Effect of Temperature on the Purity of Product in the Preparation of 1-Butyl-3-methylimidazolium-Based Ionic Liquids

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The preparation of room-temperature ionic liquids 1-butyl-3-methylimidazolium chloride, hexafluorophosphate, and dicyanamide by microwave-assisted reaction in non-solvent and solvent conditions has been studied in this contribution. A special emphasis is put on the effect of the reaction temperature on the purity of ionic liquids that was monitored by electrospray ionisation mass spectrometry and ^{1}H NMR. The X-ray structure of 1-butyl-3-methylimidazolium chloride is presented.

Key words: RTIL, Purity, Side Products, Electrospray Mass Spectrum