GELATIN EXTRACTION FROM SILVER CATFISH *PANGASIUS SUTCHI* AT DIFFERENT EXTRACTION TIME AND EVALUATION OF ITS AMINO ACID, VISCOSITY AND MOLECULAR WEIGHT DISTRIBUTION

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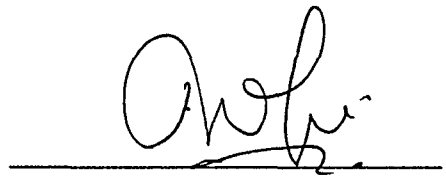

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ABSTRACT

GELATIN EXTRACTION FROM SILVER CATFISH (*Pangasius sutchi*) AT DIFFERENT EXTRACTION TIME AND EVALUATION OF ITS AMINO ACID, VISCOSITY AND MOLECULAR WEIGHT DISTRIBUTION

Gelatin extraction from silver catfish (*Pangasius sutchi)* skin was performed at different extraction time of 6, 8, 10 and 12 hours. The skin was washed with NaCl (0.8N), NaOH (0.19N) and acetic acid (0.12N) followed by extraction using hot distilled water at 50 °C. The extract was dried using a freeze-drier and ground to obtained gelatin in powdered form. The longer the extraction time, the higher the percentage of yield obtained where for 12 hours extracted gelatin yield 11.42% while 6 hours gelatin showed only 8.20% yield. The gelatin was analyzed for amino acids composition, molecular weight distribution and viscosity and was compared with commercial bovine gelatin. Silver catfish gelatin showed higher amount in proline, lysine, phenylalanine and glycine compared to other amino acids. Silver catfish gelatin extracted for 6 hours showed the high presence of molecular weight band compared to the 12 hours gelatin and the commercial gelatin. The viscosity value also showed that the 6 hours gelatin had higher viscosity value when compared to the other while the viscosity of 12 hours silver catfish gelatin and commercial gelatin was very closed to each other. Gelatin application in food industries were extraordinarily versatile because high viscosity value of gelatin (6 hours) can be used to improve food elasticity (gelling agent), stability (emulsifier) and consistency. At the same time, it also contains essential amino acids that were necessary for human health which were suitable to be used as desserts.