

1,000 IU  
Per Drop

# New Higher Potency Micellized D<sub>3</sub> 1,000

Micellized D<sub>3</sub> is the natural form of Vitamin D provided in a water-soluble micellized form. The micellization process produces tiny droplets (micelles) that are then formed into highly absorbable aggregate structures. Micellization greatly increases the solubility, absorption and bioavailability of our vitamin D<sub>3</sub> over oil or emulsified forms. Micellized D<sub>3</sub> has approximately 5 times greater increase in serum 25(OH) Vitamin D levels versus emulsified vitamin D. NuMedica's Micellized D<sub>3</sub> is superior in reaching optimal levels of vitamin D<sub>3</sub> over other forms of Vitamin D. Studies on micelle vitamin preparations demonstrate the effectiveness of this new delivery system when compared with both standard oil forms and other emulsified forms. The data shows that micellized forms of fat-soluble micronutrients increased plasma levels greater than the oil forms and emulsified forms.

Emulsified  
Oil Form



Micro-Emulsified  
Individual Micelles  
Small Oil Forms



Micellized  
Ball-like, Water-Soluble  
Structures



**NuMEDICA**<sup>®</sup>  
ACHIEVING PHYSIOLOGICAL BALANCE

For more information or to place an order, call **866.787.5175** or visit us on the web at [www.numedica.com](http://www.numedica.com) to see our full catalog of professional nutritional formulas.

# Micellized D3 1,000 IU

Vitamin D, considered both a hormone and a vitamin, is made in response to skin's exposure to sunlight and is essential to the body's absorption of calcium. Natural vitamin D<sub>3</sub> (cholecalciferol) is four times more potent than synthetic vitamin D<sub>2</sub>. Calciferol in Latin means "calcium carrier." Strong evidence suggests that vitamin D is beneficial when combined with calcium and have a significant impact on overall bone health. Additionally, vitamin D has been the subject of numerous studies for its effect on the immune system.

Fats and fat-soluble micronutrients are insoluble in the water medium of the small intestine, so they must first be broken down through the normal digestive process to become water-soluble (aqueous) and be absorbed. The body's manufacture of water-soluble fat is also called micellization. It is caused by the action of lipase, bicarbonate and most importantly, bile. Bile interacts with fat in a unique way. A bile molecule has a specific chemical structure in which one end is fat-soluble (non-polar), the other is water-soluble (polar).

Recently a process has been developed that renders fat-soluble nutrients totally water-soluble and smaller in molecular size (less than 0.1 microns referred to as "micelles"). These micelles are capable of direct transport into the "unstirred water layer" bordering the microvilli of the small intestine. Gaining entrance into the "still water layer" and immediate access to the intestinal lining are essential to the efficient and rapid absorption of fat-soluble nutrients. Micellized supplements require little digestive effort and result in minimal fecal loss.

Once nutrients become water-soluble through Micellization they are now up to 5 times more absorbable through the gastrointestinal lining. Micellization produces a very tiny and completely water-soluble cluster of fat molecules normally produced in the small intestine. Micelles are the body's basic unit of absorption for vitamins A, D, E, and K, as well as beta-carotene, essential fatty acids and lecithin. These nutrients are not adequately absorbed in humans unless they are micellized.

## Supplement Facts

Serving Size: 1 drop (0.05 ml)  
Servings Per Container: 600

	Amount	%DV*
Vitamin D <sub>3</sub> (as cholecalciferol)	1000 IU	250%

\* Percent Daily Value based on a 2,000 calorie diet.

**Other ingredients:** Deionized water, ethoxylated castor oil, glycerine, citric acid, grapefruit seed extract and potassium sorbate.



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