

Mazuri® Vitamin E TPGS, 20% Solution

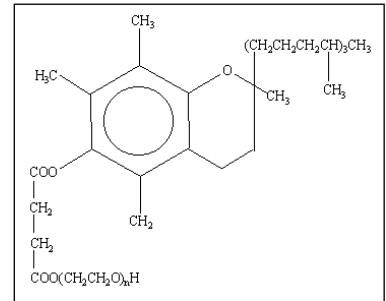
(Available through a Mazuri retailer)

Formula Code – 5M84

Vitamin E TPGS, 20% solution (d-alpha tocopheryl polyethylene glycol 1000 succinate) is a water-soluble solution of a form of Vitamin E derived from natural sources. TPGS is prepared by the esterification of polyethylene glycol 1000 to the acid group of crystalline d-alpha tocopheryl acid succinate. The vitamin E potency of Vitamin E TPGS is 387 IU/g, so the potency of Vitamin E TPGS, 20% solution is 77.4 IU/g. This TPGS solution has been used as a means of providing an easily absorbed form of Vitamin E.

Because Mazuri® Vitamin E TPGS is water-soluble while other forms of Vitamin E are fat-soluble, TPGS is absorbed by an entirely different mechanism. Fat-soluble Vitamin E requires the use of bile salts in the gut for absorption from the intestinal lumen through to the intestinal cells. Vitamin E TPGS is absorbed without the need for bile salts activity. TPGS has the ability of transferring Vitamin E into the intestinal cells with no need of assistance.

Along with assisting in Vitamin E absorption, the water-solubility of Vitamin E TPGS results in a product which is quite stable and does not hydrolyze under normal conditions. In addition, Vitamin E TPGS has practically no taste.



Product Form

Clear liquid.

- 1 gallon jar (8.8 lb) plastic bottle

Catalog

0007525

Typical Properties of Vitamin E TPGS, 20% Solution

Vitamin E content of solution, as d-alpha tocopherol 52 mg/g

Molecular Weight, Vitamin E TPGS 1513, approximately

Concentration, weight/weight 20%

Taste Practically tasteless

Stability Stable to air: Reacts with alkali

Recommended Vitamin E TPGS Dosing Procedures for Elephants

- Blood values for alpha tocopherol should be obtained on the elephants before administration of Mazuri® Vitamin E TPGS, and then annually to ensure that satisfactory blood levels are attained and maintained.
- Recommended intake of this product on a daily basis is 4,000 IU per elephant per day, or approximately 50 ml of Mazuri® Vitamin E TPGS per elephant per day.
 - However, during the first three weeks, we recommend providing a total of 16,000 IU per elephant per day, or approximately 4 to 5 IU/kg of body weight. To achieve this additional 12,000 IU of vitamin E per elephant per day, we suggest you "pulse" the animal with additional Mazuri® Vitamin E TPGS liquid form, which would require dosing between 150 ml and 160 ml of Mazuri® Vitamin E TPGS per elephant per day. This can be administered directly into the mouth or on a treat.

Additional information about Vitamin E TPGS:

- <http://jcp.sagepub.com/content/33/1/84.abstract>
 - Ferslew, Acuff, Daigneault, Woolley, Stanton. 1993. Pharmacokinetics and Bioavailability of the RRR and All racemic Stereoisomers of Alpha-tocopherol in Humans after Single Oral Administration. Journal of Clinical Pharmacology. 33(1): 84-88.

Storage Conditions

Store at room temperature or under refrigeration. Avoid freezing and excessive heat. Use within 1 year of manufacturing date.

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