

Abstract

Purification of Type II Collagen from Chicken Sternum [†]

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Abstract: The study presented in this work focused on the extraction and purification of type II collagen from chicken sternum using an acid-enzymatic extraction. Cartilage digestion with pepsin and acetic acid was followed by several successive precipitations using NaCl. Collagen was then solubilized and recovered by acetic acid. The estimation of the purity of obtained protein was carried out by polyacrylamide gel electrophoresis in presence of SDS and UV-visible scanning. Results of SDS-PAGE showed two pure proteins corresponding to α and β chains of collagen type II. Spectrophotometric scan gives a characteristic spectrum of collagen II with a single peak at 225 nm in absence of other proteins which absorb at 280 nm. The purified collagen from chicken sternum cartilage could have several laboratory applications especially in the induction of rheumatoid arthritis.

Keywords: collagen type II; chicken sternum; pepsin; precipitation; electrophoresis; absorption spectrum

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