PRAKRUTI
PRODUCTS PVT LTD

WHITE KIDNEY BEAN EXTRACT

General description

- Botanical Name : *Phaseolus vulgaris*
- Family : Fabaceae
- Common Name : White kidney bean, Common bean
- Part used : Seed

Common bean is a legume widely consumed throughout the world. It is recognized as the major source of dietary protein.

Clinical indications:

Antiobesity: White kidney beans are well known for blocking carbohydrate absorption by inhibition of α-amylase. Recently, common bean is gaining increasing attention as a functional or nutraceutical food, due to its rich variety of phytochemicals with potential health benefits such as dietary fiber, polyphenolic compounds, lectins, unsaturated fatty acids, trypsin inhibitors and phytic acid. The common bean α-amylase inhibitior-1has been reported to have relatively great potential as an extensive anti-obesity and antidiabetic remedy. [1]

Phytochemistry

White kidney bean contains bioactive components like polyphenols, lectins, tripsin inhibitor and carbohydrates. 9.4-37.8 mg catechin equivalents per gm proanthocyanidins have been detected in common bean. 5-20% Lectins; the major group of bioactive glycoproteins found in common bean. Starch and non-starch polysaccharides (dietary fiber) are the major constituents, with smaller but significant amounts of mono, di and oligosaccharides. [2]

Clinical studies:

- study Animal and human studies clearly showed that white kidney bean has clinical utility.[3] Legume consumption has been associated with a lower risk of developing type 2 diabetes.
- In a Clinical trail consumption of common bean triglyceride, glucose content and insulin response were estimated. Study concluded that white kidney beans lowered blood glucose and significantly reduced triglyceridemic response.[4]
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- Extracts of *P. vulgaris* are known to reduce glycaemia and food intake in rodents and humans.
- In a randomised, double-blind, placebo-controlled trial standardised and purified *P. vulgaris* extract was employed as a supplement in a mixed balanced meal (60% carbohydrates, 25% lipids and 15% protein), on glycometabolic and appetite control in twelve volunteers. Study concluded that bean supplementation reduced postprandial glucose, insulin and C-peptide excursions, suppressed ghrelin secretion and affected satiety sensations, inducing a lower desire to eat.[5]
- Hutchins et al., (2012) reported that consumption of *P. vulgaris* bean is beneficial in prevention and treatment of chronic diseases those are promoted by increased glycaemic stress (hyperglycaemia and hyperinsulinaemia) including diabetes, cardio vascular diseases and cancer.[6]

Our Product Overview:

Manufactured in a GMP and ISO 9001 -2000 certified manufacturing facility

Specifications

Botanical/ Scientific name	***Phaseolus vulgaris***
CAS No.	NAV
Description	Off white to creamish white powder
Identification	Assay
Heavy metal	Not more than 20 ppm
Arsenic	Not more than 1 ppm
Lead	Not more than 10 ppm
Amylase inhibitory activity	NLT 20000 units / g
Microbiological profile	As per JPN Food Regulation

References:

1. Sales et al., 2012. α-Amylase Inhibitors: A review of raw material and isolated compounds from plant source. J Pharm Pharmaceut Sci. 15(1) 141 - 183, 2012
2. Reynoso-Camacho et al., 2006. Bioactive components in common beans (*Phaseolus vulgaris* L.). Adv in Agri and Food Biotech. 10: 217- 236
3. Preuss HG. 2009. Bean amylase inhibitor and other carbohydrate absorption blockers: Effects on diabesity and general health. J Am Coll Nutr. 28(3):266-76.
4. Olmedilla-Alonso et al., 2013. Composition of two Spanish common dry beans (*Phaseolus vulgaris*), 'Almonga' and 'Curruquilla', and their postprandial effect in type 2 diabetics. J Sci Food Agric. 93(5):1076-82
5. Spadafranca et al., 2013. *Phaseolus vulgaris* extract affects glycometabolic and appetite control in healthy human subjects. Br J Nutr. 109(10):1789-95
6. Hutchins et ai., 2012. Phaseolus beans: impact on glycaemic response and chronic disease risk in human subjects. Br J Nutr. 108(1):S52-65.