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## Product Data Sheet

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Product Name: DL-Methionine-d4

Cat. No.: GC68992

### Chemical Properties

Cas. No. 93709-61-6

Formula  $C_5H_7D_4NO_2S$  M.Wt 153.24

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

DL-Methionine-d<sub>4</sub> is the deuterium labeled DL-Methionine. DL-Methionine is an essential amino acid containing sulfur with oxidative stress defense effects. DL-Methionine can be used for animal natural feed. DL-Methionine also kills *H. rostochiensis* on potato plants[1][2][3].

Stable heavy isotopes of drogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs<sup>[1]</sup>.

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.

[2]. K. evans, et al. Effects of amino acids on the reproduction of *Heterodera rostochiensis*. *Nematologica*, 1971, 17(4), 495-500.

[3]. Swennen Q, et al. Effects of dietary protein content and 2-droxy-4-metlthiobutanoic acid or DL-methionine supplementation on performance and oxidative status of broiler chickens. *Br J Nutr.* 2011 Dec;106(12):1845-54.

[4]. Garlich JD. Response of broilers to DL-methionine droxy analog free acid, DL-

**Caution: Product has not been fully validated for medical applications. For research use only.**

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methionine, and L-methionine. Poult Sci. 1985 Aug;64(8):1541-8.

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