

Thesis title: **Investigation of Amino Acids in Fortified Meals**

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Summary:

This thesis investigates the significance of amino acids in food fortification, particularly focusing on the improving the protein quality of the legume-based meals using egg-white protein powder (EWPP) and whey protein isolate (WPI). Globally, nutritionally balanced diets are required, legumes,

despite their environmental advantages, often lack recommended amount of certain essential amino acids. This research aimed to fortify meals made from green peas and kidney beans to create a complete protein profile. The methodology used in this research included analyzing the protein content, amino acid compositions of legumes and protein powders, determining optimal fortification ratios, and evaluating the fortified meals based on their protein content and amino acid scores. The results describe that the fortification with EWPP and WPI significantly improved both protein content and the amino acid profile of the limiting amino acids in legume-based meals. These fortified dishes met or exceeded FAO/WHO recommended values for essential amino acids, that highlights the effectiveness of this approach in addressing these dietary protein limitations in plant-based foods.