

RADHUNI, OR WILD CELERY SEED IS A HIGHLY AROMATIC, CITRUSY, AND SLIGHTLY PUNGENT SPICE THAT SERVES AS THE BACKBONE OF BENGALI CUISINE

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ABSTRACT

The English name for the Bengali spice Radhuni is wild celery. Radhuni (wild celery seed) is a potent aromatic spice essential to Bengali and Indian cuisine. It has a flavor similar to parsley and traditional celery with a pungent, slightly bitter kick. It is primarily used for tempering (tadka) in hot mustard oil to season vegetarian dishes, dals, and fish curries, and is a key ingredient in the panch phoron (five-spice) blend. Key Culinary Uses: Tempering (Phoron): Instead of using ground spices, whole radhuni seeds are toasted in hot oil along with aromatics to form the flavor base for dishes like Shukto (a bitter vegetable stew) and Dal. Spice Blends: It is one of the five essential seeds in the Bengali panch phoron mix, alongside cumin, fenugreek, fennel, and nigella. Pickling & Marinades: Used to add flavor and a pungent aroma to marinades for meats and local vegetable pickles.

KEYWORDS: cumin, fenugreek, fennel, kalonji, ajmod.

Overview: The term Radhuni masala can refer to two very different things depending on your context: the whole dried fruit (seed) used in traditional Bengali tempering, or the popular Bangladeshi brand "Radhuni" that sells pre-packaged spice blends. If you are referring to the individual spice (botanical name *Psammogeton involucratus*), it is not a blend. It is a single aromatic seed with a pungent, parsley-and-celery-like flavor. It is the signature "fifth element" used as a substitute for mustard in the classic Bengali five-spice blend called panc foron. **Cumin seeds (Jeera: *Cuminum cyminum*):** **Fenugreek seeds (Methi: *Trigonella foenum-graecum*):** **Fennel seeds (Mouri: *Foeniculum vulgare*):** **Nigella seeds (Kalonji/Kalo jeera: *Nigella sativa*):** **Radhuni seeds (Ajmod: *Trachyspermum roxburghianum*).** The

ingredients vary based on the specific blend. Radhuni Chicken Masala: A mix of Chilli, Turmeric, Coriander, Aniseed, Ginger, Garlic, Cinnamon, Cumin, Nutmeg, Bay Leaf, Clove, Caraway, Mace, Black Pepper, and Cardamom.

Radhuni Biryani Masala: A rich blend of Garlic, Ginger, Fennel, Cinnamon, Coriander, Chilli, Cumin, Black Pepper, Cardamom, Bay Leaves, Mace, Caraway, Nutmeg, Clove, salt, and kewra flavor. **Ingredients.** Chilli, Garlic, Cinnamon, Ginger, Coriander, Sodium chloride, Aniseed, Cumin, Black pepper, Bay leaf, Cardamom, Mace, Caraway, Nutmeg, Clove, Food grade flavor.

**Figure-1: Radhuni & Ajwain.**

Radhuni masala can refer to either the raw wild celery seed (*Trachyspermum roxburghianum* or *Psammogeton involucratus*) used in Bengali cooking, or the highly popular premium brand of spice blends produced by Square Food & Beverages in Bangladesh. The Spice (Wild Celery Seed/Ajmod). In traditional Bengali cuisine, "Radhuni" is an essential aromatic spice with a flavor reminiscent of parsley, celery, and a slight hint of anise.

Culinary Use: It is primarily used whole for tempering (tadka) in hot oil, especially in iconic regional dishes like *Shukto* or *Masoor Dal*. It is also a core, defining ingredient in the Bengali five-spice blend known as *Panch Phoron*. The Brand (Radhuni Spice Mixes): Radhuni is a massive household name in Bangladesh, offering an expansive lineup of pre-packaged, ready-to-use spice mixes, seasoning blends, and cooking essentials.

Popular Products: Their product line includes ready mixes for everyday meals (Chicken, Meat, and Fish Curry Masala), festive specials (Biryani and Tehari Masala), and packaged mixes like Haleem or Borhani. Radhuni masala refers to the dried fruit of the *Psammogeton involucratus* plant (commonly called wild celery or Ajmod). It is an essential, pungent spice primarily used in Bengali and Bangladeshi cuisines, known for its distinct, parsley-like aroma and earthy, slightly bitter, and peppery flavor. Radhuni has a very strong, distinctive flavor, so it is typically used in small quantities.

Panch Phoron: It is a core ingredient in the famous Bengali five-spice blend known as Panch Phoron, where it is often used as a substitute for mustard seeds.

Shukto: It is the foundational flavoring spice for shukto, a traditional bittersweet Bengali vegetable stew.

Curries and Dals: It is frequently added to hot oil as a tempering agent (phoron) in dals, mixed vegetable dishes, and certain non-vegetarian curries.

Synonyms and Names: Because it is not as common in the rest of India or globally, radhuni is frequently confused with or referred to by different names:

English: Wild celery seeds.

Hindi: Ajmod.

Bengali: Radhuni.

Health Benefits: In traditional Ayurveda and regional home remedies, radhuni is highly valued for its medicinal properties. It is often used to:

Stimulate the digestive process and relieve bloating or stomach cramps.

Provide anti-inflammatory and detoxifying effects.

Help reduce pain associated with pre-menstrual syndrome (PMS).

Ajwain and Radhuni are not the same spice. While they look quite similar and belong to the same botanical family (Apiaceae), they come from different plants, have completely different flavor profiles, and are used in distinct cuisines.

Ajwain (Carom Seeds)

Plant: *Trachyspermum ammi*

Kingdom: Plantae

Clade: Embryophytes

Clade: Tracheophytes

Clade: Spermatophytes

Clade: Angiosperms

Clade: Eudicots

Clade: Asterids

Order: Apiales

Family: Apiaceae

Genus: *Psammogeton*

Species: *P. involucratus*

Binomial name: *Psammogeton involucratus*



Figure-2: Radhuni culinary.

Radhuni and Ajwain (carom seeds) are often confused because they look similar, but they come from different plants. Radhuni (*Trachyspermum roxburghianum*) tastes and smells like grassy, earthy celery, whereas Ajwain (*Trachyspermum copticum*) has a pungent, medicinal aroma and a strong, bitter thyme/oregano flavor. Radhuni is essential to Bengali cooking (like panch phoron),

while Ajwain is heavily used across the rest of India.

All of the spices in panch phoron are seeds. Typically, it consists of **fenugreek seed** (*Trigonella foenum-graecum*: **methi**), **cumin seed** (*Cuminum cyminum*: **jeera**), **nigella seed** (*Nigella sativa*: **kalonji**), **black mustard** (*Brassica nigra*) seeds and **fennel**

(*Foeniculum vulgare: mouri/saunf*) seed in equal parts. The black mustard seeds are sometimes substituted with wild celery seed (radhuni). Some cooks prefer to use a smaller proportion of fenugreek seeds, because of their mildly bitter taste. Unlike most spice mixes, panch phoron is always used whole.

The primary active constituents include limonene, γ -terpinene, sabinene, β -pinene, and 5,7,8-trimethyl-dihydrocoumarin. Volatile Monoterpenes: Limonene and

sabinene provide digestive, anti-inflammatory, and spasmolytic effects. Coumarins & Phenols: Compounds like bergapten, apiin, and apigenin offer antioxidant and antibacterial benefits. Alcohols & Terpenoids: Elements like linalool and terpinen-4-ol act as aromatics and contribute to carminative properties that help relieve bloating. Ingredients. Chilli, Garlic, Cinnamon, Ginger, Coriander, Sodium chloride, Aniseed, Cumin, Black pepper, Bay leaf, Cardamom, Mace, Caraway, Nutmeg, Clove, Food grade flavor.

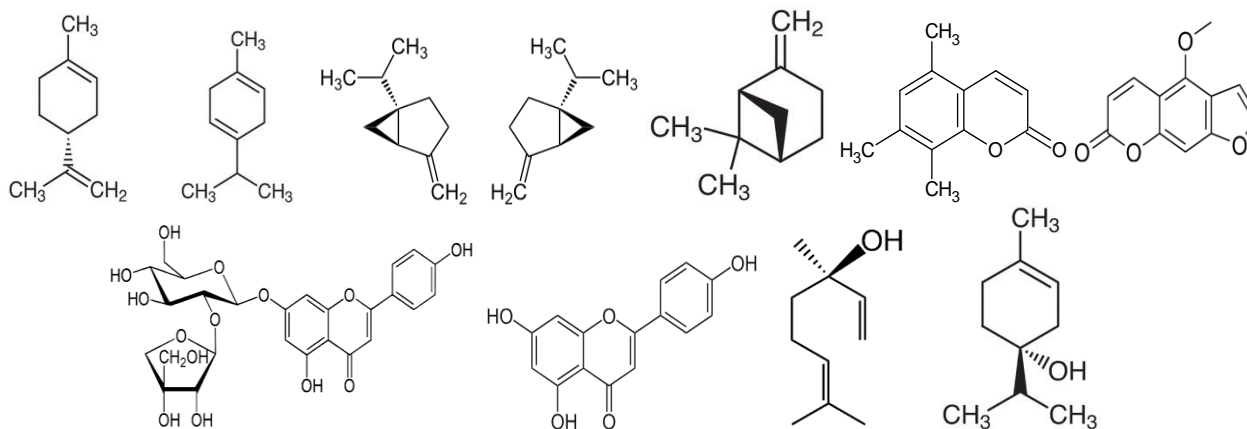


Figure-3: Volatile oil ingredients [limonene, γ -terpinene, sabinene, β -pinene, 5,7,8-trimethyl-dihydrocoumarin, bergapten, apiin, apigenin linalool and terpinen-4-ol.

Radhuni (wild celery seeds) is a highly aromatic, sharp spice essential to Bengali cooking. It is most famously used whole in hot oil (tempering) for dishes like *Shukto* (mixed vegetable stew), fish curries (macher jhol), and lentil soups, or ground as a key part of the Panch Phoron spice blend. Traditional Vegetarian Dishes. **Shukto**: A bitter-sweet, comforting vegetable stew where radhuni tempering cuts through the natural bitterness of vegetables like bitter melon and drumsticks. **Chorchori** (or Chechra): A traditional mixed vegetable hash usually featuring potato, pumpkin, eggplant, and leafy greens,

heavily seasoned with radhuni to bring out earthy flavors. **Radhuni Diye Dal**: A simple, comforting red or yellow lentil soup tempered with radhuni and dried red chilies, perfect for a light everyday meal. **Katla Macher Jhol**: A classic Bengali fish curry made with Katla fish, potatoes, and a radhuni-based gravy. **Dhakaiya Teheri**: A staple aromatic beef or mutton preparation from Dhaka that often utilizes radhuni to provide a signature earthy undertone to the spiced rice. **Tel Koi**: A spicy, oil-rich preparation of Koi fish where whole radhuni seeds are fried in mustard oil to build a deeply flavorful base.

Feature	Ajwain (Carom seed)	Radhuni (Celery seed)
Scientific Name	<i>Trachyspermum roxburghianum</i>	<i>Psammogeton involucreatus</i>
Visuals	Tiny, grayish-green to light brown, oval-shaped with fine ridges.	Slightly rounder, darker, and tinier than ajwain.
Family	Apiaceae (Carum copticum)	Apiaceae (<i>Trachyspermum roxburghianum</i>)
Flavour Profile	Earthy, grassy, tastes like celery with a slight bitter/lemony note.	Pungent, sharp, similar to oregano or thyme; slightly spicy.
Aroma	Pungent, medicinal, thyme-like, and sharply herbaceous.	Strong, zesty, and similar to parsley or celery.
Tongue Effect	Sharp, bitter, and hot. Numbing on the tongue with prominent oregano notes.	Earthy, grassy, and savory with a distinct, pleasant citrusy/lemony bite.
Main Use	Used in tadka/tempering for fried snacks (samosas), curries, and as an aid for digestion.	Primarily used in Bengali cuisine; notably the star ingredient in the panch phoron (five-spice) blend.
Common Uses	Bengali shukto, fish curries, and a key ingredient in the Bengali five-spice blend (panch phoron).	Used across India in savory snacks (like samosas), fried doughs (pakoras), and digestive aids.
Appearance	Slightly oval, resembling a smaller, grayish-brown celery seed.	Oval, striped, lighter grayish-green in color, smaller than radhuni.
English Name	Wild Celery	Carom Seeds
Hindi Name	Ajwain	Ajmod

CONCLUSION

Radhuni is a staple aromatic whole spice in Bengali cuisine, widely used in West Bengal and Bangladesh. Often confused with celery seeds or ajwain, it is derived from wild celery (*Trachyspermum roxburghianum*) and gives dishes a distinct earthy, slightly bitter, and zesty-lemmony flavor. Tempering (Phoron): It is a crucial ingredient in the Bengali five-spice blend, Panch Phoron, and is famously crackled in hot mustard oil when making dishes like Shukto.

REFERENCES

1. https://en.wikipedia.org/wiki/Psammogeton_involucratus