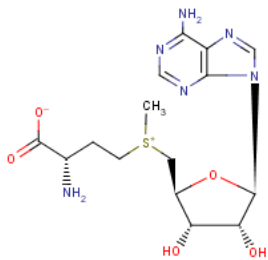


## SAMe 400 mg

### TECHNICAL SUMMARY

SAMe (S-adenosylmethionine), a compound native to the body, is a critical component of many biochemical reactions, including those that affect brain biochemistry and joint health.\* Numerous studies have indicated that SAMe can help to alleviate transient normal aches and pains resulting from overexertion or stress.\* In addition, because SAMe is also necessary for the synthesis of neurotransmitters, it plays an important role in the maintenance of a positive mood.\*

#### Structure formula:



**Chemical name:** S-Adenosyl-L-Methionine (SAMe) is a complex of adenosine triphosphate with amino acid L-methionine. (3S)-5'-((3-Amino-3-carboxylatopropyl) methylsulphonio)-5'-deoxyadenosine.

**Allergen and Additive Disclosure:** Not manufactured with wheat, gluten, soy, milk, egg, fish, shellfish or sesame ingredients. Produced in a GMP facility that processes other ingredients containing these allergens.

**Delivery Form:** Slow release, extended-release tablets.

### ROLE AS NUTRIENT/FUNCTION

SAMe is an endogenous, intracellular, amino acid metabolite and enzyme co-substrate found in every living cell, where it mainly participates in three major metabolic reactions:

- Transmethylation (donating a methyl group (CH<sub>3</sub>) to DNA bases, proteins, cell membrane phospholipids, free amino acids and amines such as noradrenaline, adrenaline, dopamine, serotonin and histamine)\*
- Transsulfuration (i.e., to create glutathione, a potent cellular free radical scavenger)\*
- Aminopropylation (to create polyamines, spermidine and spermine necessary for the regulation of cell growth)\*

### NATUROKINETICS

**Liberation:** Tablets disintegrates in water within 90 minutes using a USP method of disintegration. The dissolution of tablets using a USP method shows 25-50% dissolution within 2 hours, 50-85% dissolution within 4 hours, and should be ≥75% after 7 hours.

**Absorption:** SAMe is able to cross the intestinal wall into plasma in a dose-dependent manner (Figure 1).

## Supplement Facts

Serving Size 1 Tablet

### Amount Per Serving

SAMe (S-Adenosyl-L-Methionine) (from S-Adenosyl-L-Methionine Disulfate Tosylate)	400 mg**
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\*\* Daily Value not established.

Other ingredients: Microcrystalline Cellulose, Stearic Acid (vegetable source), Pharmaceutical Glaze, Magnesium Stearate (vegetable source), Silicon Dioxide, Glycerin, Sodium Alginate and L-Arginine.

- Supports Nervous System and Joint Health\*
- Stabilized SAMe, Smaller Tablet

**SUGGESTED USAGE:** Take 1 tablet 2 to 4 times daily, or as directed by your healthcare practitioner.

**Distribution:** After absorption, SAMe is incorporated into tissues, proteins, and phospholipids throughout the body, and crosses the blood-brain barrier into the central nervous system.

**Metabolism:** SAMe is the primary methyl donor in the body. Once SAMe donates its methyl group, it becomes s-adenosylhomocysteine and is recycled back into L-methionine, which is converted back into SAMe once again.

**Elimination:** SAMe is eliminated through the feces or urine.

### CLINICAL VALIDATION

In a 14-day, double-blind, placebo-controlled, crossover study, healthy volunteers received either 400 mg SAMe in the morning or 1,600 mg SAMe per day (800 mg in the morning and 800 mg in the evening). An electroencephalogram (EEG) was performed before and after supplementation.

This pharmaco-EEG mapping study demonstrated that SAMe administered over two weeks had a significant effect on the brain of healthy elderly subjects as compared to placebo.\* The acute oral administration of SAMe induced an activating peak effect in the first hour after ingestion.\* The maximum EEG effect was noted after 2 weeks of oral administration. Additional psychometric tests performed during the study confirmed SAMe's tolerability in elderly subjects.\* This was corroborated by the lack of effects on pulse and blood pressure.\*

### SAFETY INFORMATION

**Tolerability:** SAMe is typically well tolerated in healthy individuals.

Temporary mild GI disturbance may occur in some sensitive individuals. Individuals known for depressive manifestations, bipolar disorder, or Parkinson's disease may experience adverse reactions while taking SAMe, with anecdotal cases reporting decrease of treatment effectiveness in Parkinson's, manic episodes in bipolar patients, and suicidal ideations. As

a precaution, it is therefore highly recommended to take SAME under medical supervision in these circumstances.

**Contraindications:** None known.

### **INTERACTIONS**

**Drug Interactions:** SAME can potentially interact with many medications and psychoactive substances including serotonin re-uptake inhibitors, tricyclic antidepressants, opioids, triptans, dextromethorphan, et al. These interactions can present themselves as serotonin syndrome, with mild manifestations such as sweating, tachycardia, and overresponsive reflexes to severe hyperthermia.

**Supplement Interactions:** Supplements that effect serotonin pathways in the body may theoretically interact with SAME. These include 5-hydroxytryptophan (5-HTP), Hawaiian baby woodrose, L-tryptophan, and St. John's wort.

**Interaction with Lab Tests:** None known

### **STORAGE**

Store in a cool, dry place after opening.