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Comparative Study between Chloramine-T and Iodogen to Prepare Radio Iodinated Etodolac for Imaging of Inflammation

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This study describes a fast and efficient method for radiolabeling of etodolac with iodine-125, where both chloramine-T (CAT) and iodogen were used as oxidizing agents. The labeling reaction was carried out via electrophilic substitution of hydrogen atom with the iodonium atom I⁺. The labeling yield was found to be influenced by different factors such as drug concentration, pH of the reaction mixtures, different oxidizing agents, reaction time, temperature and different organic media. The radiochemical yield was determined by TLC system using methylene chloride: ethyl acetate (3:7 v/v) as a developing solvent and by electrophoresis using cellulose acetate moistened with 0.02M phosphate buffer pH 7. The maximum radiochemical yield of ¹²⁵I-etodolac (87.7 %) was obtained. Labeled etodolac shows a good localization in inflamed muscle. It excretes mainly via kidney and to some via liver.