

# Vitamin U



Hamari Chemicals, Ltd.

## Features

- ✓ supports the digestive system
- ✓ produces a nice fragrance when cooked
- ✓ science-based nutrition
- ✓ GMP (Pharmaceutical), ISO 14001
- ✓ Kosher Certified
- ✓ Japanese quality
- ✓ synthetic product



## Method of Action

Vitamin U is a synonym for methylmethionine sulfonium chloride. It is an important natural factor in raw cabbage juice that supports gastric health. In Japan, it is used in over-the-counter pharmaceutical products for gastric discomfort.

When heated Vitamin U breaks down to a component of the fragrance produced from cooking of certain vegetables, notably maize, cabbage, beetroot and seafoods. Hence, Vitamin U is also used as a flavoring agent.

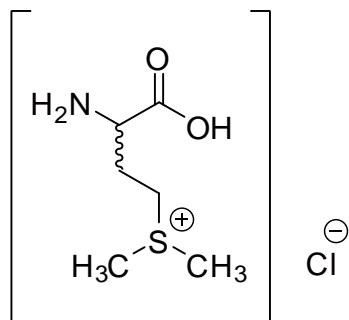
# Methyl Methionine Sulfonium Chloride Specifications

## I. Substance

Name: Methyl Methionine Sulfonium Chloride (CAS 3493-12-7)

Common Name: Vitamin U

Chemical Structural Formula:



Molecular Formula: C<sub>6</sub>H<sub>14</sub>ClNO<sub>2</sub>S

Molecular Weight: 199.70

## II. Specifications

	Test Name	Specification
1	Appearance	White crystal or white crystalline powder
2	Identification	Positive
3	pH	4.0 to 5.0
4	Clarity and color of solution	Colorless and clear
5	Sulfate	Not more than 0.028%
6	Heavy metals	Not more than 20 ppm
7	Arsenic	Not more than 2 ppm
8	Methionine	No red-orange color develops
9	Loss on drying	Not more than 1.0%
10	Residue on ignition	Not more than 0.10%
11	Assay	98.5% to 102.0%

## III. Quality Standards

Japanese Pharmaceutical Codex and Japanese Pharmacopoeia

## IV. Packaging

Store in a tightly-closed container

Standard package size: 40 kg



**Hamari Chemicals, Ltd.**

e-mail: [ask@hamari.co.jp](mailto:ask@hamari.co.jp)

tel: +81-6-6205-7755

fax: +81-6-6205-7222