RDX is a major component of plastic bonded explosives. It is widely used in military applications. The most common polymorphs of RDX are α- and β-RDX, where α-RDX is the most stable at room temperature. In β RDX, all NO_2 groups are believed to be oriented in axial positions. In α RDX, one NO_2 group is located in equatorial position and two NO_2 groups are in axial positions with respect to the triazine ring. This difference in the position of the nitro groups grants the RDX crystals different orientations in space. At first the RDX deposited on stainless steel plaques was considered to adopt filmlike properties, but since the RDX solutions are not homogeneous, they will be regarded as deposits. This lack of homogeneity can be explained through the thermodynamic processes that cause RDX to nucleate, or precipitate in ever larger conglomerations as time passes. As opposed to what is generally thought, angular velocities are inversely proportional to thickness, which is related to the concentration of RDX in the solution being deposited. For this purpose, acetone proved to be the best solvent, due to its high evaporation rate. Among the objectives of the study is to find regions where we can identify which structures are favored and correlate them with the concentration of these deposits on stainless steel surfaces. Concentration will be determined by High Performance Liquid Chromatography (HPLC). The angular velocities examined were varied from 3000 to 7000 revolutions per minute (rpm), with increments of 1000 rpms. Calibration curves from concentration data will be built to predict the thickness of these deposits.