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Title: Desalting Fish Skin Protein Hydrolysates Using Macroporous Adsorption Resin

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Abstract: Macroporous Adsorption Resin (MAR) DA 201-C was used to desalt different Fish Skin Protein Hydrolysates (FSPHs). The FSPHs were obtained by hydrolysis of fish skin using Alcalase in a batch reactor a 60°C and pH 8.25. The ash was removed by adsorbing FSPHs onto MAR. Desorption was achieved by washing with alcohol at different concentrations. Ash content of the FSPHs was reduced from 4.69-5.57 to 1.07-2.48% range. The protein content was enriched from 89.07-90.82 to 94.89-96.38% range. MAR has good hydrolysate recoveries. The use of MAR showed promising results in decolourization and fishy flavour reduction. Nile tilapia and Nile perch skin protein hydrolysates were moderately bitter compared to Grass carp skin protein hydrolysates. The bitter taste in FSPHs was reduced to slightly detectable levels by our sensor panel. The hydrolysates had relatively low molecular weight. The process of applying MAR to desalt and debitter FSPHs is feasible.

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