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Purification of papain from unclarified papaya juice using reversed phase expanded bed adsorption chromatography (RP-EBAC)

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ABSTRACT

The purification of papain using a reversed phase expanded bed adsorption chromatography (RP-EBAC) using a Fastline™ 10 EBAC column packed with Amberlite™ XAD7HP has been carried out in this study. An efficient large scale direct recovery of papain was developed and optimized from unclarified papaya juice feedstock in batch adsorption system. Enhancement of papain purity was further investigated in EBAC by stepwise elution strategy. High papain purity of 74.98% and high purification factor of 7.04 were obtained. This study shows a great potential of using two step elution RP-EBAC system to purify papain from unclarified papaya juice.