NINHYDRIN INTERACTION WITH *N*-ALKOXY-*N*'-ARYLUREAS AND *N*-HYDROXYUREA

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Ninhydrin is widely used in synthesis of these biologically active nitrogen-containing heterocycles. It is therefore important to create the reaction strategies that give access to such new biological relevant scaffolds.

We had found that ninhydrin reacted with *N*-alkoxy-*N*'-arylureas in acetic acid at room temperature with diastereoselective formation of 1-alkoxy-3-aryl-3a,8a-dihydroxy-1,3,3a,8a-tetrahydroindeno[1,2-*d*]imidazole-2,8-diones **1**. The XRD study of the synthesized compounds **1** has revealed that there is the mutual *cis*-orientation of the C(3a)–OH and C(8a)–OH hydroxyl groups towards to each other. It has also found that the C(3a)–C(8a) and C(8)–C(8a) bonds are some elongated. The ninhydrin interaction with *N*-hydroxyurea (acetic acid, room temperature) is diastereoselective too. It yields 1,3a,8a-trihydroxy-1,3,3a,8a-tetrahydroindeno[1,2-*d*]imidazole-2,8-dione **2**. The XRD study of the compound **2** has revealed that there is the mutual *cis*-orientation of the C(3a)–OH and C(8a)–OH hydroxyl groups towards to each other.