# Kara Kratok (Phaseolus lunatus L.) Protein: Unlocking their other Potential as Functional Food Ingredients

**Cahyo Budiyanto**
Department of Food and Agricultural Product Technology, Faculty of Agricultural Technology, Universitas Gadjah Mada, Jl. Flora No. 1, Bulaksumur, Yogyakarta 55281, Indonesia

**Andriati Ningrum**
Department of Food and Agricultural Product Technology, Faculty of Agricultural Technology, Universitas Gadjah Mada, Jl. Flora No. 1, Bulaksumur, Yogyakarta 55281, Indonesia

**Agnes Murdiati**
Department of Food and Agricultural Product Technology, Faculty of Agricultural Technology, Universitas Gadjah Mada, Jl. Flora No. 1, Bulaksumur, Yogyakarta 55281, Indonesia

**Retno Indrati***
Department of Food and Agricultural Product Technology, Faculty of Agricultural Technology, Universitas Gadjah Mada, Jl. Flora No. 1, Bulaksumur, Yogyakarta 55281, Indonesia

## Abstract:

Kara kratok (Phaseolus lunatus L.) beans have high potential as bioactive peptide compounds that play a role in health like antioxidant, anti-HIV, anticancer, antihypertensive, and antimicrobial. The purpose of this study was to explore other potential bioactive peptide compounds of kara kratok that are still hidden for health. In this study, light brown, dark brown and patterned kara kratok beans were analysed total protein, soluble protein, molecular weight fractions, amino acid profiles then continued with computational potential predictions. The results showed that the molecular weight of the protein of the three seeds was at 31.7 - 86.6 kDa, total protein 23.22 - 24.53% (db), soluble protein 2.29 - 2.43% (db), the amino acid profile of kara kratok seeds was dominated by glutamate, leucine, aspartate amino acids, which computationally have functional abilities as anti-cholesterol. Based on the results obtained, it can be concluded that bioactive peptide compounds from kara kratok seeds still have other potential for health, one of which is anti-cholesterol.

## Keywords:

amino acids, biopeptide, Phaseolus lunatus, protein, health.