

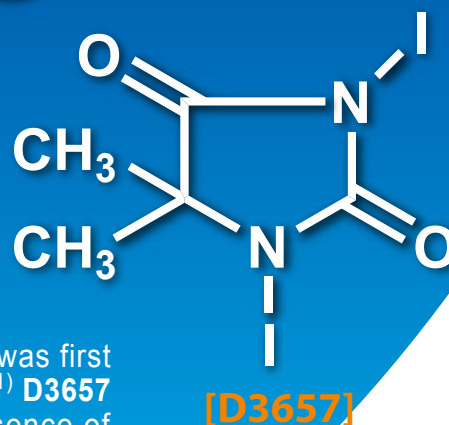
# Highly Effective Iodinating Reagent – DIH

## Advantages

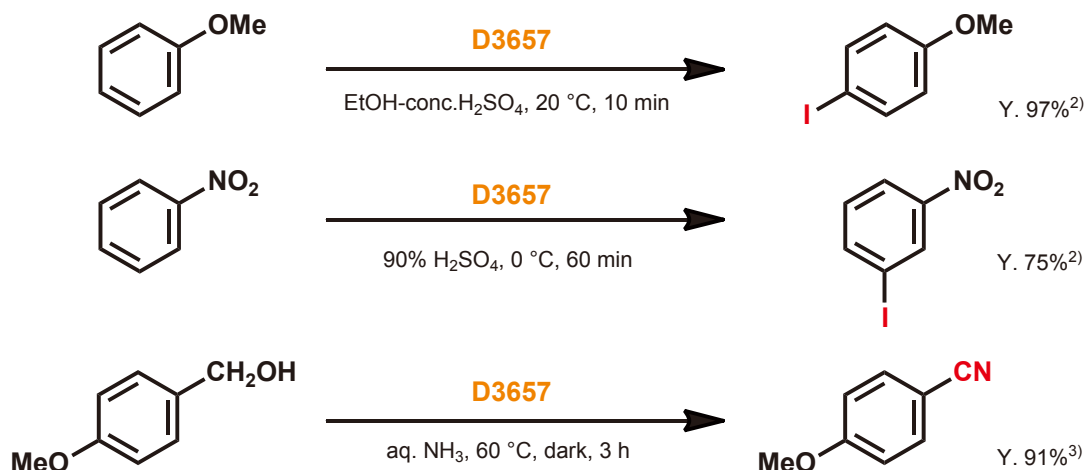
- Higher Reactivity and Selectivity than Other Iodinating Reagents, such as  $I_2$  or NIS
- By-Product can be Easily Removed by Aqueous Extraction

1,3-Diiodo-5,5-dimethylhydantoin (DIH) (D3657), which was first reported by Orazi *et al.*, is an useful iodinating reagent.<sup>1)</sup> D3657 reacts smoothly with aromatic compounds in the presence of sulfuric acid to give the corresponding iodinated products in high yields and high regioselectivities.<sup>2)</sup> In addition, direct conversion of alcohols and amines to the corresponding nitriles using D3657 also have been reported.<sup>3)</sup>

Furthermore, dimethylhydantoin, which is formed after the reaction, can easily be removed by aqueous extraction.



## Reaction Examples



**D3657 1,3-Diiodo-5,5-dimethylhydantoin (DIH)** 5g / 25g

1) O. O. Orazi, R. A. Corral, H. E. Bertorello, *J. Org. Chem.* **1965**, 30, 1101.

2) V. K. Chaikovskii, V. D. Filimonov, A. A. Funk, V. I. Skorokhodov, V. D. Ogorodnikov, *Russ. J. Org. Chem.* **2007**, 43, 1291.

3) S. Iida, H. Togo, *Tetrahedron* **2007**, 63, 8274.

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