One-Pot and step-wise synthesis of thieno[3,2-c]pyridin-4-ones

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**X-ray structural analysis of 6c**

The compound was crystallized in mixture of chloroform and methanol. The 6c shows H-bonding interactions in the solid state structure of the compound. The distance between N2-H2A···O2 & N2-H2B···O1 H-interactions is 2.8187(16), 2.4007(16) Å and bond angle 101.153(144)°, 99.792(147)°, respectively. Similarly, the distance between N3-H3A···O3 & N3-H3B···O1 is 2.2416(19), 2.2219(15) Å and bond angle is 124.869(149), 129.154(148)°, respectively.

*Figure. 1: ORTEP diagram of 6c at 30% probability with atom numbering scheme.*