Effect of organic solvents on RDX precipitation by ASES process

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In this work, a recrystallization technique called Aerosol Solvent Extraction System (ASES) process is used to micronize RDX (cyclotrimethylenetrinitramine). ASES process utilizes supercritical carbon dioxide to extract organic solvents from the drops of RDX solution sprayed through nozzles for atomization. After the process is done, dried particles of RDX remain in the filters for collection and futher analysis. Although the same apparatus was used, the appearances of the particles are significantly changed when different organic solvents were used for dissolving the raw RDX particles initially. Therefore, the effect of organic solvents on the size and shape of the particles were investigated, especially on the morphologies.