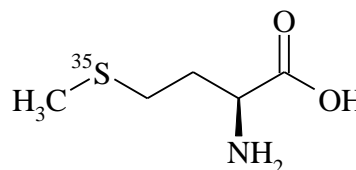


Methionine, L-[³⁵S]-

Product Number: NEG009T

LOT SPECIFIC INFORMATION

| | |
|--------------------|---|
| Lot Number: | 07084 |
| Specific Activity: | 1175 Ci/mmol 43.5 TBq/mmol |
| Concentration: | 11.0 mCi/ml 407.0 MBq/ml 0.00936 μmol/ml 0.00140 mg/ml |
| Calibration Date: | 2-Aug-2024 |

M.W. 149.2
C₅H₁₁NO₂S

PACKAGING: Aqueous solution containing 10 μmoles 2-mercaptoethanol per ml, in a NENSURE vial with polypropylene-v-insert, shipped in dry ice.

STABILITY AND STORAGE:

- The rate of decomposition of NEG-009T, Methionine, L-[³⁵S]- has been determined to be less than 5% per week when stored in its original solvent -80°C. Storage at higher temperatures accelerates breakdown.
- Storage at 4°C results in rapid conversion of product to methionine sulfoxide-[³⁵S].
- If the entire quantity will not be used at once it is recommended that the product be thawed quickly, aliquoted under N₂ into samples of an appropriate size, refrozen immediately and stored at -20°C or below.
- Methionine, L-[³⁵S] is highly susceptible to oxidation and should always be protected from exposure to air, especially if it is taken to dryness.

HAZARD INFORMATION: WARNING: This product contains a chemical known to the state of California to cause cancer.

QUALITY CONTROL:

Radiochemical Purity: This lot was initially found to be >95% when determined by high performance liquid chromatography on a C18 column.

Chemical Purity: As determined by amino acid analysis, NEG-009T is routinely >99% L-isomer and contains the unlabeled amino acids alanine and valine. Each is present in approximately a 2:1 molar ratio relative to Methionine, L-[³⁵S].

PREPARATIVE PROCEDURE: Methionine, L-[³⁵S] is obtained from the protein hydrolysate of bacteria grown in the presence of carrier-free [³⁵S] sulfate. The product is purified by high performance liquid chromatography.

SAFE HANDLING: Because this product has been stored at -80°C, it is possible that pressure may develop in the vial during the thawing process. In addition, volatile ³⁵S-labeled decomposition products are generated at a rate of ~0.01% per week. We recommend that prior to opening, vials are first vented in a fume hood using the following procedure:

- Slide aside the dust cover on the cap to expose the septum.

- Pierce the septum with a cotton-plugged syringe needle or charcoal trap (NENTM NEX-033T), taking care that the tip does not come in contact with the product.
- If the product is frozen, quickly thaw at room temperature or in a 37° C water bath. Any pressure developed will vent through the syringe needle.
- Remove the needle and dispose of as contaminated equipment.

When used for *in vivo* labeling experiments, we recommend that specific steps be taken to minimize incubator and water bath contamination. We suggest using a shallow tray of activated charcoal, charcoal sticks or charcoal filter units to trap ³⁵S volatiles and reduce contamination.

SPECIAL INFORMATION: Visit www.revvy.com to use our online Radioactive Decay Calculator.

Decay of ³⁵S (physical half-life, 87.4 days):

| | | DECAY FACTORS | | | | | | | | | |
|-------------|------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Days BEFORE | Assay Date | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | 30 | 1.269 | 1.279 | 1.289 | 1.299 | 1.309 | 1.320 | 1.330 | 1.341 | 1.352 | 1.362 |
| | 20 | 1.172 | 1.181 | 1.191 | 1.200 | 1.210 | 1.219 | 1.229 | 1.239 | 1.249 | 1.259 |
| | 10 | 1.083 | 1.091 | 1.100 | 1.109 | 1.117 | 1.135 | 1.135 | 1.144 | 1.153 | 1.163 |
| | 0 | 1.000 | 1.008 | 1.016 | 1.024 | 1.032 | 1.049 | 1.049 | 1.057 | 1.066 | 1.074 |
| Days AFTER | Assay Date | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | 0 | 1.000 | 0.992 | 0.984 | 0.976 | 0.969 | 0.961 | 0.954 | 0.946 | 0.939 | 0.931 |
| | 10 | 0.924 | 0.916 | 0.909 | 0.902 | 0.895 | 0.888 | 0.881 | 0.874 | 0.867 | 0.860 |
| | 20 | 0.853 | 0.847 | 0.840 | 0.833 | 0.827 | 0.820 | 0.814 | 0.807 | 0.801 | 0.795 |
| | 30 | 0.788 | 0.782 | 0.776 | 0.770 | 0.764 | 0.758 | 0.752 | 0.746 | 0.740 | 0.734 |

The specific activity at time t (SA_t) may be calculated, using the following equation, from the specific activity at the calibration date (SA₀) and the decay factor (f) given above.

$$SA_t = \frac{f}{1/SA_0 - (1-f)/1494}$$

REFERENCE: Rubin, I.B., and Goldstein, G., (1970) *Anal. Biochem.* 33, 244-254.

RELATED PRODUCTS:

- NEG009C Methionine, L-[³⁵S]-
- NEG009C Methionine, L-[³⁵S]-
- NEG022T Cysteine, L-[³⁵S]-

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