

Botanical, Culinary & Chemical Profile: Coriander Seeds

Comprehensive Gastronomic and Nutritional Report

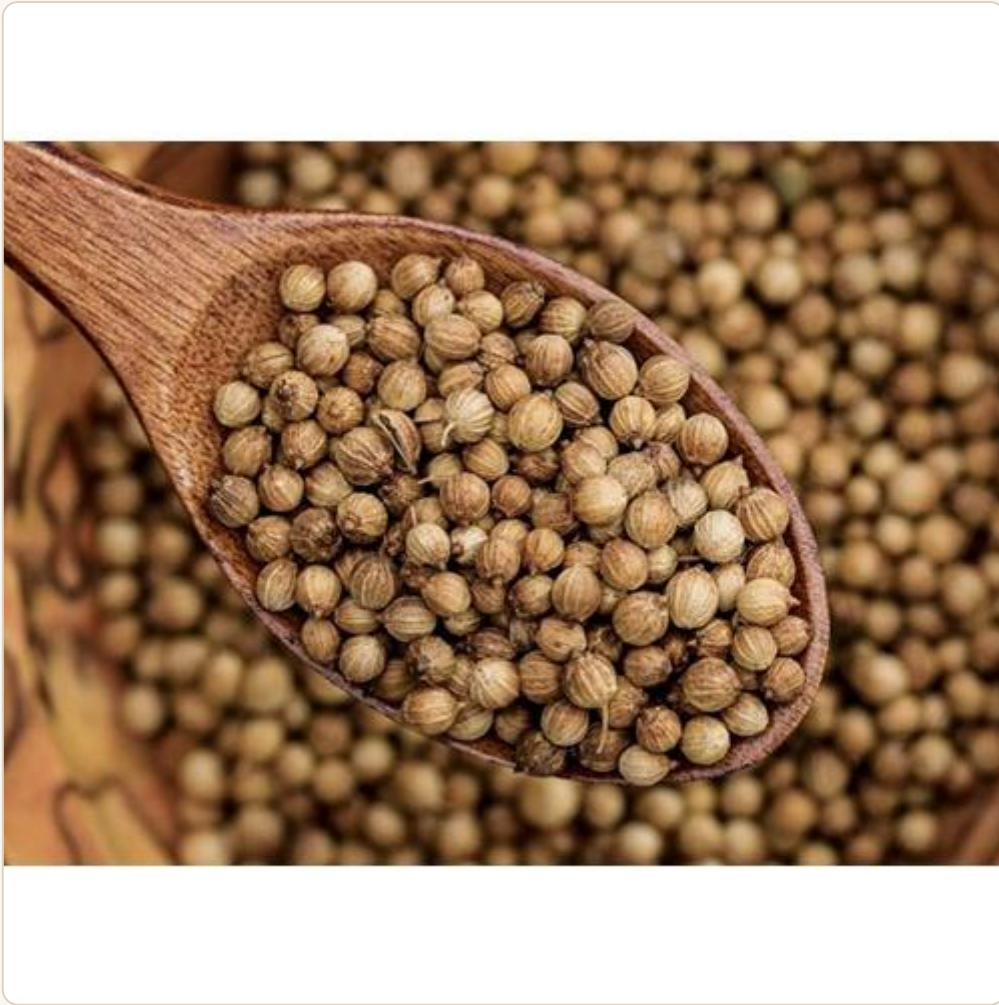


Fig 1. Whole dried coriander (*Coriandrum sativum*) seeds cradled in a traditional wooden spoon.

1. Botanical Overview & Morphology

Coriander (*Coriandrum sativum*) is an annual herb belonging to the family Apiaceae. While its fresh leaves are widely known as cilantro or Chinese parsley, its dried round fruits—commonly referred to as coriander seeds—possess an entirely distinct aromatic profile characterized by warm, citrusy, and slightly nutty notes.

The spherical, ribbed schizocarps shown above house two internal seeds containing essential oils rich in linalool, imparting the signature sweet and fragrant aroma that serves as a cornerstone of spice blends across global cuisines.

Botanical Specifications

Family: Apiaceae

Genus: *Coriandrum*

Species: *C. sativum*

Seed Diameter: ~3.0 – 5.0 mm

Primary Aroma Compounds

Linalool: Dominant floral and citrus note ($C_{10}H_{18}O$)

Alpha-pinene: Woody and pine undertone

Gamma-terpinene: Fresh herbaceous accent

2. Nutritional Profile (per 100g)

Beyond their culinary value as a seasoning agent, coriander seeds provide notable amounts of dietary fiber, minerals, and antioxidant compounds.

Nutrient Component	Concentration	Physiological Significance
Calories	298 kcal	Energy value
Dietary Fiber	41.9 g	Digestive health & regularity
Calcium (<i>Ca</i>)	709 mg	Skeletal health and bone density
Magnesium (<i>Mg</i>)	330 mg	Enzymatic function
Iron (<i>Fe</i>)	16.3 mg	Cellular oxygen transport
Essential Oil Yield	0.2% – 1.5%	Flavor delivery and bioactivity

Culinary Tip: Lightly crushing or roasting whole coriander seeds just prior to cooking releases entrapped volatile oils, drastically enhancing the depth of curries, marinades, and spice rubs.

3. Global Gastronomy & Traditional Uses

Coriander seeds are utilized extensively in Indian masala blends, Middle Eastern meat rubs, North African spice mixtures, and European baking and pickling. In traditional wellness practices, coriander seed infusions have long been used to support digestion and metabolic balance.