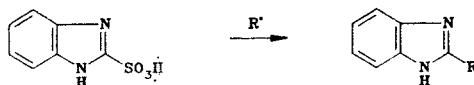
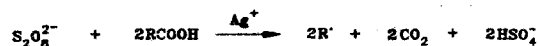


It is known that the sulfinic acid group of benzimidazole-2-sulfonic acids can be replaced by nucleophiles [1]. We found that the replacement by alkyl radicals also proceeds readily.



The reaction is carried out in an aqueous acetonitrile solution, and the radicals are generated by oxidative decarboxylation of carboxylic acids by ammonium persulfate in the presence of silver ions, by a method described in [2].



A 1-mmol portion of silver nitrate in 3 ml of water is added, with heating (80°C) and stirring, to a solution of 5 mmol of benzimidazole-2-sulfonic acid and 10 mmol of phenylacetic acid in a mixture of 50 ml of acetonitrile and 70 ml of water, and then a solution of 10 mmol of ammonium persulfate in 5 ml of water is added dropwise. After 1.5 h, a few drops of HCl are added to the reaction mixture and silver chloride is filtered off. After acetonitrile has been distilled off, 2-benzylbenzimidazole [3] is precipitated from the filtrate by sodium carbonate. Yield 28%. 2-Adamantylbenzimidazole [4], yield 45%; 2-phenoxyethylbenzimidazole [5], yield 65%; and 2-methoxyethylbenzimidazole [5], yield 80%, were obtained in a similar way.

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