

Synthesis of Glutathione Adducts of K-Region Arene Oxides

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The K-region oxides of phenanthrene, pyrene, and benzo[*a*]pyrene react with *N*-trifluoroacetylglutathione dimethyl ester to give diastereoisomeric conjugates amenable to separation by chromatography.

The enzymatic reaction of glutathione (γ -glutamylcysteinylglycine, GSH) with epoxides is an important metabolic pathway in a general detoxication scheme leading to the eventual elimination of these reactive intermediates.¹ The use of K-region oxides of polynuclear aromatic hydrocarbons as substrates has provided valuable information relevant to the stereochemistry of this enzymatic transformation.²

Further mechanistic studies have been hampered by the lack of suitable procedures for the preparation of diastereoisomerically pure GSH adducts of K-region oxides. The separation of isomeric sulphide derivatives of arene oxides, including those from simple thiols,³ has been traditionally difficult; this difficulty is magnified when attempting purifications on a preparative scale. In the present communication

