PRE-PURIFICATION OF AN ALKALINE PROTEASE FROM INTESTINE OF NILE TILAPIA *(Oreochromis Niloticus)* USING REVERSED MICELLES

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Reversed micelles are the aggregates of amphiphilic molecules in an organic solvent. The liquid–liquid extraction using reversed micelles systems is a useful and very versatile tool for biomolecules separation. Many enzymes have been successfully extracted with reversed micelles without too much bioactivity loss. This work describes the extraction and back-extraction, through the contact of equal phase volume ratio, of an alkaline protease from the intestine crude extract of Nile tilapia (*Oreochromis niloticus*), using 50 mM AOT/isooctane reversed micelles. The time, speed and temperature of agitation on extraction and back-extraction were studied. The best condition for the extraction was found to be with 10 min, 700 rpm at 45^{o}C. The back-extraction was obtained through of the contact of a new aqueous phase of 100 mM Tris HCl buffer containing 150 mM KCl, at pH 8.0, with the micellar phase from extraction. The best condition for the back-extraction was found to be with 10 min, 700 rpm at 25ºC. Under these conditions it was possible to obtain a purification factor of 6.3.These findings show that liquid-liquid extraction technique with reversed micelles could be used for protein extraction as a first step of an isolation and purification process.

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