pien GW, Stamatakis KA, Brownson RC. Association between Physical Activity and Insomnia Symptoms in Rural Communities of Southeastern Missouri, Tennessee, and Arkansas. NIH Public Access; 2013; 29(3):239-47.
32. Borkar S, Prachi D. A Comparative Study of Shiroabhyang and Karnabhyang in the Management of Nidranash (Primary Insomnia). Journal of Sciene& Innovative Research.2016; 5(5):168-173.
33. Megumi U, Saijo Y, Yoshioka E, Horikawa N, Sato T, Gong Y *et al*. Relationships of Occupational Stress To Insomnia and Short Sleep In Japanese Workers. Occupational Stress and Sleep. 2005; 28(6):728-35.
34. Momin AH, Acharya SS, Gajjar AV. Coriandrum Sativum- Review of Advances in Phyto pharmacology, International Journal of Pharmaceutical Science and Research. 2012; 3(5):1233-1239.
35. Masoumeh E, Mohammad K, Maryam FA. *Coriandrum sativum*: evaluation of its Anxiolytic Eeffect in the Elevated Plus-Maze. J Ethnopharmacol.2005; 96:320-25.
36. Pandey A, Bigoniya P, Raj V, Patel KK. Pharmacological Screening of *Coriandrum sativum* Linn. For Hepatoprotective Activity. Journal of Pharmacy and Bioallied Sciences. 2011; 3(3):435-41.