

DES BIO Datasheet

Liposomal Methyl B



Why Liposomal Methyl B?

Performance of a vitamin supplement is dependent upon two distinct factors: absorption and bioavailability. **Liposomal Methyl B** provides the best of both by providing activated forms of B-vitamin in a nano-technology liposomal delivery system. Though there are many B-vitamin products on the market, most use synthetic or inactive forms of vitamins B6, B12, and folate. These products must then be converted by the body via a series of reactions so they can actually be utilized. **Liposomal Methyl B** was developed to give the body a boost, not create extra work, which is why we only included the co-factor forms of these essential B vitamins.

The Need For Methylation Support

The co-factors in **Liposomal Methyl B** are involved in a series of reactions classified as methylation reactions. There are over 100 reactions in the body that are dependent on methylation, and impaired function of this process has a direct link to numerous chronic diseases. In fact, methylation may be comparable to antioxidant function when it comes to the important role it plays in disease prevention and anti-aging.

Reactions dependent on methylation include:

- Production of neurotransmitters, such as serotonin, dopamine, and norepinephrine
- DNA and RNA synthesis
- Gene expression
- Melatonin production
- Production of glutathione
- Production of phospholipids such as phosphatidylcholine
- Production of endothelial nitric oxide synthase for nitric oxide production
- Phase 2 Detoxification
- Homocysteine regulation (elevated levels linked to cardiovascular/neurological diseases)

Liposomal Delivery

Liposomal Methyl B also utilizes a liposome, the paramount transport system for delicate nutrients. Liposomes are microscopic vesicles made up of phospholipids, the same structures that make up our cell membranes. These small, bubble-like complexes work to encapsulate nano-particle sized nutrients, supporting their intact delivery directly to target cells. The unique structure of the liposome allows the encapsulated nutrient to bypass the digestive tract, allowing for mega-doses of nutrients even at moderate intake.¹

Folate (as 5-methyltetrahydrofolate)

The bioactive form of folate: 5'-methyl tetrahydrofolate (5-MTHF). Sometimes referred to as levomefolic acid, this is the form of folate that participates in reactions at the cellular level. In a double-blind placebo-controlled study of liver transplant recipients treated for 8 weeks with 5-MTHF (1 mg) vs. folic acid (1 mg) vs. placebo in an 8-week trial, 5-MTHF was found to be significantly more potent than folic acid at lowering elevated homocysteine levels.²

Vitamin B12 (as methylcobalamin)

Essential for the regeneration of 5-MTHF in the methylation pathway. Vitamin B12 is predominately found in animal products, making inadequate intake of special concern in vegans and vegetarians. Absorption of dietary vitamin B12 is unique because it is dependent upon intrinsic factor. This glycoprotein is secreted by the parietal cells of the stomach and often declines in patients with digestive issues, who have undergone gastric surgery (such as a bypass), and in the elderly. If unnoticed, B12 deficiency can lead to neurological decline and a specific form of anemia known as pernicious anemia, named for its insidious onset. Since liposomal methylcobalamin bypasses normal digestive processes, taking vitamin B12 in this form can help correct deficiencies even when normal absorptive mechanisms are impaired. In patients with low intrinsic factor, oral sublingual supplementation with B12 has been found to be a comparable alternative to injection therapy.³

POWERFUL

Provides folate, B12, B6 and trimethylglycine in their bio-active co-factor forms

BIOAVAILABILITY

Advanced liposomal delivery system for superior bioavailability

DELICIOUS

Great-tasting, fruit punch-flavored liquid supplement that is easy for any patient to incorporate into a daily protocol

Supplement Facts

Serving Size: 0.5 ml (approximately 10 drops)
Servings Per Container: 60

Amount per Serving	% DV†
Folate (as 5-methyltetrahydrofolate)	400 mcg 100%
Vitamin B-12 (as methylcobalamin)	500 mcg 8333%
Pyridoxal 5-phosphate (CoEnzyme Vitamin B-6)	2 mg *
Phosphatidylcholine	45 mg *
Trimethylglycine	34 mg *

* % DV (Daily Values) not established

OTHER INGREDIENTS: Purified water, natural flavors, potassium sorbate.

Suggested Use: As a dietary supplement, take 1 serving 1 time per day or as directed by your healthcare professional. For best results combine with **Vitalyze**, **Elevate RxS**, **Vitalyze**, and/or **Focus RxS** (for mood issues), or **VascuFlow RxS** (for cardiovascular issues).

Warnings: If pregnant or breastfeeding, consult with your healthcare provider before use.



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Trimethylglycine (TMG)

Also referred to as betaine, this nutrient has been shown to help reduce plasma homocysteine levels as well as protect the health of the liver.⁴ TMG has also shown a strong ability to increase SAM-e production, indicating that it may have positive effects on mood and energy levels. The trimethylglycine in **Liposomal Methyl B** in combination with the B-vitamin co-factors provides added support for the entire methylation pathway.

Pyridoxal 5'-Phosphate (Vitamin B6)

As the active co-factor of Vitamin B6, pyridoxal 5'-phosphate (P 5'-P) is responsible for numerous reactions involved in the synthesis and metabolism of proteins. P 5'-P acts as a co-factor for enzymes in the synthesis of neurotransmitters, including serotonin, dopamine, norepinephrine, and GABA. P 5'-P also plays many essential roles in metabolism, including the synthesis and release of glucose from glycogen and gluconeogenesis. Other roles of B6 include hemoglobin and heme synthesis.⁵ When providing vitamin B6 as P 5'-P, the body benefits from receiving the active form as opposed to the pyridoxine form which would need to be converted by the liver to perform most active functions.⁶

Phosphatidylcholine

This phospholipid makes up the outermost layer of the liposome complex utilized in **Liposomal Methyl B**. Also known as lecithin, phosphatidylcholine is the most abundant of the phospholipids making up our cell membranes. Intake of phosphatidylcholine has been associated with supporting brain health as well as preventing age-related memory loss.⁷ Phosphatidylcholine has also been shown to reduce plasma homocysteine levels, indicating that it may play a role in supporting the healthy function of the methylation pathway.⁹

¹What is a Liposome? *News Medical*.

²Akoglu, B. et al. The folic acid metabolite L-5-methyltetrahydrofolate effectively reduces total serum homocysteine level in orthotopic liver transplant recipients: a double-blind placebo-controlled study. *European Journal of Clinical Nutrition* 62, 796-801, doi:10.1038/sj.ejcn.1602778 (2008).

³Berlin, H., Berlin, R. & Brante, G. Oral treatment of pernicious anemia with high doses of vitamin B12 without intrinsic factor. *Acta Medica Scandinavica* 184, 247-258 (1968).

⁴Steenge, G. R., Verhoef, P. & Katan, M. B. Betaine supplementation lowers plasma homocysteine in healthy men and women. *The Journal of Nutrition* 133, 1291-1295 (2003).

⁵Groff JL, G. S., Hunt SM. *Advanced Nutrition and Human Metabolism*. 2nd edn, (West Publishing Company, 1995).

⁶Lichtstein, H. C., Gunsalus, I. C. & Umbreit, W. W. Function of the vitamin B6 group; pyridoxal phosphate (codecarboxylase) in transamination. *The Journal of Biological Chemistry* 161, 311-320 (1945).

⁷Conant, R. & Schauss, A. G. Therapeutic applications of citicoline for stroke and cognitive dysfunction in the elderly: a review of the literature. *Alternative Medicine Review: A Journal of Clinical Therapeutic* 9, 17-31 (2004).

⁸Olthof, M. R., Brink, E. J., Katan, M. B. & Verhoef, P. Choline supplemented as phosphatidylcholine decreases fasting and postmethionine-loading plasma homocysteine concentrations in healthy men. *The American Journal of Clinical Nutrition* 82, 111-117 (2005).

*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.



Serving Healthcare Practitioners
for Over 25 Years

Why DesBio?

For over two decades, DesBio has been committed to providing the best solutions in health. DesBio is an innovative market leader, a trusted, established company that has been delivering cutting-edge homeopathics to practitioners for 20 years. We're excited to bring you info on our tried-and-true formulas as well as our newest products.

What makes DesBio different?

We sell products only to healthcare practitioners. Our practitioner-only philosophy places you in an optimal position with distinctive and more powerful offerings for your patients.

Our expert formulators build formulas around advanced homeopathic principles with respect to ingredients, dilutions, Burgi groups, and optimized homochords. Our products are formulated and manufactured according to rigorous standards:

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- Registered as FDA-listed products

We have products that you won't find anywhere else. As knowledge about America's top health problems continues to evolve, we update and renew our formulations to reflect these advancements. Our ability to combine cutting-edge approaches with traditional homeopathic remedies is what truly separates us from the competition. We support our practitioners with educational materials such as webinars, clinical decision support algorithms, and e-mail support from specialists in the field.