

Culinary & Nutritional Profile: Hulled Sesame Seeds

A Comprehensive Botanical, Nutritional, and Gastronomic Analysis



Fig 1. Premium quality hulled white sesame seeds presented in traditional dark wooden bowls.

1. Overview and Botanical Identity

Sesame (*Sesamum indicum*) is one of the oldest oilseed crops known to humanity, domesticated well over 3,000 years ago. Highly valued for its drought tolerance, the plant produces prolific seed pods containing small, teardrop-shaped seeds. When the outer husk (hull) is mechanically removed, the resulting product is known as **hulled sesame seeds**.

Unlike unhulled sesame seeds, which retain their fibrous, tan-colored coat and a slightly bitter, earthy edge, hulled sesame seeds feature a delicate, ivory-white hue, a soft and buttery texture, and a mild, nutty flavor profile that makes them exceptionally versatile in global cuisines.

Botanical Characteristics

Family: Pedaliaceae

Key Commercial Grades

Natural: Unhulled, higher fiber, bitter notes.

Species: *S. indicum*

Seed Weight: ~2.5 to 3.5 mg per seed

Oil Content: 50% – 60% dry weight

Hulled: De-hulled, bright white, delicate flavor.

Roasted: Golden-brown tone, rich toasted aroma (tahini / garnish).

2. Nutritional Value and Macronutrient Breakdown

Despite their diminutive size, sesame seeds are powerhouse matrices of dense nutrition. They are exceptionally rich in healthy plant fats, quality proteins, and essential micronutrients.

Nutrient Component (per 100g)	Amount	% Daily Value (approx.)
Calories	573 kcal	28%
Total Fat	49.7 g	76%
Monounsaturated Fat ($C_{18}H_{34}O_2$)	18.8 g	—
Polyunsaturated Fat	21.8 g	—
Carbohydrates	23.5 g	8%
Dietary Fiber (Hulled)	7.9 g	32%
Protein	17.7 g	35%

Health Highlight: Sesame seeds are exceptionally rich in unique lignans—specifically *sesamin* and *sesamol*—which have been scientifically shown to support healthy blood lipid profiles and exhibit antioxidant properties.

3. Culinary Applications and Global Gastronomy

The subtle sweetness and tender crunch of hulled sesame seeds lend themselves seamlessly to an array of culinary traditions across East Asia, the Middle East, South Asia, and the Mediterranean.

Common uses include incorporation into artisan breads, burger buns, and crackers; rolling sushi rolls (such as inside-out maki); compounding into traditional pastes like Tahini; and garnishing stir-fries, noodle dishes, and confectionery items like *halva* and sesame brittle.