



## NOW's Testing Results of Bromelain Supplements Purchased on Amazon March 2023

NOW has been conducting testing of unknown brands on Amazon since 2017 and this is our 14<sup>th</sup> report. We chose Bromelain because raw material costs increased in recent years and we guessed that some suppliers or brands may knowingly, or unknowingly, be selling low potency products. Bromelain is a fairly expensive enzyme and testing is more difficult than other basic vitamins and minerals. We also assumed that most lower-priced, lesser-known brands do not test for Bromelain potency at all, and the results below seem to confirm this educated guess. NOW purchased 19 samples of Bromelain supplements on Amazon, plus NOW's own capsule product, to verify label claims and potencies.

Bromelain is a proteolytic enzyme found in pineapples that can support healthy digestion or joint comfort. The activity of bromelain is commonly measured in Gelatin Digesting Units (GDU) and measures the ability of the enzyme to break down a gelatin solution. The GDU activity in the samples purchased on Amazon was determined using the United States Pharmacopeia (USP) method for Bromelain. NOW is capable of testing Bromelain for GDU potency in-house, but we decided to use an independent laboratory that specializes in enzyme testing. Venture Labs ([www.ventlabs.com](http://www.ventlabs.com)) in Lexington, KY performed all tests below. Below are details and a summary:

- 16 out of 20 samples tested (80%) failed to meet label claims for potency. Only six out of 20 samples contained over 50% of labeled potency.
- Shocking that 12 out of 20 brands contained less than even 10% of label claim! That means more than half of all tested Bromelain supplement samples contained less than one-tenth of label claims -- the most egregious testing results NOW has seen!
- Three samples had ambiguous labeling that only claimed weight and no activity. Generally, Bromelain powder has an activity of 2,400 GDU per gram, but these brands made no potency claims. Two of these product's potencies were below the detection limit and were reported as < 10 GDU/g. The third brand, Cadane, only contained 34 GDU of Bromelain per capsule, which is extremely low potency.
- Three brands were labeled as products made in India. These brands tested to only contain 10, 34 and 78 GDU potencies, respectively. Two were under 10% of label claim and the third made no potency claim.
- Only three brands exceeded 100% potency with NOW as one at 121%.
- NOW intentionally did not test known "natural" or practitioner brands. The reason being these other brands typically abide by Good Manufacturing Practices (GMPs) and we expect full potencies.
- NOW has been testing products sold by lesser-known brands for six years and consistently finds most suspect products failing potency testing. We have shared this information widely, with the goal of addressing bad quality products in the marketplace. Unfortunately, testing shows the problem is getting worse.
- NOW has been testing products exclusively found on Amazon, but we will begin adding unknown products found on Walmart.com in the future. We are finding that low potency products often spend the most dollars marketing on both Amazon and Walmart.com. Two of the top four "sponsored" or paid advertised brands from a search on Amazon in March 2023 included the violating brands below.



Brand Tested for Potency	Size	Lot #	Label Potency	GDU Claim	Total GDU/Cap	Test Results	% Label Claim
Amazing Nutrition (NJ)	120 Vcaps	AV-21120???	500mg	2,400	1,200	24 GDU/cap	2%
Balance Greens (MI)	180 Caps	VM2200267/1	500mg	2,400	1,200	12 GDU/cap	1%
Best Naturals (NJ)	120 Tabs	12251	500mg	600	300	17 GDU/tab	6%
Best Vite (CA)	120 Vcaps	110621	500mg	2,400	1,200	96 GDU/cap	8%
Cadane (India) + Formula	60 Vcaps	CRBO6C01/1	300mg	?	?	34 GDU/cap	n/a
Deal Supplement (CA)	180 Caps	21-388	500mg	300	150	126 GDU/cap	84%
Earthborn Elements (OR)	200 Caps	76255	575mg	?	?	< 10 GDU/cap	0%
Fresh Nutrition (CA)	90 Vcaps	B21224006-1	625mg	2,400	1,500	608 GDU/cap	41%
H&C (India)	180 Vcaps	NCBE102	250mg	2,400	600	10 GDU/cap	2%
Horbaach	120 Caps	123369	850mg	600	480	690 GDU/cap	144%
Herbal Secrets (NJ)	120 Tabs	AN-22101702	500mg	300	150	37 GDU/cap	25%
<b>NOW</b>	<b>120 Vcaps</b>	<b>3277931</b>	<b>500mg</b>	<b>2,400</b>	<b>1,200</b>	<b>1451 GDU/cap</b>	<b>121%</b>
Nutricost (UT)	120 Vcaps	22102614	500mg	2,400	1,200	1202 GDU/cap	100%
NutriONN (OR)	120 Vcaps	B989710	500mg	2,400	1,200	39 GDU/cap	3%
NUSA Pure/GMAX (NC)	150 Vcaps	2206038	750mg	300	225	20 GDU/cap	9%
Pure Supplements (UT)	100 Caps	73628	575mg	?	?	< 10 GDU/cap	0%
Superior Labs (UT)	120 Vcaps	2202025	500mg	2,400	1,200	1321 GDU/cap	110%
TenMid (India) + Formula	90 Vcaps	TBRO9C01/1	350mg	2,400	840	78 GDU/cap	9%
Vitamatic (NJ)	180 Caps	P2100020	500mg	2,400	1,200	815 GDU/cap	68%
We Like Vitamins (TX)	180 Vcaps	BR8958-138-3	500mg	2,400	1,200	< 10 GDU/cap	0%

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