

[54] PROCESS FOR PURIFYING AND STABILIZING CATECHOL-CONTAINING PROTEINS AND MATERIALS OBTAINED THEREBY

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[58] Field of Search ..... 106/124, 160, 161; 260/112 R

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[57] ABSTRACT

A process is provided for purifying and stabilizing marine mussel polyphenolic proteins rich in 3,4-dihydroxyphenylalanine (dopa) and hydroxyproline (hyp) while obtaining high yields thereof. The process includes the steps of providing an acid soluble extract of the dopa-containing proteins, removing the low molecular weight material from the extract and reacting the remaining proteinaceous material with a water soluble borate at a pH of 7.0-9.0 to provide a soluble borate complex of the dopa-containing protein while precipitating impurities. The complex is separated from the precipitate and may be concentrated for storage or treated with an acetic acid solution and either concentrated or lyophilized and stored under an inert atmosphere. The purified proteins exhibit a dopa:protein index of purity ratio of at least about 0.10.

29 Claims, No Drawings