Novel Quinoline-Imidazolium Adducts via the Reaction of 2-Oxoquinoline-3-Carbaldehyde and Quinoline-3-Carbaldehydes with 1-Butyl-3-Methylimidazolium Chloride [BMIM][Cl]

Kenneth K. Laali, Daniel Insuasty, Rodrigo Abonia, Braulio Insuasty, Scott D. Bunge

PII: S0040-4039(14)00925-3
DOI: http://dx.doi.org/10.1016/j.tetlet.2014.05.094
Reference: TETL 44685

To appear in: *Tetrahedron Letters*

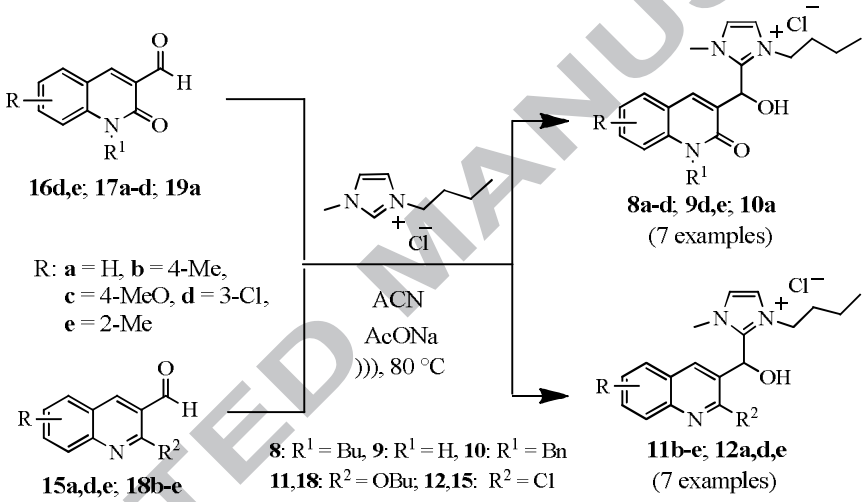
Received Date: 14 May 2014
Revised Date: 22 May 2014
Accepted Date: 24 May 2014

Please cite this article as: Laali, K.K., Insuasty, D., Abonia, R., Insuasty, B., Bunge, S.D., Novel Quinoline-Imidazolium Adducts via the Reaction of 2-Oxoquinoline-3-Carbaldehyde and Quinoline-3-Carbaldehydes with 1-Butyl-3-Methylimidazolium Chloride [BMIM][Cl], *Tetrahedron Letters* (2014), doi: http://dx.doi.org/10.1016/j.tetlet.2014.05.094

Novel Quinoline-Imidazolium Adducts via the Reaction of 2-Oxoquinoline-3-Carbaldehyde and Quinoline-3-Carbaldehydes with 1-Butyl-3-Methylimidazolium Chloride [BMIM][Cl]

Kenneth K. Laali*[a], Daniel Insuasty [a,b], Rodrigo Abonia*[b], Braulio Insuasty[b], and Scott D. Bunge[c]

[a] Department of Chemistry, University of North Florida, 1 UNF Drive, Jacksonville, Florida 32224, USA; [b] Department of Chemistry, Universidad del Valle, A.A. 25360, Cali-Colombia; [c] Department of Chemistry and Biochemistry, Kent State University, Kent, OH 44242, USA



Abstract: A library of hydroxyquinolin-3-ylmethylimidazolium adducts were prepared in high yields from the reaction of [BMIM][Cl] with various substituted quinoline-3-carbaldehydes and 2-oxoquinoline-3-carbaldehydes under mild conditions by using sodium acetate in MeCN under ultrasound irradiation. The use of sodium acetate and imidazolium chloride was crucial for the success of these C-C bond forming reactions. Attempted coupling with thiazolium bromide led instead to quinoline-3-carboxylic acid.

Keywords: quinolone-3-carbaldehyde; ionic liquids (IL´s); 3-butyl-1-methylimidazolium acetate; N-heterocyclic carbenes (NHCs), hydroxyquinolin-3-ylmethylimidazolium adducts; thiazolium salts; quinoline-3-carboxylic acids.

*Corresponding Author: Tel: 904-620-1503, Fax: 904-620-3535. E-mail: kenneth.laali@UNF.edu (Kenneth K. Laali)