

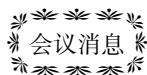
## Analysis of Mechanical Properties of RDX Crystals Obtained from Different Solvents

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**Abstract:** Three types of RDX crystals were prepared. The first one was obtained from the direct production process, and the other two were recrystallized from the first one in acetone and in cyclohexanone respectively. The mechanical performances of these three RDX crystals were tested and analyzed. Among them, the one recrystallized from cyclohexanone possesses the best mechanical performances. The pressed charge column of this kind of RDX crystal did not appear breakage until the pressure was brought to 383 MPa. Besides, the crystal from cyclohexanone exhibits a smoother surface, a better transparency, and a more regular shape in comparison with others. A number of experimental results related to different RDX crystals are presented in this paper, which would be useful for RDX's molding application.

**Key words:** physical chemistry; RDX; crystal; recrystallization; mechanical performance



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