

Quarternized nicotinic esters and amides permitted easy alkaline hydrolyses. This enabled the selective cleavage of the nicotinoyl group. The intramolecular ester functions were not affected during the course of introduction and removal of the nicotinoyl group as seen for phenyl salicylate and methyl lactate. Other advantages of the present protective group are as follows; 1) Since quarternized protected substrates are water-soluble crystalline solids, they are readily isolated from the reaction mixture and purified by recrystallization. 2) Deprotected substrates are readily separated from the removed N-methylnicotinate by simple extraction by virtue of the difference in solubility.

The author thanks Professor A. Ohno of Kyoto University for helpful discussions.

Table 1. Introduction and removal of nicotinoyl group

Substrate	Introduction	N-Methylation	Alkaline hydrolysis	
	Yield/%	Yield/%	Yield/%	Time for 50% hydrolysis
Phenol	98	94	98	9 min
Benzyl Alcohol	92	93	94	2 h
2-Phenylethanol	96	95	98	2 h
1-Hexanol	95	94	95	3 h
Phenyl Salicylate	99	95	89	7 min
Methyl Lactate	93	90	85	2 min
Aniline	99	81	86	18 h
4-Chloroaniline	98	77	96	55 h
Benzylamine	99	93	55	2 h

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(Received September 26, 1988)