of adsorption to the content in the aqueous phase. For the cement with a high tricalcium aluminate content (8.5 %), a low molecular weight sample [η] = 0.12, which is adsorbed in the tricalcium aluminate phase, is more effective.

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Synthesis of new mesoionic tetrazolium-5-aminide

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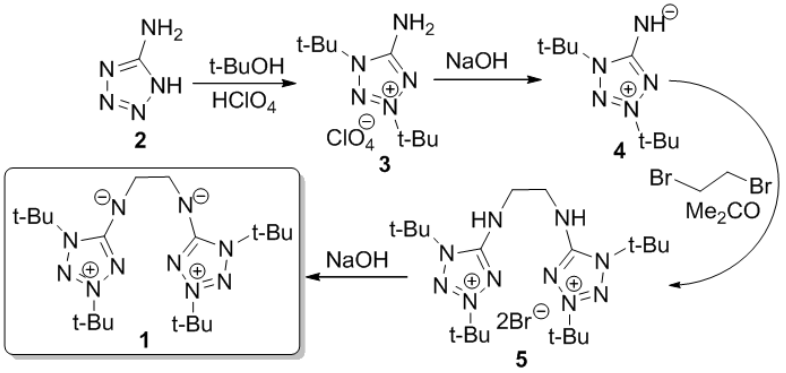
Today there is a growing interest in tetrazole based mesoionic compounds because they are potential candidates for use as components of energetic ionic liquids [1]. Also mesoionic tetrazoles are attractive ligands for synthesis of new complexes with transition metals [2].

The purpose of this work was to develop simple method for the synthesis of new mesoionic tetrazole, namely ethane-1,2-diylbis((1,3-di-*tert*-butyl-1H-tetrazol-3-ium-5-yl)amide) (**1**) which is of interest as chelating multi-nitrogen ligand for coordination chemistry. The developed method for synthesis of **1** includes four main stages. At first, quaternization of available 5-aminotetrazole (**2**) with t-BuOH/$HClO_4$ system allowed us to obtain tetrazolium salt **3** which gave tetrazolium-5-aminide **4** under base treatment [3]. Then bis-tetrazolium salt **5** was prepared by alkylation of **4** with 1,2-dibromoethane in acetone. Finally, reaction of **5** with sodium hydroxide led to target compound **1.**



Structures of obtained compounds were characterized by NMR, IR and MS.

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Novel cholesterol-like steroids with artificial side chains: design as molecular probes or potential drugs precursors: docking studies against selected human and mycobacterial steroid-operating proteins

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Various 3-beta-hydroxysteroids with artificial side-chains (substituents at C17) have been developed that are analogues to fluorescent cholesterol, such as 22-NBD-cholesterol, BODIPY-cholesterol. These compounds with azide, alkyne or nitrile groups in side-chains have found popularity due to their properties as small bioorthogonal tags enabling detection *via* both click-chemistry based conjugation and Raman microscopy. Previously we described