SYNTHESIS OF 2-AMINO-5-{(1E)-1-[(CARBAMOTHIOYLAMINO) IMINO] ETHYL}-4-METHYL-1, 3-THIAZOL-3-IUM CHLORIDE MONOHYDRATE

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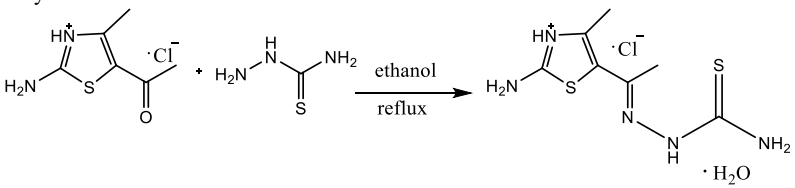
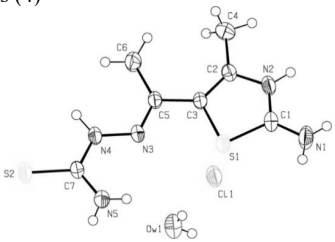
Among pharmacologically important heterocyclic compounds, thiazole and its derivatives have been well known in pharmaceutical chemistry because of their wide spectrum of biological activities and their presence in naturally occurring compounds e.g. antibiotic like penicillin, cephalosporin, micrococcin, vitamin B1. Thiazole and its derivatives are found to be associated with various biological activities such as antibacterial, antifungal and anti-inflammatory activities. Different thiazole bearing compounds possess anti-inflammatory activities and some are known to be used as pharmaceuticals (1–3).

Because the biological activity of thiazole derivatives is so impoprtant, the interest in the synthesis of their new derivatives is increasing. The presented research paper is from the interaction of 5-acetyl-2-amino-4-methylthiazol-3-ium chloride and thiourea interaction of 2-amino-5-{(1E)-1-[(carbamothioylamino)imino]ethyl}-4-methyl-1,3-thiazol-3-ium chloride monohydrate.



The structure of the synthesized compound was confirmed RSA method. The molecular structure of showing the atom labeling and displacement ellipsoids drawn at the 50 % probability level is as follows (4)



Based on crystal data the H atoms of the methyl groups were positioned geometrically and refined as riding with C—H = 0.96 A˚, with Uiso(H) = 1.5Ueq(C). The H atoms attached to the N atom and the H atoms of the water molecule were found in a difference-Fourier map. Their positional parameters were refined freely while setting Uiso(H) = 1.2Ueq(N) and 1.5Ueq(O).