

Stability / Storage of Acrylamide Solution

Acrylamide solutions must be kept free of any contamination to avoid accidental polymerization. Contact with rust, oxidizing and reducing agents, and vinyl polymerization initiators will cause rapid polymerization. Avoid contact with materials such as persulfates, bisulfites, peroxides and azo compounds. Avoid contact with acids and bases as these materials may result in a solution pH outside the recommended range as discussed herein.

The cupric ion inhibitor in acrylamide solution may be rendered ineffective by chelating agents and precipitants for copper. Avoid contact with materials such as EDTA, polyphosphates, sulfides, carbonates, etc.

Metallic copper, aluminum, brass, bronze and iron will cause slow polymerization in the area of contact with acrylamide solution. Avoid contact with metals above copper in the Electromotive (EMF) series. Stainless steel is the recommended material of construction.

Drums that have contained the material should be stored separately and not used for any other purpose. These drums should be incinerated. To prevent inadvertent exposure, it is important that surfaces subject to acrylamide contamination be thoroughly cleaned on a routine basis.

Maintain a pH range between 6.0 and 7.0 to avoid destabilizing the solution. (High pH will cause the cupric ion inhibitor to precipitate rendering it ineffective, whereas low pH reduce the stability of the solution.)

Keep away from heat sources and direct sunlight. Longterm storage temperatures must be maintained between 2-8°C. (Acrylamide stability decreases at elevated temperatures. Low temperatures may destabilize the solution if acrylamide crystals separate from the solution). Although acrylamide solutions may be stored at room temperature for a short time, we recommend storage at 2-8°C for longterm.