

BUJNO Synthesis Sp. z o.o.

Dorodna 16,
03-195 Warszawa, POLAND
www.bujno.com.pl

Dess-Martin periodinane,

DMP

1,1,1-Triacetoxy-1,1-dihydro-1,2-benziodoxol-3(1H) –one

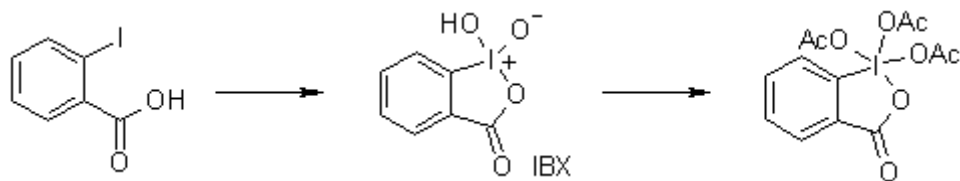
CAS	87413-09-0
FW	424,16
Melting point	133-134 °C
Merck	13, 2950
Beilstein	4548207

The Dess-Martin periodinane (DMP) is a mild, versatile reagent for selective oxidation of primary and secondary alcohols to aldehydes and ketones, hydroxamic acids to acyl nitroso compounds, deprotection of thioacetals, deoximation of ketoximes to ketones .

Why DMP?



Preparations of Dess-Martin Periodinane



Readily Accessible 12-I-5 Oxidant for the Conversion of Primary and Secondary Alcohols to Aldehydes and Ketones,
Dess, D.B., Martin, J.C., J. Org.Chem. 48 (1983) 4155

A Useful 12-I-5 Triacetoxypiperidine (the Dess-Martin Periodinane) for Selective Oxidation of Primary or Secondary Alcohols and a Variety of Related 12-I-5 Species,
Daniel B. Dess and J.C. Martin, J.Am.Chem.Soc., 113 (1991) 7277

An Improved Procedure for the Preparation of the Dess-Martin Periodinane,
Robert E. Ireland and Longbin Liu, J.Org.Chem., 58 (1993) 2899

A User-Friendly Entry to 2-Iodoxybenzoic acid (IBX),
Marco Frigerio and Marco Santagostino and Simona Sputore, J.Org.Chem., 64 (1999) 4537

Magnesium amide base-mediated enantioselective deprotonation processes,
Kenneth W. Henderson, William J. Kerr and Jennifer H. Moir, Tetrahedron, 58 (2002)4573

Applications of of Dess-Martin Periodinane

Readily Accessible 12-I-5 Oxidant for the Conversion of Primary and Secondary Alcohols to Aldehydes and Ketones,
Dess, D.B., Martin, J.C., J. Org.Chem. 48 (1983) 4155

Enantioselective Total Synthesis of (-)-Preclavulone-A,
E.J. Corey and Yi Bin Xiang, Tetrahedron Lett., 29 (1988) 995

Oxidation of Fluoroalkyl-Substituted Carbinols by the Dess-Martin Reagent,
Russell J. Linderman and David M. Grave, J.Org.Chem., 54 (1989), 661

Development of a Fully Synthetic Stereoselective Route to 6-Deoxyerythronolide B by Reiterative Applications of the Lewis Acid Catalyzed Diene Aldehyde Cyclocondensation Reaction: A Remarkable Instance of Diastereofacial Selectivity,
David C. Myles and Samuel J. Danishefsky, J.Org.Chem., 55 (1990) 1636

A Useful 12-I-5 Triacetoxypiperidine (the Dess-Martin Periodinane) for Selective Oxidation of Primary or Secondary Alcohols and a Variety of Related 12-I-5 Species,
Daniel B. Dess and J.C. Martin, J.Am.Chem.Soc., 113 (1991) 7277

A Novel Application of the Dess-Martin Reagent to the Synthesis of an FK506 Analogue and other Tricarbonyl Compounds,
Mark J. Batchelor, Roger J. Gillespie, Julian M.C. Golec and Charles J. R. Hedgecock, Tetrahedron Lett., 34 (1993) 167

Hypervalent Iodine Oxidant: Structure and Kinetics of the reactive Intermediates in the Oxidation of Alcohols and 1,2-Diols by o-Iodoxybenzoic acid (IBX) and Dess-Martin Periodinane. A Comparative H-NMR study.

Sergio De Munari, Marco Frigerio and Marco Santagostino, *J.Org.Chem.*, 61 (1996) 9272

The Asymmetric Synthesis of Erythromycin B,

Stephen F. Martin, Tsuneki Hida, Philip R. Kym, Michael Loft and Anne Hodgson, *J.Am.Chem.Soc.*, 119 (1997) 3193

Deoxygenation Using Dess-Martin Periodinane: Regeneration of Ketones from Ketoximes,

Sachin S. Chaudhari and Krishnacharya G. Akamanchi, *Tetrahedron Lett.*, 39 (1998) 3209

Reaction of 1,1,1-Trifluoro[chloro]-4-ethoxybut-3-en-2-ones with 1,3-Dicarbonyl Compounds: Synthesis of 5-Acetyl[carboxyethyl]-1,1,1-trifluoro[chloro]hept-3-ene-2,6-diones and their Cyclic Derivatives Phenol, Pyridines and Acetone,

Nilo Zanatta, Resemario Barichello, Helio G. Bonacorso, Marcos A.P. Martins, *Synthesis*, 5 (1999) 765

New Synthetic Technology for the Rapid Construction of Novel Heterocycles- Part1:

The Reaction of Dess-Martin Periodinane with Anilides and Related Compounds,

K.C. Nicolaou, Young-Li Zhong, Phil S. Baran, *Angew. Chem.Int.Ed.*, 39 (2000) 622

New Synthetic Technology for the Rapid Construction of Novel Heterocycles- Part2:

The Reaction of Dess-Martin Periodinane with Anilides and Related Compounds,

K.C. Nicolaou, Young-Li Zhong, Phil S. Baran, *Angew. Chem.Int.Ed.*, 39 (2000) 625

Oxidation of α,ω -Diols Using the Dess-Martin Periodinane,

Jochen Roels, Peter Metz, *Synlett*, 6 (2001) 789

A Mild, Chemoselective Protocol for the Removal of Thioketals and Thioacetals Mediated by Dess-Martin Periodinane,

Neil F. Langille, Less A. Dakin, and James S. Panek, *Org.Lett.*, 5 (2003) 575

Shotgun Process through Differentiation of Aliphatic and Aromatic Aldehyde Functions: The First Synthesis of Ferulic Acid Hexan-3-onyl Ether,

Yoshifumi Nagano, Akhiro Orita, Junzo Otera, *Synlett*, 5 (2003) 684

Preparation of 14,36-didehydro pristinamycins IIs,

Baptiste Ronan, Eric Bacque, Jean-Claude Barriere and Serge Sable, *Tetrahedron*, 59 (2003) 2929

Recyclable 2nd generation ionic liquids as green solvents for the oxidation of alcohols with hypervalent iodine reagents,

J.S. Yadav, B.V.S. Reddy, A.K. Basak and A. Venkat Narsaiah, *Tetrahedron*, 60 (2004) 2131

Synthesis of Imides, N-Acyl Vinylogous Carbamates and Ureas, and Nitriles by Oxidation of Amides and Amines with Dess-Martin Periodinane,

K.C. Nicolaou and Casey J.N. Mathison, *Angew.Chem.Int.Ed.*, 44 (2005) 5992

Syntheses of the cylindrospermopsin alkaloids,

Ryan E. Looper, Maria T.C. Runnegar and Robert M. Williams, *Tetrahedron*, 62 (2006) 4549

Hypervalent Iodine Mediated Intramolecular Cyclization of Thioformanilides: Expedient Approach to 2-Substituted Benzothiazoles,

D.Subhas Bose and Mohd. Idrees, *J.Org.Chem.*, 71 (2006) 8261

If you would like to purchase this item or enquire for current pricing and availability then please look at BUJNO Synthesis Web Pages_ <http://www.bujno.com.pl/listprod.htm>