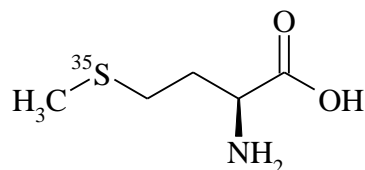


## Methionine, L-[<sup>35</sup>S]-

Product Number: NEG009C

### LOT SPECIFIC INFORMATION

|                    |  |
|--------------------|--|
| Lot Number:        | 10303  |
| Specific Activity: | 1175 Ci/mmol<br>43.5 TBq/mmol                                  |
| Concentration:     | 43.3 mCi/ml<br>1602.1 MBq/ml<br>0.0369 μmol/ml<br>0.0055 mg/ml |
| Calibration Date:  | 24-Nov-2023  |



M.W. 149.2  
C<sub>5</sub>H<sub>11</sub>NO<sub>2</sub>S

**PACKAGING:** 50mM Tricine (pH 7.4) containing 10μmoles

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-009C, Methionine, L-[<sup>35</sup>S]- has been determined to be less than 1% per week when stored in its original solvent under nitrogen atmosphere at -80°C. The decomposition rate is approximately 2% per week when stored at -20°C.
- Storage at 4°C results in rapid conversion of product to methionine sulfoxide-[<sup>35</sup>S].
- If the entire quantity will not be used at once it is recommended that the product be thawed quickly, aliquoted under N<sub>2</sub> into samples of an appropriate size, refrozen immediately and stored at -20°C or below.
- Methionine, L-[<sup>35</sup>S] 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-009C 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-[<sup>35</sup>S].

**PREPARATIVE PROCEDURE:** Methionine, L-[<sup>35</sup>S] is obtained from the protein hydrolysate of bacteria grown in the presence of carrier-free [<sup>35</sup>S] 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 <sup>35</sup>S-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 into 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 <sup>35</sup>S volatiles and reduce contamination.

**SPECIAL INFORMATION:** Visit [www.revivity.com](http://www.revivity.com) to use our online Radioactive Decay Calculator.

Decay of <sup>35</sup>S (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<sub>t</sub>) may be calculated, using the following equation, from the specific activity at the calibration date (SA<sub>0</sub>) 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.  
 Paterson, B.M., Roberts, B.E., and Kuff, E.L. (1977) Proc. Nat. Acad. Sci. USA. 73, 4370-4374.  
 Pelham, H.R.B. and Jackson, R.J. (1976) Eur. J. Biochem. 67, 247-256.

**RELATED PRODUCTS:**

- NEG009A Methionine, L-[<sup>35</sup>S]-
- NEG022T Cysteine, L-[<sup>35</sup>S]-

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