Structure of 2-[4-(Dimethylamino)phenyl]-4,5-diphenyl-1Himidazole Isopropanol Solvate

<u>Oscar Au-Alvarez</u>^a, Horst Puschmann^b, Judith A. K. Howard^b, Hassan Martinez^a, Jorge Acevedo^a, ^aDepartment of Chemistry, University of Oriente, Santiago de Cuba 90500, Cuba. ^bDepartment of Chemistry, University of Durham, Durham DH1 3LE, UK. E-mail: o.au-alvarez@cnt.uo.edu.cu

Different types of organic compounds have been synthesized using microwave-assisted organic synthesis [1] and Usyatinsky & Khmelnitsky [2] have reported the use of this technique in the preparation of 2,4,5-substituted imidazoles. Their synthetic procedure involved the condensation of 1,2-diaryethandienones with aldehydes and ammonium acetate as the source of ammonia with an acidic support (acidic silica) in a microwave oven. We synthesized 2-[4-(dimethylamino)phenyl]-4,5-diphenyl-1H-imidazole using a similar technique in the absence of the acidic support media. Recrystallization of the reaction product from isopropanol afforded the title compound, as shown by single-crystal X-ray structure determination. The title compound, C23H21N3·C3H8O, crystallizes with two independent molecules and two solvent molecules in the asymmetric unit. These are connected through hydrogen bonds between the NH group of the imidazole ring and the O atom of the isopropanol solvent molecule, as well as between the N atom of the imidazole ring and the OH group of the isopropanol solvent molecule.

Lidström P., Tierney J., Wathey B., Westman J., *Tetrahedron*, 2001, 57, 9225-9283.
Usyatinsky A. Ya., Khmelnitsky Y., *Tetrahedron Lett.*, 2000, 41, 5031-5034.

Keywords: microware materials, organic structures, hydrogen bonds