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## REFERENCES

- Anastas, P. T., and J. C. Warner. 1998. *Green Chemistry: Theory and Practice*. Oxford University Press: New York.
- Bell, D. J., M. Hoare, and P. Dunnill. 1983. *The Formation of Protein Precipitates and Their Centrifugal Recovery*. *J. Advances in Biochemical Engineering / Biotechnology* (26): 1-72.
- BPS. 2011. *Consumption of Calorie and Protein of Indonesia and Province 2011*. Jakarta, Indonesia: Badan Pusat Statistik.
- Cagampang, G. B., L. J. Cruz, S. G. Espiritu, R. G. Santiafo, and B. O. Juliano. 1966. *Studies on the extraction and composition of rice proteins*. *J. Cereal Chem* (43): 145–155.
- Chen, C., J. E. Sander, and N. M. Dale. 2003. *The effect of dietary lysine deficiency on the immune response to Newcastle disease vaccination in chickens*. *J. Avian Diseases* 47(4): 1346–1351.
- Cohen, A. C. 2004. *Insects Diets: Science and Technology*. Boca Raton, Florida, USA: CRC Press.
- David, L. N., and M. M. Cox. 2008. *Principles of Biochemistry*. New York, USA: W.H Freeman and Company.
- De Bandt, J. P., and L. Cynober. 2006. *Therapeutic use of branched-chain amino acids in burn, trauma, and sepsis*. *J. Journal of Nutrition* 185(1): 308S–313S.
- Decker, E. A., C. Faustman, and C. J. Lopez-Bote. 2000. *Antioxidants in Muscle Tissue*. New York, USA: John Wiley & Sons, Inc.
- Dunn, M. J. 1992. *Protein Determination of Total Protein Concentration*. Oxford, UK: IRL Press.
- Durford, N. T. 2012. *Food and Industrial Bioproducts and Bioprocessing*. Iowa, USA: John Wiley & Sons, Inc.

Durst, P. B., and K. Shono. 2010. *Edible forest insects: exploring new horizons and traditional practices*. Food and Agriculture Organization of the United Nations Regional Office for Asia and the Pacific. Proc. Workshop on Asia-Pacific Resources and Their Potential for Development: 1–4.

Etzel, M. R. 2004. *Manufacture and use of dairy protein fractions*. *J. Journal of Nutrition* 134 (4): 996S–1002S.

FAO/WUR. 2013. *Six-legged livestock: edible insect farming, collecting and marketing in Thailand*. Bangkok, Thailand:FAO.

FAO/WUR. 2013. *Edible insects: future prospects for food and feed security*. Rome, Italy: FAO.

FAO/WHO/UNU. 1985. Energy and protein requirements. *In Report of a Joint FAO/WHO/UNU Expert Consultation* (pp. 206). Geneva, Switzerland: Food and Agriculture Organization, World Health Organization and the United Nations University.

Finke, M. D., G. R. Difoliart, and N. J. Benevenga. 1989. *Use of a four-parameter logistic model to evaluate the quality of the protein from three insect species when fed to rats*. *J. Department of Nutritional Science, Entomology, and Meat and Animal Science* 119(6): 864-871.

González-Pérez, S. 2003. *Physico-chemical and functional properties of sunflower proteins*. Wageningen, The Netherlands: Wageningen University, PhD dissertation.

Hanboonsong, Y., T. Jamjanya, and P. B. Durst. 2013. *Six-legged livestock: edible insect farming, collection and marketing in Thailand*. FAO, Rome, 57 pp.

Hardinsyah., and V. Tambunan. 2004. *Aangka kecukupan energi, protein, lemak, dan serat makanan*. Proc. VIII Widyakarya Nasional Pangan dan Gizi 740.

Hui, V. A., J. V. Itterbeeck, H. Klunder, E. Mertens, A. Halloran, G. Muir, and P. Vantomme. 2013. *Edible insects: future prospects for feed and feed security*. Rome, FAO.

Ivanova, P., V. Chalova, L. Koleva, and I. Pishtiyski. 2013. *Amino acid composition and solubility of proteins isolated from sunflower meal produced in Bulgaria*. *J. International Food Research Journal* 20(6): 2995-3000.

---

Jakob, H. W. 2002. *The Protein Protocol Handbook: The Lowry Method for Protein Quantitation*. Totowa, New Jersey, USA: Humana Press Inc.

Janairo, G., M. L. Sy, L. Yap, N. Lianos-Lazaro, and J. Robles. 2011. *Determination of the sensitivity range of biuret test for undergraduate biochemistry experiments*. *J. Journal of Science and Technology* 5 (6): 77-82.

Jiang, L., L. He, and M. Fountoulakis. 2003. *Comparison of protein precipitation methods for sample preparation prior to proteomic analysis*. *J. Chromatography A* 1023 (2004): 317 – 320.

Nakagaki, B. J., M. L. Sunde, and G. R. Defoliart. 1986. *Protein quality of the house cricket, *Acheta domesticus*, when fed to broiler chicks*. *J. Poultry science* 66: 1367-1371.

Lim, S. T., J. H. Lee., D. H. Shin., H. S. Liem. 1999. *Comparison of protein extraction solutions for rice starch isolation and effects of residual protein content on starch pasting properties*. *J. WILEY-VCH* (4): 120-125.

Nakai, S., and H. W. Modler. 1996. *Food Proteins: Properties and Characterization*. New York, USA: Wiley-VCH, Inc.

Nooralabettu, K. P. 2014. *Optimisation of ammonium sulfate precipitation method to achieve high throughput concentration of crude alkaline phosphatase from Brown shrimp (*Metapenaeus monoceros*) hepatopancreas*. *J. Anal Bio-Sci* 2 (1): 7-16.

Omotoso, O. T. 2006. *Nutritional quality, functional properties and anti-nutrient compositions of the larva of *Cirina forda* (Westwood) (Lepidoptera: Saturniidae)*. *J. Zhejiang University Sci B* 7 (1): 51-55 .

Owen, T. 1996. *Fundamental of UV-visible Spectroscopy A Primer*. DE: Hewlet Packard.

Paiko, Y. B., B. E. N. Dauda, M. A. T. Suleiman, H. O. Akanya, and J. O. Jacob. 2013. *Physico-chemical properties and metal ions content of oil extracted from cricket (*Brachitrupes membranaceus*) in bosco local government area of niger state, Nigeria*. *J. Asian Journal of Science and Technology* 4 (5): 008-012.

Powrie, W. D., and S. Nakai. 1981. *Processing effects on Protein Systems I Utilization of Protein Resources*. In: Stanley, D. W., E. D. Murray., and D. H. Lees. Food and Nutrition Press Inc., Westport, USA.

Putri, R. A., A. Kusrijadi, and A. Suryatna. 2013. *Kajian Penggunaan Amonium Sulfat Pada Pengendapan Enzim Protease (Papain) Dari Buah Pepaya Sebagai Koagulan Dalam Produksi Keju Cottage*. *J. Sains dan Teknologi Kimia* 4 (2): 159- 168.

Raditya, H. 2010. *Processing Of Fish Protein Hydrolysate from Catfish Waste*. BS Thesis. Department of Food Technology. Swiss Geman University, Tangerang, Indonesia.

Ramos-Elorduy, J., J. M. P. Moreno, E. E. Prado, M. A. Perez, J. L. Otero, and O. L. De Guevara. 1997. *Nutritional value of edible insects from the state of Oaxaca, Mexico*. *J. Food Composition and Analysis*. 10 (2):142-157.

Raphael, M. L. 1997. *Recovery and Kinetics Study of Isoelectric Precipitation of Sunflower Protein in Tubular Precipitator*. PhD Thesis. Department of Chemical Engineering. University of Saskatchewan, Saskatoon, Canada.

Raubenheimerl, D., and J. Rothman. 2012. *Nutritional ecology of entomophagy in humans and other primates*. *Annual Review of Entomology* 58 (1): 141-160.

Rose, R. C., and A. M. Bode. 1993. *Biology of free radical scavenger: an evaluation of ascorbate*. *J. The FASB Journal* 12 (7): 1135-1142.

Rosenberg, I. M. 2005. *Protein Analysis and Purification: Benchtop Techniques*. Boston, USA: Birkhäuser.

Spies, J. R., and D. C. Chambers. 2014. *Spectrophotometric analysis of amino acids and peptides with their copper salts*. *J. Biological Chemistry* 191(2): 787-797.

Tzompa-Sosa, D. A., L. Yi, H.J.F. van Valenberg, M.A.J.S. van Boekel, and C.M.M. Lakemond. 2014. *Insect lipid profile: aqueous versus organic solvent-based extraction methods*. *J. Food Research International* 62 (14): 1087 – 1094.

Wall, J. S., and F. R. Huebner. 1981. *Adhesion and Cohesion in Protein Functionality in Foods*. Symposium. ACS Symposium Series 147: 111-130.

WHO/UNU Expert Consultation (pp. 206). Geneva, Switzerland: Food and Agriculture Organization, World Health Organization and the United Nations University.

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Wilson, K., and J. Walker. 2010. *Principle and Techniques of Biochemistry and Molecular Biology*. 2010. Cambridge, UK: Cambridge University Press.

Xiaoming, C., F. Ying, Z. Hong, and C. Zhiyong. 2010. Review of the nutritive value of edible insects. In P.B. Durst, D.V. Johnson, R.L. Leslie, & K. Shono, eds. *Forest insects as food: humans bite back, proceedings of a workshop on Asia-Pacific resources and their potential for development*. Bangkok, FAO Regional Office for Asia and the Pacific.

Xòthitl, T. J., A. A. Cuenca, A. T. Jurado, A. A. Corona, and C. R. M. Urista. 2012. *Traditional methods for whey protein isolation and concentration effects on nutritional properties and biological activity*. *J. Mexican Chemical Society* 56 (4): 369-377.

Yi, L., C. M. M. Lakemond, L. M. C. Sagis, V. E. Schadler, A.V. Huis, and M. A.J.S. van Boekel. V. 2013. *Extraction and characterization of protein fractions from five insect species*. *J. Food Chemistry* 141(4): 3341-3348.

Young, V. R., and P. L. Pellett. 1984. *Background paper 5: amino acid composition in relation to protein nutritional quality of meat and poultry products*. *J. The American Journal of Clinical Nutrition*.1984; 40 (3): 737-742

Zayaz, J. F. 1997. *Functionality of Proteins in Food*. New York, USA: Springer.

Zhang, B., Y. Chui, G. Yin, X. Li, and X. Zhou. 2009. *Alkaline extraction method of cottonseed protein isolate*. *J. Modern Applied Science* 3 (3): 77-82.