

[1]王元元,刘玉存,王建华,等.降感RDX的制备及晶形控制[J].火炸药学报,2009,(2):44-47.

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Title: Preparation and Crystal Control of Desensitized RDX

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摘要: 采用溶剂-非溶剂重结晶方法制备了降感RDX,研究了温度、溶剂、非溶剂、搅拌强度、表面活性剂和加料方式等工艺条件对双重结晶的影响。采用光学显微镜和扫描电镜分析了所得晶体的形貌,测定了其撞击感度。结果表明,采用最佳工艺条件:70℃,二甲基亚砜(DMSO)为溶剂,甲醇为非溶剂,糊精为表面活性剂,搅拌强度1000r/min,改善了RDX的晶貌和内部质量,降低了撞击感度。通过控制溶液的初始浓度可制得不同粒度的RDX,粒径为100~120μm晶体的撞击感度比原料降低了34%。

Abstract: The desensitized RDX was prepared by the method of solvent-nonsolvent recrystallization, the effect of different conditions, such as temperature, solvents, surface-active agents, stirring strength and feeding modes was studied. The results obtained by an optical microscope, SEM and the impact sensitivity test show that the crystal shape and inner quality of crystallized RDX are improved and the impact sensitivity is reduced adopting the best process conditions:70℃, DMSO-solvent, methanol-nonsolvent, dextrin-surface active agent, 1000r/min stirring strength. The different sizes by controlling RDX concentration of initial solution was gained. The impact test results indicate that the impact sensitivity of granulation 100-120μm is decreased by 34%.

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