

LABELLING OF LEUKOTRIENES WITH ISOTOPES (^{14}C , ^2H , ^3H) OR WITH A NON ISOTOPICALLY LABELLED $\text{Fe}(\text{CO})_3$ GROUP : SYNTHESSES AND UTILISATIONS.

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Leukotrienes are important metabolites of arachidonic acid. We synthesized these compounds labelled with deuterium and tritium in their lipid part from suitable acetylenic precursors. Thus, we obtained LTA_4 , LTC_4 , LTD_4 and LTE_4 labelled in positions 11, 12, 14 and 15. By another route, LTC_4 , LTD_4 and LTE_4 were labelled with ^{14}C in their peptide part, starting from the tripeptide glutathione [^{14}C -CO] (both natural form and distereoisomer were obtained). We also synthesized leukotrienes labelled with a non isotopic iron tricarbonyl $\text{Fe}(\text{CO})_3$ group. Tritium and ^{14}C labelled leukotrienes were used in metabolism studies, deuterated leukotrienes as internal standards in mass spectrometry and leukotrienes-iron tricarbonyl complexes as infra-red markers for in vitro assays.

THE SYNTHESIS OF CARBON-14 LABELLED MUPIROICIN

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Mupirocin (formally known as pseudomonic acid A) is a novel antibiotic produced by a strain of Pseudomonas fluorescens. Mupirocin contains a 9-hydroxynonanoic acid residue joined via an α,β -unsaturated ester linkage to a highly functionalised carbon-chain (monic acid). In order to investigate the metabolic fate of mupirocin it was necessary to separately label mupirocin with carbon-14 in the 2 and 9' positions. The synthesis of [2- ^{14}C]mupirocin from triethyl phosphono[2- ^{14}C]acetate and [9'- ^{14}C]mupirocin from potassium [^{14}C]cyanide are described. Also described is the preparation of [2- ^{14}C]monic acid and its associated rearrangement products which are formed under acidic conditions.