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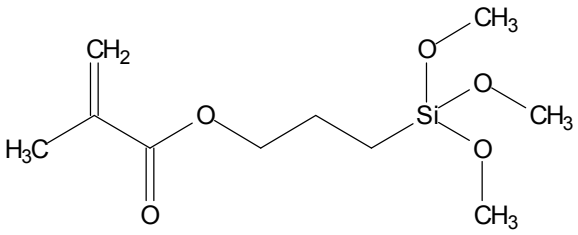
Product Information

3-(Trimethoxysilyl)propyl methacrylate

Catalog Number **M6514**
Storage Temperature 2–8 °C

CAS RN 2530-85-0
Synonyms: γ-Methacryloxypropyltrimethoxysilane; [3-(Methacryloyloxy)propyl]trimethoxysilane

Product Description



Molecular formula: $C_{10}H_{20}O_5Si$
Molecular weight: 248.35
Appearance: Clear, colorless to faint yellow liquid
Density: 1.045 g/mL

3-(Trimethoxysilyl)propyl methacrylate has been used to covalently link polyacrylamide gels to glass plates. Gels cast in this way do not lift from the glass plate as a result of shrinking or swelling due to pH gradient formation during isoelectric focusing. Also the gel will remain attached to the glass plate during staining procedures.[1]

This product can also be used to attach cells, microscopic sections, and total organs to slides and other glass surfaces for *in situ* hybridization purposes. The attachment was faster and considerably more durable than using poly-L-lysine or other protein systems.[2]

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.

Storage/Stability

Store the product at 2–8 °C, protected from moisture. Any cloudiness in the liquid indicates some exposure to water. The product remains active for at least 2 years.

The product will react with water, since alkylsilanes react with hydroxyl groups. An ethanol solution remains active for one day.

Procedure

A procedure for treating glassware.[1]

1. First, glass plates should be cleaned in strong soap, rinsed thoroughly with water, and dried (preferably in a drying oven.)
2. Place spacers around glass plates to allow full contact with the silane solution.
3. Dilute 1 mL of 3-(trimethoxysilyl)propyl methacrylate in 200 mL of ethanol and just before use, add 6 mL of dilute acetic acid (1:10 glacial acetic acid:water).
4. Pour solution (step 3) onto plates and allow to react for ~3 minutes. Pour off excess, and then rinse plates with ethanol to remove the residual reagent. Allow to dry thoroughly.

A similar procedure without using ethanol:

1. Adjust 1 L of water to pH 3.5 with acetic acid. Add 4 mL of 3-(trimethoxysilyl)propyl methacrylate and stir until clear.
2. Treat plates for an hour at room temperature, then rinse and dry.

The coated film may be removed from the glass surface by soaking in a 10% sodium hydroxide solution.

References

1. Garoff and Ansorge, Anal. Biochem., **115**, 450-457 (1981).
2. Dyanov, H.M., and Dzitoeva, S.G., BioTechniques, **18**, 822-826 (1995).

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