polysulfides (acyclic compounds)

P 0425

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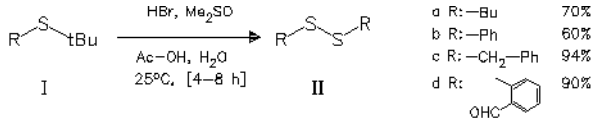
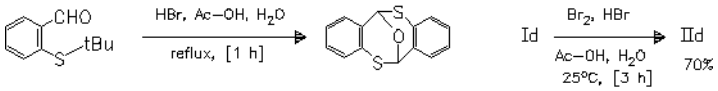
Oxidative Cleavage of Aryl or Alkyl tert-Butyl Sulfides with Dimethyl Sulfoxide/Hydrobromic Acid to Form Symmetrical Aryl or Alkyl Disulfides. — Treatment of hydrobromic acid with dimethyl sulfoxide results in the formation of bromonium ions which attack the tert-butyl sulfides (I), to undergo oxidative cleavage, producing the symmetrical disulfides (II). Reaction of ortho-(tert-butylthio)benzaldehyde (Id) with hydrogen bromide in the absence of DMSO gives the hemithioacetal dimer (III), whereas a mixture of HBr and bromine converts (Id) to the disulfide (IId). — (DICKMAN, D. A.; CHEMBURKAR, S.; KONOPACKI, D. B.; ELISSEOU, E. M.; Synthesis (1993) 6, 573-574; Process Res., Pharm. Prod. Div., Abbott Lab., Abbott Park, IL 60064, USA; EN)



I II



Id III 70%