



**TheLiverDoc**

@theliverdr

33 Tweets • 2023-02-26 • [See on Twitter](#)

rattibha.com 

1/30

Our "Protein Project" report is here

What is it?

Unique public-health project funded by @paraschopra to analyze common/well-known protein supplements sold in India

Who did it?

Me & team at The Liver Institute with world class, independent food/drugs testing Neogen Labs.

WHAT IS INSIDE YOUR PROTEIN SUPPLEMENT?

THE  
PROTEIN  
PROJECT

by



@paraschopra

@theliverdr

@arifhussaintm

@ResmiN94852506

BREAKING  
NEWS

RESULTS OF ANALYSIS OF PROTEIN BRANDS

2/30 What did we analyze?

36 brands

- pure whey, whey-blend, whey & herbal blend, plant based and vegan types
- national, multinational and local brands
- all bought from authorized sellers or brand website
- none were spurious, authenticity of products checked



3/30 Which brands did we analyze?

Here they are, all 36 of them

All received with packing and seal intact

Opening the seal and pack removal for analysis was done by the lab personnel at the main lab before analysis and for sterile/safe storage for analysis repetitions

No	Product name	Manufacturer
1	Protein super herbs women	Himalayan Organics
2	High protein nutrishake vanilla	Oriflame
3	Nutrabox whey	Nutrabox
4	GNC whey	GNC
5	Elite 100% whey	Dymatize
6	Whey protein	One Science
7	Whey gold	Muscle Blaze
8	Whey protein	Muscle Blaze
9	Vegan protein	Origin
10	Ultra-soy protein	Forever Life
11	Nutrella whey	Patanjali Ayurved
12	Whey protein	Ultimate Nutrition
13	Iso veda protein	Patanjali Ayurved
14	Protinex	Danone
15	Whey isolate	Optimum nutrition
16	Quista pro whey	Himalaya Wellness
17	B-protin	British Biologicals
18	Resource high protein	Nestle Ltd
19	Ensure plus	Abbott Ltd
20	Premium protein matrix	Syntha 6
21	Nitrotech whey	Muscletech
22	Gold standard whey	Optimum nutrition
23	Musclefood whey protein	Dr Morepen
24	Frotein whey	Big Muscles
25	Vegan protein	Big Muscles
26	Whey essentials	Fast & Up
27	My first protein	Healthkart
28	Protein powder	Vestige
29	Protein plus	Bakson's Homeo
30	Protein powder	Elements
31	Impact whey	My protein
32	Personalized protein powder	Herbalife Nutrition
33	Formula 1 shake	Herbalife Nutrition
34	Protein & herbs	Oziva
35	Weight plus protein	Dr. Vaidya's
36	Nutrilite plant protein	Amway

4/30 What analysis did we perform on these protein products?

Analysis of protein % (Kjeldahl method)

Detection of fungal toxins/aflatoxins (HPLC)

Pesticide (GC & LC MSMS)

Heavy metals (ICP-MS)

Complete GC-MSMS profiling

Synthetic, anabolic steroids (GC-MS HP5 column)

5/30 Results - I

Protein content/protein %

Advertised (labelled) vs identified (on analysis)

Of 36 products, nine had less than 40% protein content, while the rest had above 60%. The worst protein supplements concerning protein content were B-protein, with an advertised 40%..

## 6/30 Results - I (cont)

but detected 10%; Big muscles Protein Whey, with an advertised 76.5%, but detected a protein of 26.1%; Big Muscles Vegan Protein, with an advertised 81.3% and detected 19.4% protein. Overall, the best product with very high pure-whey-based protein..

## 7/30 Results - I (cont)

includes – Dymatize, Muscle Blaze, Ultimate Nutrition, Optimum Nutrition, Muscletech, and My protein brands, and those with the lowest protein content include Protinex, B-Protein, Ensure Plus, Big Muscles Vegan protein, and Bakson's Protein Plus.

## 8/30 Results - I (cont)

The highest protein content among plant/vegan brands includes Himalayan Organics, Oziva, Amway Nutrilite, and Elements. However, most of these plant proteins also contain multiple herbal supplements, which requires caution as herbal blended dietary..

## 9/30 Results - I (cont)

..protein supplements are an upcoming cause of severe liver injury and liver failure. Patanjali Ayurved's Whey Protein products contained an excellent quantity of protein % but were all blended whey and contained a host of herbal and dietary supplements..

## 10/30 Results - I (cont)

..which could cause liver injury without additional data on safety.

The full list of protein supplements, their brands and labelled and detected protein percentages are given below.

NO	Product name	Manufacturer	Detected protein %	Labeled protein %	Mislabeled
1	Protein super herbs women	Himalayan Organics	65.7	68.4	No
2	High protein nutrishake vanilla	Oriflame	43.3	41.1	No
3	Nutrabox whey	Nutrabox	58.2	72.7	Yes, severe
4	GNC whey	GNC	63.9	68.6	Yes, mild
5	Elite 100% whey	Dymatize	73.3	71	No
6	Whey protein	One Science	68.4	83	Yes, severe
7	Whey gold	Muscle Blaze	76.1	82	Yes, mild
8	Whey protein	Muscle Blaze	71.7	76	Yes, mild
9	Vegan protein	Origin	63.6	64.1	No
10	Ultra-soy protein	Forever Life	50.7	52	No
11	Nutrella whey	Patanjali Ayurved	73.2	80	Yes, mild
12	Whey protein	Ultimate Nutrition	71.7	83	Yes, severe
13	Iso yeda protein	Patanjali Ayurved	80.3	90	Yes, severe
14	Protinex	Danone	34.2	34	No
15	Whey isolate	Optimum nutrition	80.7	81	No
16	Quista pro whey	Himalaya Wellness	65.2	64.7	No
17	B-profin	British Biologicals	10.4	40	Yes, severe
18	Resource high protein	Nestle Ltd	48.5	45	No
19	Ensure plus	Abbott Ltd	19.6	19	No
20	Premium protein matrix	Syntha 6	46.3	47	No
21	Nitrotech whey	Muscletech	76.9	65.2	Yes, severe
22	Gold standard whey	Optimum nutrition	75.8	79	No
23	Musclefood whey protein	Dr Morepen	68.6	64.3	No
24	Protein whey	Big Muscles	26.1	76.5	Yes, severe
25	Vegan protein	Big Muscles	19.4	81.3	Yes, severe
26	Whey essentials	Fast & Up	68.6	75	Yes, mild
27	My first protein	Healthkart	33.4	32	No
28	Protein powder	Vestige	79	82	No
29	Protein plus	Bakson's Homeo	8	16.7	Yes, mild
30	Protein powder	Elements	76.4	80	No
31	Impact whey	My protein	71	76	No
32	Personalized protein powder	Herbalife Nutrition	84.5	82.7	No
33	Formula 1 shake	Herbalife Nutrition	35.7	38	No
34	Protein & herbs	Oziva	65.5	71.7	Yes, mild
35	Weight plus protein	Dr. Vaidya's	20.5	25.8	Yes, Mild
36	Nutrilite plant protein	Amway	84.7	80	No

## 11/30 Results - I (end)

In this figure, we have shown how severe the mislabeling on the protein products is, with respect to protein content advertised on the bottle/package vs what is actually discovered on analysis. The gradient shows least to worst protein percent mislabeling

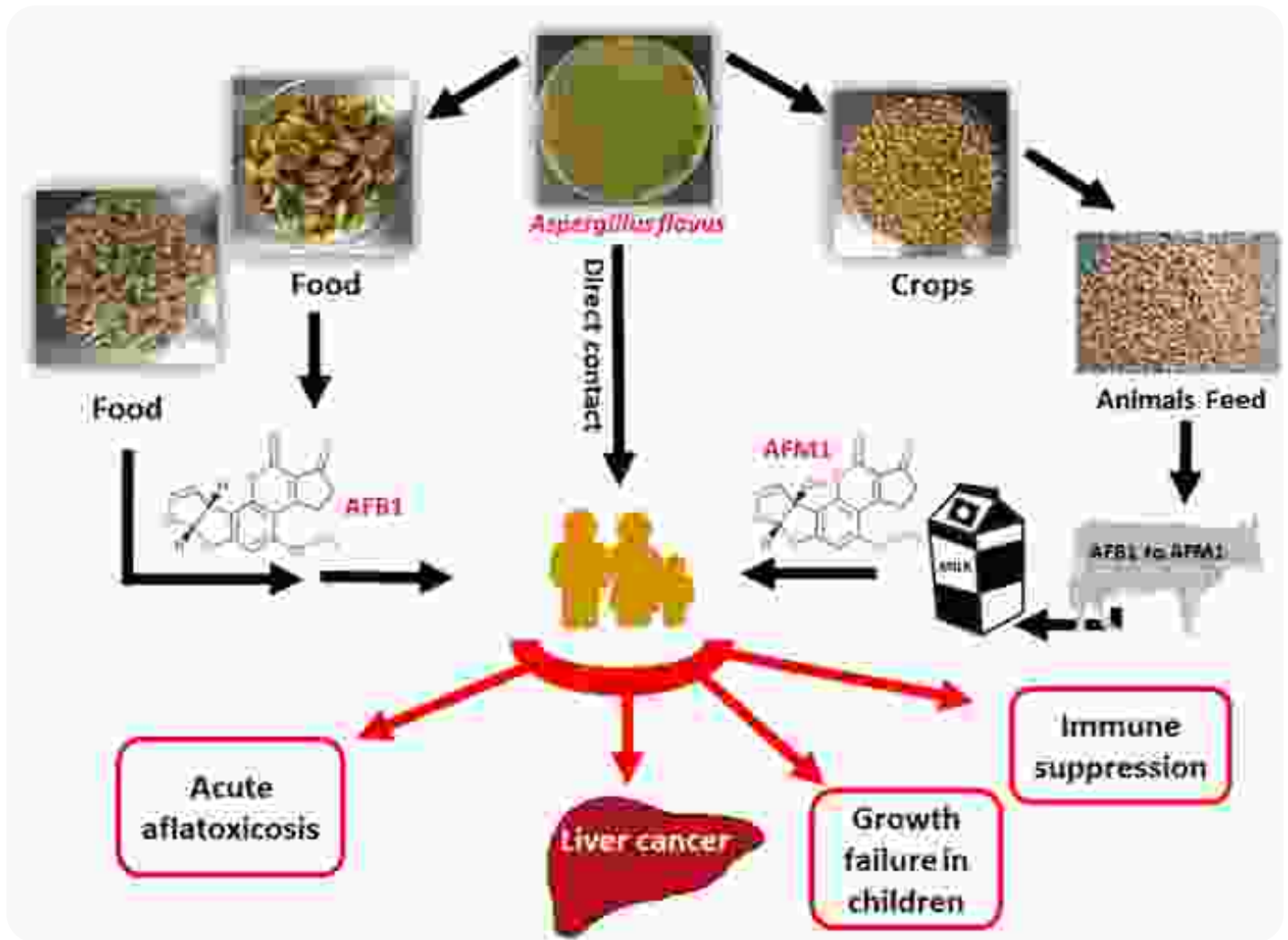


Product name	Manufacturer	Detected protein %	Labeled protein %	Difference
Nitrotech whey	MuscleTech	76.9	55.2	11.1
Nutrillite plant protein	Anway	84.7	80	4.7
Musclefood whey protein	Dr Morepan	68.6	64.3	4.3
Resource high protein	Nestle Ltd	48.5	45	3.5
Elite 100% whey	Dymatize	73.3	71	2.3
High protein nutrishake vanilla	Orillame	43.3	41.1	2.2
Personalized protein powder	Herbalife Nutrition	84.5	82.7	1.8
My first protein	Healthkart	33.4	32	1.4
Ensure plus	Abbott Ltd	19.6	19	0.6
Quista pro whey	Himalaya Wellness	55.2	54.7	0.5
Protinax	Danone	34.2	34	0.2
Whey isolate	Optimum nutrition	80.7	81	-0.3
Formula 1 shake	Herbalife Nutrition	35.7	36	-0.3
Vegan protein	Origin	63.6	64.1	-0.5
Premium protein matrix	Syntha 6	48.3	47	-0.7
Ultra-soy protein	Forever Life	50.7	52	-1.3
Protein super herbs women	Himalayan Organics	65.7	68.4	-2.7
Protein powder	Vestige	79	82	-3
Gold standard whey	Optimum nutrition	75.8	79	-3.2
Protein powder	Elements	76.4	80	-3.6
Whey protein	Muscle Blaze	71.7	76	-4.3
GNC whey	GNC	63.9	68.6	-4.7
Impact whey	My protein	71	76	-5
Weight plus protein	Dr. Vaidya's	29.5	25.8	-5.3
Whey gold	Muscle Blaze	76.1	82	-5.9
Protein & herbs	Oziva	65.5	71.7	-6.2
Whey essentials	Fast & Up	68.6	75	-6.4
Nutrella whey	Patanjali Ayurved	73.2	80	-6.8
Protein plus	Bakson's Homeo	8	16.7	-8.7
Iso veda protein	Patanjali Ayurved	80.3	90	-9.7
Whey protein	Ultimate Nutrition	71.7	83	-11.3
Nutrabox whey	Nutrabox	58.2	72.7	-14.5
Whey protein	One Science	68.4	83	-14.6
B-protein	British Biologicals	10.4	40	-29.6
Protein whey	Big Muscles	26.1	76.5	-50.4
Vegan protein	Big Muscles	19.4	81.3	-61.9

## 12/30 Results - II

### Fungal toxins & Pesticide detection

Aflatoxin is a toxin produced by the fungus *Aspergillus flavus*, which can infect crops at pre- and post-harvest stages and negatively impact food quality. Exposure to aflatoxin can lead to reduced growth in children..



## 13/30 Results - II (cont)

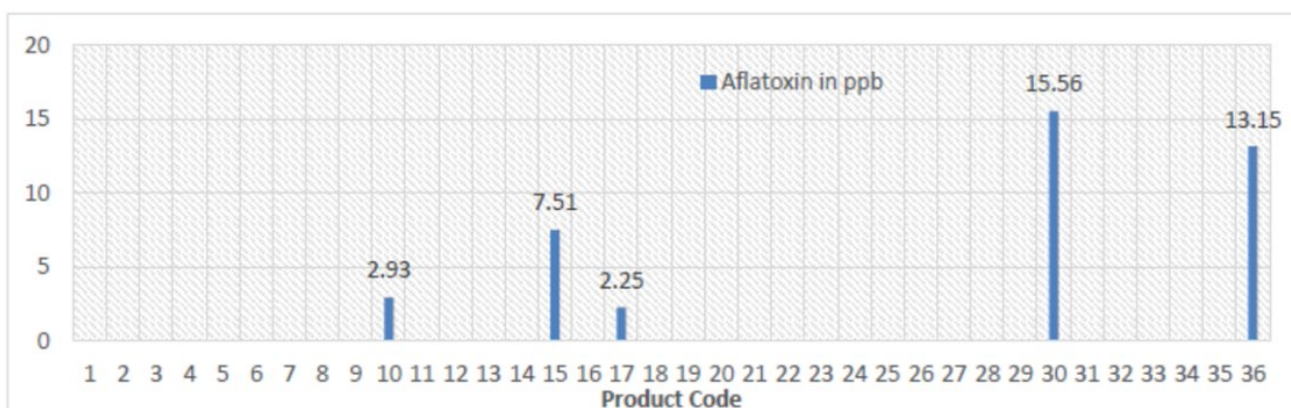
liver damage, and liver cancer. Per guidelines, the limit of aflatoxin exposure in processed food such as cereals in humans is 10 ppb (parts per billion). We identified five out of 36 protein products with aflatoxin contamination. These included..

## 14/30 Results - II (cont)

Ultra-soy protein by Forever Life (product code 10), Whey isolate by Optimum nutrition (code 15), B-protein by British Biologicals (code 17), Protein powder by Elements (code 30), and Nutrilite plant protein by Amway (code 36). Of these..

## 15/30 Results - II (cont)

the last two brands, Protein powder by Elements & Nutrilite plant protein by Amway, had aflatoxin above safe limits. Aflatoxin detection and corresponding product codes are shown below. For product code, please refer to tweet 3 or descriptions above.



5 out of 36 samples were contaminated by aflatoxins. In two sample (Product code 30,36 ) aflatoxin was seen over the 10 ppb.

## 16/30 Results - II (cont)

Concerning pesticide detection, three out of 36 samples were contaminated by a trace amount of pesticide. Vegan Protein by Big Muscles contained Fenobucarb at 0.061 mg/kg; Protein & Herbs by Oziva contained Azoxystrobin at 0.033 mg/kg AND..

## 17/30 Results - II (end)

..Dimethomorph at 0.013 mg/kg & Weight Plus Protein by Dr. Vaidya's contained Thiamethoxam at 0.017 mg/kg. Only among protein brands that were purely plant/vegan was pesticide residue identified, & none were noted in pure whey or blended whey products.

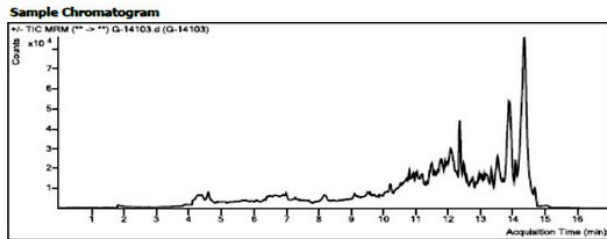
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 Report Time: 1-12-2023 2:28 PM  
 Last Calib Update: 1-12-2023 2:08 PM

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 Position: P2-09  
 Dilution: 1  
 Acq Time: 2022-12-15 23:57  
 Inj Vol: -1

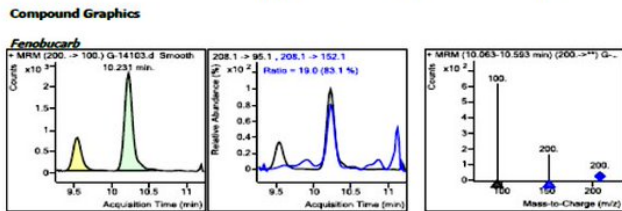
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**Reporter Name**: neogen-PC/Admin  
**Batch State**: Processed

**Sample Name**: G-14103  
**Data File**: G-14103.d  
**Sample Type**: Sample  
**Acq Method**: FSSAI 213 Pesticides DMRH 05-03-2020.m  
**Operator**



**Quantitation Results**

Compound	RT	Resp	Final Conc	ng/ml
Thiamethoxam	5.375	203	ND	ng/ml
Fenobucarb	10.231	17926	61.8770	ng/ml
Azoxystrobin	10.371	294	ND	ng/ml
Dimethomorph(E)	10.677	443	ND	ng/ml



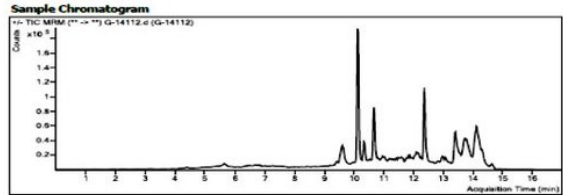
**Quantitative Analysis Sample Report**

**Batch Info**  
 Batch Data Path: D:\MassHunter\LC-MSMS\Data\2022\December\Pesticides\15-12-22\QuantResults\Rice M-SPK Linearity.batch.bin  
 Analysis Time: 1-12-2023 2:08 PM  
 Report Time: 1-12-2023 2:28 PM  
 Last Calib Update: 1-12-2023 2:08 PM

**Instrument**  
 Instrument 1  
 Position: P2-09  
 Dilution: 1  
 Acq Time: 2022-12-16 03:45  
 Inj Vol: -1

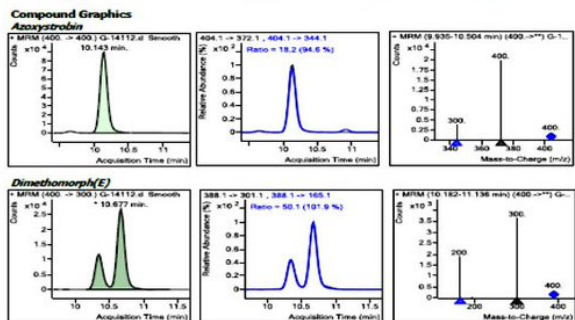
**Analyst Name**: neogen-PC/Admin  
**Reporter Name**: neogen-PC/Admin  
**Batch State**: Processed

**Sample Name**: G-14112  
**Data File**: G-14112.d  
**Sample Type**: Sample  
**Acq Method**: FSSAI 213 Pesticides DMRH 05-03-2020.m  
**Operator**



**Quantitation Results**

Compound	RT	Resp	Final Conc	ng/ml
Thiamethoxam	5.356	245	ND	ng/ml
Fenobucarb	10.250	669	ND	ng/ml
Azoxystrobin	10.143	699937	33.3379	ng/ml
Dimethomorph(E)	10.677	31199	13.4008	ng/ml



18/30 Results - III

Heavy metal detection

In all 36 samples, Mercury and Thallium were not detected. Five samples contained trace levels of Arsenic. These included Ultra-soy protein by Forever Life; Protinex by Danone; My first protein by Healthkart; Protein powder..

## 19/30 Results - III (cont)

..by Vestige, and Protein Plus by Bakson's Homeopathy. Ten products also had traces of Cadmium (very low levels). Most samples contained Lead at low levels, and Copper was found in all the samples at different levels, with the highest in..

## 20/30 Results - III (cont)

..Ultra-soy protein by Forever Life.

Complete results of heavy metal detection is below. I would be cautious about any amount of Lead in products as there is no safe level of Lead. Even high levels of Copper isn't ideal as it is toxic to brain/liver.

Product name	Manufacturer	Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Thallium (mg/kg)	Copper (mg/kg)
Protein super herbs women	Himalayan Organics	BLQ	BLQ	0.086	BLQ	BLQ	1.61
High protein nutrishake vanilla	Oriflame	BLQ	BLQ	0.04	BLQ	BLQ	4.41
Nutrabox whey	Nutrabox	BLQ	BLQ	BLQ	BLQ	BLQ	1.51
GNC whey	GNC	BLQ	BLQ	0.038	BLQ	BLQ	2.94
Elite 100% whey	Dymatize	BLQ	0.029	BLQ	BLQ	BLQ	2.87
Whey protein	One Science	BLQ	BLQ	BLQ	BLQ	BLQ	1.92
Whey gold	Muscle Blaze	BLQ	0.043	BLQ	BLQ	BLQ	3.65
Whey protein	Muscle Blaze	BLQ	0.047	BLQ	BLQ	BLQ	4.43
Vegan protein	Origin	BLQ	BLQ	BLQ	BLQ	BLQ	4.57
Ultra-soy protein	Forever Life	0.048	BLQ	0.033	BLQ	BLQ	30.61
Nutrella whey	Patanjali Ayurved	BLQ	0.028	0.028	BLQ	BLQ	11.66
Whey protein	Ultimate Nutrition	BLQ	BLQ	BLQ	BLQ	BLQ	2.38
Iso vada protein	Patanjali Ayurved	BLQ	BLQ	0.29	BLQ	BLQ	BLQ
Protinex	Danone	0.063	BLQ	BLQ	BLQ	BLQ	5.34
Whey isolate	Optimum nutrition	BLQ	BLQ	0.04	BLQ	BLQ	1.49
Quista pro whey	Himalaya Wellness	BLQ	BLQ	BLQ	BLQ	BLQ	2.97
B-protein	British Biologicals	BLQ	0.026	0.1	BLQ	BLQ	2.19
Resource high protein	Nestle Ltd	BLQ	BLQ	0.071	BLQ	BLQ	BLQ
Ensure plus	Abbott Ltd	BLQ	BLQ	0.1	BLQ	BLQ	6.50
Premium protein matrix	Syntha 6	BLQ	BLQ	0.19	BLQ	BLQ	3.76
Nitrotech whey	Muscletech	BLQ	BLQ	0.11	BLQ	BLQ	2.40
Gold standard whey	Optimum nutrition	BLQ	BLQ	0.29	BLQ	BLQ	2.97
Musclefood whey protein	Dr Morepen	BLQ	BLQ	0.3	BLQ	BLQ	2.19
Protein whey	Big Muscles	BLQ	BLQ	0.27	BLQ	BLQ	BLQ
Vegan protein	Big Muscles	BLQ	0.042	0.31	BLQ	BLQ	5.73
Whey essentials	Faast & Up	BLQ	BLQ	0.25	BLQ	BLQ	3.29
My first protein	Healthkart	0.075	0.037	0.32	BLQ	BLQ	4.48
Protein powder	Vestige	0.095	BLQ	0.23	BLQ	BLQ	9.34
Protein plus	Bakson's Homeo	0.031	BLQ	0.26	BLQ	BLQ	16.80
Protein powder	Elements	BLQ	0.026	0.28	BLQ	BLQ	8.80
Impact whey	My protein	BLQ	BLQ	0.23	BLQ	BLQ	1.49
Personalized protein powder	Herbalife Nutrition	BLQ	0.029	0.26	BLQ	BLQ	11.27
Formula 1 shake	Herbalife Nutrition	BLQ	BLQ	0.23	BLQ	BLQ	20.80
Protein & herbs	Oziva	BLQ	BLQ	0.27	BLQ	BLQ	1.71
Weight plus protein	Dr. Vaidya's	BLQ	BLQ	0.22	BLQ	BLQ	6.33
nutriliite plant protein	Anway	BLQ	0.03	0.23	BLQ	BLQ	10.83

## 21/30 Results - III (end)

Companies may argue that Lead detected was within range as per regional rules, but fact is Lead has no safe limit of exposure. Also, notable is that there were brands WITHOUT any detectable Lead or metal for that matter showing good production quality.

## There is no safe threshold for lead exposure: A literature review

Th. Koryziakos<sup>1</sup>, S. Arseniou<sup>1</sup>, M. Samakour<sup>2</sup>

Affiliations: + expand

PMID: 27837574 DOI: 10.22365/jpsych.2016.273.204

Free article

### Abstract

Lead was one of the most dangerous environmental toxic substances for a long time in western countries, and this is still the case for many places on earth today. Its neurotoxic potential is highly significant but its secure blood level concentration remains unknown. The aim of this study was to approach the above issue from the perspective of social psychiatry. A systematic search was made at Dialog and Diastar interfaces for data regarding the neuropsychiatric complications of direct or chronic exposure to lead, and a review of the relevant literature was conducted using the databases Medline, Embase, CAB Global Health and Cochrane. Lead affects the cholinergic, dopaminergic and glutamergic systems, thus interfering in the normal function of neurotransmission. The consequence of neurotoxicity in the central nervous system includes apoptosis and excitotoxicity. Direct as well as chronic exposure causes serious neurological symptoms and possibly constant cognitive impairment. Acute encephalopathy, the most serious expression of lead poisoning, occurs in blood level concentrations over 100 µg/dL in adults and 60-100 µg/dL in children. Early symptoms of lead neurotoxicity include irritability, headaches and difficulties in concentration in both children and adults. Continuous exposure in children produces neurobehavioral symptoms, such as decreased concentration, inability to follow instructions, difficulty to play games and low IQ, which are associated with concentrations of 10-35 µg/dL. However, some studies claim that cognitive decline and low IQ can occur in concentrations <10 µg/dL. The commonest symptom in adults is peripheral neuropathy with foot drop. Prenatal exposure to lead has been correlated with antisocial behavior and schizophrenia. Long-term lead exposure causing low and medium lead concentration in blood has been linked to depression as well as generalized anxiety disorder and other behavioral disorders. High blood level concentrations correlate with psychotic symptoms like delusions and hallucinations but more rarely with psychotic syndromes. Despite the fact that lead has been banned from gasoline, paint and water pipes, quite significant quantities of lead still exist, particularly in deprived areas of modern cities, in transition zones and city centers, and there are also great concentrations around lead mines and in developing countries, but even for the remaining areas there is no safe threshold.

**Conclusions:** Lead was and still is an environmental factor that increases neurologic and psychiatric morbidity. It also causes developmental disorders, especially in deprived areas. Prevention should be the single most important way of dealing with lead poisoning.



## 22/30 An introduction to final summary

Our final summary on best brands took into consideration all relative analysis outcomes, from protein content, mislabeling, heavy metal detection and contaminants. This is a personal opinion of the group and is in no way a recommendation.

## 23/30 FINAL SUMMARY

Best whey protein- One Science & Ultimate Nutrition

Best medium range whey- Nutrabox

Best Vegan protein- Origin

Best herbal whey- Himalaya[CAUTION]

Worst whey brand- Big Muscles

Worst plant-based- Amway

Worst brands advertised as best- Protinex/Ensure/B-protein

## 24/30 FINAL SUMMARY (cont)

Worst protein content- B-Protein, Ensure Plus, Bakson's Protein & Vegan by Big Muscles

Brands that need EXTREME caution- Protein by Elements/Nutriline by Amway [fungal toxins]

Herbal blended proteins have MORE CONTAMINANTS/Pesticides than non-herbal.

## 25/30 FINAL SUMMARY (cont)

Only vegan/plant-based supplements had pesticide residue - none of pure whey or whey-blends had this issue

[Origin is the best in vegan category, is super clean]

Brands to be used WITH CAUTION

- Himalayan

Organics/Patanjali/Himalaya/Herbalife/Oziva...

## 26/30 FINAL SUMMARY (cont)

...because they contained at least one or more known and documented liver toxic agent such as green tea/curcumin/turmeric/ Ashwagandha/Garcinia extracts.

**STAY AWAY FROM THESE** - herbal+dietary supplements are a major cause of liver failure in the West.

## Eight-Fold Increase in Dietary Supplement-Related Liver Failure Leading to Transplant Waitlisting Over the Last Quarter Century in the United States

Mahmud Ghahry<sup>1</sup>, Jiyi Ma<sup>1</sup>, Sarah K. Falck<sup>1</sup>, Lauren Raphael<sup>1</sup>, Archana P. Desai<sup>1</sup>, Eric S. Orman<sup>2</sup>, Raj V. Gupte<sup>1</sup>, Snehal Kubal<sup>2</sup>, Naga Chalasani<sup>1,3</sup>

Affiliations, + expand

PMID: 34331346 DOI: 10.1002/lt.26246

### Abstract

We investigated the trends in listing and outcomes of drug-induced acute liver failure (DIALF) over the last quarter century in the United States using the United Network for Organ Sharing (UNOS) database. We examined waitlisted patients in the UNOS database between 1995 and 2020 with a diagnosis of DIALF and assessed trends in etiologies, demographic and clinical characteristics, and outcomes over 3 periods: 1995-2003, 2004-2012, and 2013-2020. Patients with DIALF and cirrhosis were classified as drug-induced acute-on-chronic liver failure. Implicated agents including acetaminophen (APAP) and herbal or dietary supplements (HDS) were ascertained. There were 2146 individuals with DIALF during the study period. The observed demographic trends between the earliest and latest period included fewer pediatric patients (18.8% to 13.5%) but with an increasing number of males in non-APAP DIALF (31.8% to 41.4%) and increased racial diversity in APAP DIALF. Antimicrobials remained the most common non-APAP agents across all periods, but antiepileptics, propylthiouracil, and mushroom poisoning decreased, while HDS markedly increased from 2.9% to 24.1% of all non-APAP DIALF patients. The overall 5-year post-liver transplantation (LT) patient survival improved significantly over the 3 periods (69.9% to 77.4% to 83.3%) and was evident for both APAP and non-APAP DIALF. Over the last quarter century, there has been an 8-fold increase in HDS-related liver failure necessitating waitlisting for liver transplantation in the United States. There are other important temporal trends during the study period, including improved survival following LT among both APAP and non-APAP DIALF patients.

27/30 Details of purchased products along with ingredient details is available at this link for download

You may use it to find the safest protein for your use, after consulting with your doctor.

<https://file.io/N8gds52IDmSL>

28/30

PS: We DID NOT detect significant steroids-synthetic/anabolic in any products analyzed.

Detailed analysis on full scan and trace level detection of steroids -synthetic or plant-based will be provided as supplementary data when this study is published after peer-review.

29/30 Before I conclude,

Whey protein is liver safe

Whey protein does not cause kidney stones

Pure whey/different blends of whey varieties are safe

Whey + herbs -use with caution (ideally, don't use)

Pure plant proteins (soy/pea) are safe, plant proteins + herbal blends aren't.

30/30

We hope you've found this thread helpful.

Follow me @theliverdr for more.

Like/Retweet the first tweet given below to spread this information far and wide, so that people who use protein supplements benefit from this information

Thank you in advance!

Stay safe!

Since this link to download seems like its not working, please find this new Google Drive link which allows you to download the file

<https://docs.google.com/spreadsheets/d/1XSc8hqTEiMRKRJ1yqKNqojJU5hV3Gik0/edit?usp=sharing&ouid=113987699695654238597&rtf=of=true&sd=true>

Cost of analysis

This is so cool

A Twitter friend, @\_rohitag made a nice little web-app that helps you compare the brands we have analyzed, based on tested features.


Maybe this can be improved upon, more brands analyzed, more labs involved with help of public funding.

<https://protein-project.vercel.app/>



# Compare Protein Brands

Select Product Brand

Dymatize - Elite 100% whey 

VS

Compare Product Brand

Patanjali Ayurved - Nutrella whey 

## Results

	ELITE 100% WHEY	NUTRELLA WHEY
<b>Manufacturer</b>	Dymatize	Patanjali Ayurved
<b>Labelled Protein</b>	71%	80%
<b>Actual Protein</b>	73.3%	73.2%
<b>Mislabeled?</b>	No	Yes, mild
<b>Arsenic</b>	BLQ	BLQ
<b>Cadmium</b>	0.029	0.028
<b>Lead</b>	BLQ	Yes
<b>Copper</b>	No	No
<b>Recommended Buying?</b>	Not Bad	Yes with Caution

## Notes

- Possible values of **Recommended Buying?** — Yes, Yes with Caution, Not Bad, No.
- Possible values of **Mislabeled?** — Yes, severe, Yes, mild, No.
- **BLQ** stands for - Below the Limit of Quantification.

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