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New Preparative Routes to Isosorbide 5-Mononitrate.

— Three novel methods for the synthesis of isosorbide 5-mononitrate (VII), a very potent vasodilating agent, are presented. The first method involves regioselective enzyme-catalyzed acylation of position 2 of isosorbide (I) followed by nitration of position 5 and subsequent 2-O-deacylation. The other two methods utilize selective removal of the 2-nitro group of dinitroisosorbide (VIII), either by PtO_2 -catalyzed hydrogenation or by cobalt phthalocyanine-catalyzed reduction with NaBH_4 . All three methods are efficient, cost-effective, and industrially applicable. — (BROWN, CHRIS; MARSTON, RICHARD W.; QUIGLEY, PAUL F.; ROBERTS, STANLEY M.; Perkin 1 (2000) 12, 1809-1810; Archimica Lab., Sandycroft, Flintshire CH5 2PX, UK; EN)

