

Poster Presentations

[MS32-P05] Effect of Low Temperatures on the Crystal Structures of N-Methylated Glycines.

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Most crystal structures of amino acids have infinite "head to tail" chains where zwitterions are linked by N-H...O hydrogen bonds. The smallest amino acid, glycine, has three polymorphs at ambient conditions and even more at high pressures. Notwithstanding the conformations of glycine zwitterions are almost identical, the structural diversity is caused by different packing and arrangement of N-H...O hydrogen bonds. So, in many respects the N-H...O hydrogen bonds are structure forming interactions and investigation of them is of special interest in the present work. In the present communication we discuss the effect of decreasing temperature on the crystal structures of N-methylated glycines: N-methylglycine, N,N-dimethylglycine, and N,N,N-trimethylglycine. The changes in these crystal structures on decreasing temperature are considered in terms of their crystal structure features especially N-H...O hydrogen bonds. The work was partly supported by Integration Project of SB RAS No. 108, the Ministry of Education and Science of the Russian Federation (agreement No. 14.B37.21.1093) and the Russian Foundation for Basic Research (grant No. 12-03-31145).

[1] Minkov, V.S., Boldyreva, E.V. (2012) *Acta Cryst*, **C68**, o283o287.

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