

Active Folate 1000

VITAMIN SUPPLEMENT

Biologically active folate rich formula*

- Promotes healthy homocysteine levels*
- Helps to promote folate intake without masking vitamin B₁₂ deficiency*
- Provides 1000 mcg of folate per day from Metafolin[®]

Active Folate 1000 provides 1000 mcg of folate per day from Metafolin® in its physiologically active form.^{1*} Folate is primarily involved in DNA synthesis and methylation reactions, including the conversion of homocysteine to methionine.² Metafolin[®] is a proprietary and bioavailable form of the folate found naturally in foods that does not mask a vitamin B₁₂ deficiency.^{1*} Randomized, placebo-controlled trials have found that daily supplementation with Metafolin® promotes healthy levels of both folate and homocysteine.^{3,4*}



Supplement Facts

Serving Size 1 Capsule Servings per Container 90

Each Capsule Contains		%DV †
Folate (from calcium L-5-methyltetrahydrofolate, Metafolin®♦)	1000 mcg	250%
 † Daily Value ♦ Metafolin[®] is a registered trademark of Metafolin[®] 	erck KGaA, Da	armstadt,

Germany

Other ingredients: Cellulose, hypromellose

Recommended Adult Dose: Take one capsule daily or as recommended by your healthcare practitioner.

Product Size: 90 vegetable capsules Product Code: 02184

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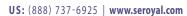
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* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

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Scientific Rationale:

Folate forms

The term "folate" can describe the natural form of folate found in foods as well as folic acid, the synthetic form found in supplements and fortified foods.¹ Metafolin[®] is a proprietary and bioavailable form of the naturally occurring form of folate.^{2*} It can be used directly by the body and does not depend on the genotype of folate-dependent enzymes.^{2*} In contrast, folic acid must be enzymatically converted into dihydrofolate and tetrahydrofolate before it can be used in the folate cycle.³ This conversion can be slow and may result in the accumulation of unmetabolized folic acid in the plasma.³ Metafolin[®] may also be more appropriate for supplementation than folic acid as it does not mask the symptoms of vitamin B_{12} deficiency.^{2*} In a randomized, double-blind, placebo-controlled trial involving 136 healthy women of child-bearing age, the efficacy of Metafolin® supplementation was compared with folic acid supplementation.⁴ Participants were randomly assigned to one of four groups (placebo, 400 mcg of folic acid, 416 mcg of Metafolin[®], or 208 mcg of Metafolin[®]) and consumed their supplements once daily for 24 weeks.⁴ Participants were also stratified based on their genotype for a polymorphism of the gene that encodes the folate-dependent enzyme 5, 10-methylenetetrahydrofolate reductase (MTHFR).⁴ This enzyme is a risk factor for neural tube defects (NTD) and can affect red blood cell folate levels.⁴ Fasting blood samples were collected at baseline and every four weeks for 24 weeks.⁴ All three folate groups significantly increased red blood cell and plasma folate levels, although the high dose Metafolin[®] supplement resulted in significantly greater increases in folate status than the other two supplements.4*

Folate and Homocysteine

Folate is involved in the metabolism of the amino acid homocysteine. In all tissues, folate donates a methyl group to homocysteine in order to form methionine.⁵ A large proportion of methionine is further metabolized to form S-adenosylmethionine (SAM), the universal methyl donor to many compounds – including DNA, RNA, hormones, lipids and proteins.⁵ As a result, normal levels of homocysteine are necessary for the methylation of important biological molecules.⁵ As homocysteine can also be cytotoxic at high concentrations, research has investigated the role of folate in promoting healthy homocysteine levels.⁵⁻⁷ In a randomized, double-blind, placebo-controlled trial involving 155 adults, Metafolin[®] significantly promoted healthy folate and homocysteine levels.^{6*} Participants were randomly assigned to one of three groups: placebo, 100 mcg folic acid or 113 mcg Metafolin^{®,6} Both folate supplements significantly raised plasma folate and red blood cell folate levels when compared to placebo values after 24 weeks.⁶ Both folate supplements also significantly promoted healthy homocysteine levels when compared to placebo values; however, the effects of Metafolin[®] were significantly greater than the effects of folic acid supplementation.^{6*}

In a randomized, double-blind, placebo-controlled trial involving 135 women, Metafolin® supplementation significantly promoted healthy folate and homocysteine levels.^{7*} Participants were randomly assigned to consume one of four groups: a placebo, 400 microgram folic acid, 416 microgram Metafolin®, or 208 microgram Metafolin®.⁷ Fasting blood samples were collected at baseline and weeks 4, 8, 12, 16, 20, and 24.⁷ When compared to placebo group values, all three folate supplements significantly decreased homocysteine levels and elevated plasma folate levels after 24 weeks.⁷ The study authors concluded that Metafolin® is a good alternative to folic acid supplementation.^{7*}

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