

## Product Information

### Dihydroxyacetone phosphate dimethyl ketal bis(cyclohexylammonium) salt, monohydrate

Product Number **D7878**

Storage Temperature 2–8 °C

#### Product Description

This product is the stable dimethyl ketal derivative of dihydroxyacetone phosphate. It may be used to prepare dihydroxyacetone phosphate in solution.

The molecular weight of dihydroxyacetone phosphate dimethyl ketal bis(cyclohexylammonium) salt, monohydrate is 432.5 Da. The molecular weight of dihydroxyacetone phosphate is 170.1 Da ( $C_3H_7O_6P$ ).

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

This procedure describes the preparation of a solution of dihydroxyacetone phosphate from this product.

A package of specially washed Dowex<sup>®</sup> 50 × 4-200R resin is included with this product for preparing the solution. The Dowex 50 ( $H^+$  form) resin (Product Code 50X4200R) has been washed; however, upon aging it may contribute some color to the solution. It is therefore recommended that the resin be suspended in water and washed by decantation several times before use.

1. Dissolve 25 mg of dihydroxyacetone phosphate dimethyl ketal bis(cyclohexylammonium) salt, monohydrate in 2 ml of water.
2. Add 0.5 g (wet weight) of Dowex-50 ( $H^+$  form to exchange with the cyclohexylammonium ions) and swirl for 30 seconds.
3. Filter the suspension and save the filtrate. Wash the resin with a small amount of water, filter, and save the filtrate.
4. Keep the combined filtrates at 38–40 °C for 4 hours to hydrolyze the ketal.

The yield of dihydroxyacetone phosphate is almost quantitative.

#### Storage/Stability

Store the product, as supplied, at 2–8 °C.

The acid solution may be adjusted to pH 4.5 with potassium bicarbonate and stored frozen without decomposition. If the methanol formed in the hydrolysis of the ketal is objectionable, it may be removed by distillation under reduced pressure.

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