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Oxidation in Solution

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1. OXIDATIVE REACTIONS

The 1987 Stability Guidelines state that “It is also suggested that the following conditions be evaluated in stability studies on solutions or suspensions of the bulk drug substances High oxygen atmosphere.”

Oxidation reactions are relatively rare in pharmaceutical dosage forms as a main reaction. Some oxidation probably takes place in many cases and results in small amounts of unidentified degradation products. When an oxidation reaction is one of the main reactions, then it is a serious matter, and formulating around such a problem can be difficult. Notable examples are liquid vitamin A products (although, strictly speaking, they are not solutions). Other examples will be cited shortly.