

# Vitamin Standards



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ChromaDex offers both fat-soluble (A, D, E, K) and water soluble (B, C) vitamins used for quantitative analysis. For quality control analysis of vitamin-based cosmetics, pharmaceuticals, or dietary supplements ChromaDex offers a full line of standards each with a comprehensive and detailed Certificate of Analysis.

Examining vitamins contained in dietary supplements, studies have shown that their concentrations have been distorted or completely absent compared to the product label claim.<sup>1</sup> As a result, rigorous quality testing procedures to determine (quantitatively) the concentration of all vitamin components in a supplement is becoming more common place in the industry as this is required by the FDA for “dietary supplements” sold in the United States. So why do we see a difference in the label concentration vs. the testing results? One idea is that the reference standards that a company or contract testing lab is using are not high quality. When a reference standard is claimed to be simply >95% by HPLC or similar, we do not get the whole picture.

A non-biased, third-party, orthogonally characterized reference material is important to obtaining accurate results, which is what ChromaDex specializes in. Simply put, we use multiple methods of analysis to validate that the purity of the reference standard is accurate, and all impurities are accounted for. Some of our additional methods of analysis includes residual solvents, water content, elemental analysis (when needed), and other analytical techniques. All these factors can influence the true weight% purity of the compound of interest.

### **What makes our vitamin standards different/better?**

ChromaDex is the leading provider of phytochemical reference standards, botanical reference materials, and research grade materials for the natural products industry since 1999. As a results, our extensive experience and knowledge within all these fields and specifically vitamins makes us unique. Our vitamin standards are the highest quality, offered in different grades: Primary (P), Analytical Standard (AS), and Reagent Grade (RG) reference standards. Our primary grade standards (P) are supplied with a detailed certificate of analysis (CoA) that highlights all data collected including:

- NMR
- High Resolution Mass Spec
- HPLC or GC with Method Details
- Water Content by Karl Fisher
- Residual Solvents by GC/MS
- Additional tests as needed

Our results are included in our CoA. We provide a clear, concise, and detailed characterization on all of our standards like no other.

<sup>1</sup> Navarro, Victor et al. “The Contents of Herbal and Dietary Supplements Implicated in Liver Injury in the United States Are Frequently Mislabeled.” *Hepatology communications* vol. 3,6 792-794. 3 Apr. 2019, doi:10.1002/hep4.1346

Part Number	Standard	Grade	Sizes	CAS Number	Chemical Family
ASB-00001433	Adenosylcobalamine(Coenzyme B12)	AS	25mg, 100mg, 250mg	13870-90-1	Vitamins
ASB-00003693	Adenosylcobalamine(Coenzyme B12)	P	1g, 25mg, 100mg, 250mg	13870-90-1	Vitamins
ASB-00011026	Ascorbyl Palmitate(Ascorbic Acid-6-Palmitate)	P	50mg, 100mg	137-66-6	Vitamin derivatives
ASB-00003035	Calcitriol	AS	1mg	32222-06-3	Vitamins
ASB-00004200	Deoxyripyridoxine HCL, 4	RG	100mg	148-51-6	Vitamins
ASB-00006170	Folic Acid Hydrate(Vitamin M)	P	1g, 250mg	75708-92-8	Vitamins
ASB-00013517	Methyl Folate Calcium Salt	AS	25mg, 100mg, 500mg	151533-22-1	Vitamins
ASB-00013481	Methylcobalamin	P	100mg, 250mg	13422-55-4	Vitamins
ASB-00013482	Methylcobalamin	AS	100mg, 250mg	13422-55-4	Vitamins
ASB-00014303	Niacin(Nicotinic Acid)	P	1g, 10mg, 250mg	59-67-6	Vitamins
ASB-00015290	Oleandrin	P	5mg, 10mg, 25mg	465-16-7	Vitamins
ASB-00016058	Pantethine, D	P	25mg, 100mg	16816-67-4	Vitamin derivatives
ASB-00016476	Pyridoxal-5-Phosphate	RG	5g	54-47-7	Vitamins
ASB-00016477	Pyridoxal-5-Phosphate	P	1g, 250mg	54-47-7	Vitamins
ASB-00016478	Pyridoxal-5-Phosphate Hydrate	P	250mg	853645-22-4	Vitamins
ASB-00016479	Pyridoxal-5'-Phosphate Monohydrate(P)	P	1g, 100mg, 250mg	41468-25-1	Vitamins
ASB-00018286	Riboflavin-5'-Phosphate Sodium Salt	P	1g, 100mg, 250mg	130-40-5	Vitamins
ASB-00020311	Tocopherol, D-Alpha	P	1g, 5g, 50mg, 250mg	59-02-9	Vitamins
ASB-00020314	Tocopherol, D-Delta	P	1g, 50mg, 250mg	119-13-1	Vitamins
ASB-00020317	Tocopherol, DL-Alpha	P	1g	10191-41-0	Vitamins
ASB-00020325	Tocotrienol, D-Alpha	P	10mg, 50mg	58864-81-6	Vitamins
ASB-00020326	Tocotrienol, D-Beta	P	5mg	490-23-3	Vitamins
ASB-00020327	Tocotrienol, D-Delta	P	10mg, 50mg	25612-59-3	Vitamins
ASB-00020328	Tocotrienol, D-Gamma	P	10mg, 50mg	14101-61-2	Vitamins
ASB-00020347	Trigonelline	RG	10mg, 25mg	535-83-1	Vitamin derivatives
ASB-00020353	Trigonelline	P	25mg, 50mg	535-83-1	Vitamin derivatives
ASB-00022713	Vitamin A Acetate(Retinol Acetate)	P	1g, 250mg	127-47-9	Vitamins
ASB-00022715	Vitamin A Acetate(Retinol Acetate)	RG	1g, 250mg	127-47-9	Vitamins
ASB-00022710	Vitamin A Palmitate(Retinyl Palmitate)	AS	1g, 5g, 250mg, 500mg	79-81-2	Vitamins
ASB-00022716	Vitamin A Palmitate(Retinyl Palmitate)	RG	1g, 250mg	79-81-2	Vitamins
ASB-00022717	Vitamin A Palmitate(Retinyl Palmitate)	P	1g, 5g, 250mg, 500mg	79-81-2	Vitamins
ASB-00022719	Vitamin B1 HCL (Thiamine HCL)	P	1g, 50mg, 250mg	67-03-8	Vitamins
ASB-00022722	Vitamin B1 Mononitrate (Thiamine Mononitrate)	P	1g, 5g	532-43-4	Vitamins
ASB-00022740	Vitamin B12(Cyanocobalamin)	RG	1g	68-19-9	Vitamins
ASB-00022742	Vitamin B12(Cyanocobalamin)	P	1g, 250mg	68-19-9	Vitamins

Part Number	Standard	Grade	Sizes	CAS Number	Chemical Family
ASB-00022720	Vitamin B2(Riboflavin)	P	1g, 250mg	83-88-5	Vitamins
ASB-00022721	Vitamin B2(Riboflavin)	AS	1g	83-88-5	Vitamins
ASB-00022724	Vitamin B3(Niacinamide)	P	1g, 250mg	98-92-0	Vitamins
ASB-00022725	Vitamin B3(Niacinamide)	AS	1g, 250mg	98-92-0	Vitamins
ASB-00022727	Vitamin B5	AS	1g	137-08-6	Vitamins
ASB-00022728	Vitamin B5(Calcium Pantothenate)	P	1g, 250mg	137-08-6	Vitamins
ASB-00022730	Vitamin B6(Pyridoxine HCL)	AS	1g, 250mg	58-56-0	Vitamins
ASB-00022731	Vitamin B6(Pyridoxine)	P	1g, 250mg	65-23-6	Vitamins
ASB-00022750	Vitamin D2(Ergocalciferol)	RG	250mg	50-14-6	Vitamins
ASB-00022751	Vitamin D2(Ergocalciferol)	P	1g, 100mg, 250mg	50-14-6	Vitamins
ASB-00022773	Vitamin D3(Cholecalciferol)	AS	1g, 250mg	67-97-0	Vitamins
ASB-00022774	Vitamin D3(Cholecalciferol)	P	1g, 5g, 100mg, 250mg	67-97-0	Vitamins
ASB-00022804	Vitamin E Acetate	P	1g, 250mg	52225-20-4	Vitamins
ASB-00022807	Vitamin E Succinate(Tocopherol Succinate)	P	1g, 100mg, 250mg	4345-03-3	Vitamins
ASB-00022801	Vitamin E(D Form)	RG	1g, 10mg, 25mg, 250mg	59-02-9	Vitamins
ASB-00022809	Vitamin H (Biotin)	P	1g, 100mg, 250mg	58-85-5	Vitamins
ASB-00022811	Vitamin H1(4-Aminobenzoic Acid)(Paba)	P	1g, 250mg	150-13-0	Vitamins
ASB-00022815	Vitamin K1(Phytonadione)	RG	1g, 250mg	84-80-0	Vitamins
ASB-00022816	Vitamin K1(Phytonadione)	P	1g, 250mg	84-80-0	Vitamins
ASB-00022820	Vitamin K2(Menaquinone-4)	AS	50mg, 250mg	863-61-6	Vitamins
ASB-00022821	Vitamin K2(Menaquinone-4)	P	50mg, 250mg	863-61-6	Vitamins
ASB-00022822	Vitamin K2(Menaquinone-7)	P	5mg, 10mg, 50mg, 250mg	2124-57-4	Vitamins
ASB-00022824	Vitamin K3(Menadione)	P	1g, 250mg	58-27-5	Vitamins

# Vitamin Standards



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