

Functional properties of protein concentrates of KB6 kenaf (*Hibiscus cannabinus*) seed and its milky extract

ABSTRACT

Kenaf seed meal protein concentrate (KSPC) and lyophilized kenaf seed milky extract protein concentrate (KSMEPC) were obtained via alkaline extraction. The proximate compositions, amino acids and functional properties of both concentrates were compared. KSPC was found to be significantly higher in protein, essential and non-essential amino acids but, lower in lipid and carbohydrate contents than KSMEPC. The solubility, water absorption capacity and denaturation temperature of KSPC and KSMEPC were similar. However, KSMEPC had significantly higher oil absorption capacity, foam capacity and stability, and a significantly lower emulsion property than KSPC. The heat coagulability and coagulation capacity of the protein concentrates were not significantly different. But, the heat coagulability was significantly increased as the concentration of the protein concentrates increased from 4 to 20%. This study showed that kenaf seed may be considered as a potential ingredient in food products like tofu, meat extender, butter and mayonnaise.

Keyword: Coagulation capacity; Functional properties; Kenaf seed; Protein concentrates; Thermal stability