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# Clean Label Project — science or marketing?

Clean Label Project has released a report that misses the mark in terms of thorough scientific inquiry.

**By** — [George Collings, Ph.D.](#)

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The thought of a food product's contamination brings concern to anyone — consumers, food companies, ingredient companies and trade associations. With the launch of the Food Safety Modernization Act (FSMA) in 2011, the goal was to improve the consistency of our food system (human food and animal) while reducing issues with safety and health. Unforeseen contamination should be more limited as ingredient sourcing, approvals, and controls are more intense and part of the overall process of FSMA.

The U.S. Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA) oversee the overall safety of the food system, but ingredients and food companies are actively involved as well. From experience, every ingredient is tested with regularity to ensure safe food and feed. Heavy metals are of concern. They can contaminate soils, drinking water, and ground water; pollute streams; and eventually impact some ingredients. Based upon extensive testing and review, Maximum Tolerable Levels (MTL) are set by national and state regulatory bodies to guide safety. Similarly, nutritional profiles for dogs and cats are also established by the Association of American Feed Control Officials (AAFCO) to guide nutritional adequacy.

## **Recent Clean Label Project report**

Recently, [Clean Label Project](#) (CLP) published a recent “CLP Insights” report, titled: [“Extremely high levels of lead, mercury, arsenic and cadmium found in dry dog food.”](#) (The review also focused on bisphenols, phthalates, glyphosate and pesticides. I will only be focusing on their comments on heavy metals due to space constraints.)

This report reminded me of a similar hasty set of conclusions communicated to consumers on canine dilated cardiomyopathy (DCM) a few years ago where a couple of professors loudly condemned grain-free pet foods with peas. They went onto attack small to medium pet food companies and promote mega-doses of taurine. Unproven hypotheses were presented as fact which stirred up consumers with more incomplete information. Direct attacks of pet food brands ensued even though peas/legumes were not the causative agent in DCM. The damage was done. Even today, there is apprehension in the use of peas/legumes in pet food.

## **CLP’s approach to its presented findings**

My purpose is to fairly review CLP’s approaches and conclusions to justify their hypothesis. CLP states on their logo their goal is “clean, pure, science.” CLP suggests their purpose was “established with the mission to uncover the often-overlooked risks associated with environmental contaminants and toxins found in everyday products.” Their guiding principle is that: “reducing contaminants is critical to safeguarding long-term health.” Who would argue with that? All of us want contaminants to be exceptionally rare.

The report also states that, “CLP is committed to exposing the limitations of traditional nutrition labels and setting elevated safety standards for consumer products.” Any regulatory agency, company, action group or association could do the same.

CLP says they rely on data and scientific evidence to uncover contaminants. The approach of CLP was to test only one sample of one product from each of the 79 top-selling dog food products (dry food, air-dried, freeze-dried and fresh/frozen). Each of these were tested for arsenic, cadmium, mercury and lead (heavy metals) at an accredited laboratory.

CLP goals:

- Empower consumers by delivering accurate and reliable product information.
- Provide data to enable consumers to make informed decisions.
- Certify individual products by CLP protocols.
- Publish a Purity Award for products that perform relative to others in the category; only those in the top third would qualify.
- Name a “Clean 16” list of products.

## **Is this a reasonable approach?**

- Only one sample of each food from each brand was tested.
- No reports or data were shared with the brands.
- No protocol was published to review.
- Scientific literature supporting their hypothesis and data was not robust.

For the brands that were tested, it would be easy to conclude they were Guilty Until Proven Innocent by a non-certifying group. There was little recourse for each brand that believed a scientific conversation should be a first step. From here, CLP data, opinions and conclusions were picked up by a large media outlet that also quickly reprinted the CLP report as fact.

The point is that if you make the accusation loud enough, there is little room for rebuttal. There is no opportunity to return to real science.

CLP said they were willing to certify brands in the future, becoming a new certifying agency. However, reports are not transparent and the work is not collaborative. Additionally, food regulatory oversight already exists. Major reviews were missing. CLP did not mention the National Research Council (NRC) of the National Academies of Sciences, Engineering and Medicine's exhaustive review of heavy metals from 2005 ([Mineral tolerance of animals, second revised edition](#)). They also did not mention the FDA's report on Heavy Metals in Animal Food.

Good science observes and then develops working hypotheses. Good science always starts with a thorough literature review. The hypotheses are then tested, retested and tested again. Each hypothesis goes through the scrutiny of peer-review and more testing occurs. Opinions form and protocols are challenged. Good debate follows and society and science improve.

Again, to be fair, CLP is concerned about contamination. However, it also appears that the starting point was pet foods are not safe and are contaminated. Laboratory data was misrepresented to appear more concerning. CLP heavy metal analysis presented the laboratory results as parts per billion (ppb). Heavy metals can be tested in parts per billion, but all MTLs are routinely reported in parts per million (ppm). Most toxicity studies show heavy metals in parts per million or milligrams per kilogram of body weight per day. By choosing the incorrect unit, CLP data artificially inflates the heavy mineral values.

When compared to published and accepted MTLs, CLP values are dramatically below accepted levels. It is also important to question if their values are on a dry matter basis as most nutritional scientists would report. CLP's heavy metal data is shown in Table 1, correctly reported in parts per million and compared to their reported values in parts per billion. The MTLs from the NRC are shown in Table 2.

## CLEAN LABEL PROJECT'S PUBLISHED DATA: PPB VS. PPM

Heavy metals	Dry	Air/freeze-dried	Fresh/frozen
<b>As published:</b>			
CLP arsenic, ppb	184.6	148.5	13.9
CLP cadmium, ppb	68.5	69.3	11.3
CLP mercury, ppb	3.8	2.4	0.2
CLP lead, ppb	180.1	53.9	8.5
<b>Recalculated:</b>			
CLP arsenic, ppm	0.18	0.15	0.01
CLP cadmium, ppm	0.07	0.07	0.01
CLP mercury, ppm	0.004	0.002	0.0002
CLP lead, ppm	0.18	0.05	0.009

Source: "CLP Insights: Extremely high levels of lead, mercury, arsenic and cadmium found in dry dog food," 2026.  
 Recalculations by Dr. George Collings, president and general manager at Nutrition Solutions.

**TABLE 1:** When transposed to the commonly used units and compared to existing standards, CLP's found values are far below accepted levels.

## NRC MAXIMUM TOLERABLE LEVELS, PARTS PER MILLION (PPM)

Heavy metals	NRC MTLs
Arsenic, ppm	30.0
Cadmium, ppm	10.0
Mercury, ppm	0.2
Lead, ppm	10.0

*Source: National Research Council of the National Academies of Sciences, Engineering and Medicine, 2005*

*TABLE 2: The NRC's MTLs are shown here.*

**Did their samples prove the food is not safe or of good quality?**

If there is 0.18 ppm of arsenic reported in the samples with an MTL of 30, the results indicate a great deal of safety. Perhaps if CLP were to test their hypothesis further and prove 0.18 is a safety concern, then their report would be of more value. In the case of cadmium contamination, the average pet food was 0.01 to 0.07 ppm versus 10 ppm MTL. The same trends were true with mercury and lead.

The FDA Center for Veterinary Medicine (CVM) issued a report in 2019 as part of their Mineral Surveillance Program. In it, they stated: “The FDA CVM has not promulgated guidance, action levels or tolerances for heavy metal levels in animal foods. The FDA has the authority to act in a case-by-case basis. This is accomplished by taking into consideration information found in the National Research Council of the National Academies Mineral Tolerance of Animals (2005) as well as information in AAFCO’s official publication.” The FDA showed an MTL for arsenic of 30 ppm, cadmium 10 ppm, mercury 0.2 ppm and lead at 10 ppm (as shown in Table 2).

The FDA also tested 318 food samples, and none of the samples were above the MTLs for arsenic, cadmium or mercury. Three of the 318 samples were above the MTL for lead: one sample from a color additive from Germany, one domestic poultry mineral and one domestic vitamin balancer for cattle. No pet foods were reported as problematic. CLP did not cite a summary of this FDA report, and it must be pointed out that the FDA is the food industry’s principal certifying agency, although other agencies are involved.

Further, an extensive literature review is critical to reprove hypotheses. The media article and CLP report cited the work of [Dr. J.](#)

[Wakshlag \(2018\)](#) but failed to quote this scientific group accurately. Wakshlag presented a helpful review on heavy metals. His research [“Evaluation of arsenic, cadmium, lead and mercury contamination in over-the-counter available dry dog foods with different animal ingredients (red meat, poultry and fish),” published in *Frontiers in Veterinary Science*, 2018] states the following:

- “Based on caloric consumption, total arsenic and heavy metal consumption is higher in dogs than in humans; however, chronic toxic exposure levels are highly unlikely.”
- “Dog foods appear to be safe for chronic consumption and concentrations of the heavy metals were dependent on primary protein sources.”
- “Our study results suggest that dogs may be exposed to higher levels of these undesired heavy metals than humans; however, this does not indicate a higher risk of toxicity from pet foods as consumption is well below known chronic toxic exposure levels.”

Literature reviews should not be selective and must present all the facts. The researchers also stated: “Despite the well-known toxicity of arsenic, it (arsenic) may be an essential nutrient for reproduction in some species ... though its requirement has not been well defined.”

## **Selective sourcing can mislead media consumers**

Media is not the place to debate scientific hypotheses, and social media often misrepresents the facts. In this case, the article by the media went further: “The EPA [Environmental Protection Agency] states there is no safe level of lead for humans.” Yet when you connect to the reference at the EPA website, the subject is not pet foods or human foods but drinking water. It stated there is “no known safe level of lead in a child’s blood.” It then goes on to discuss lead coming from lead pipes. Taking the EPA’s review on water and applying it to attack the pet food industry seems unjustified.

They also go on to cite the levels of cancer being higher in dogs than humans, yet the article they cite for this focuses on the type of animal that might be a good test animal for human cancer research. There is no connection in this article to heavy metals and the incidence of cancers in dogs or other animals.

CLP goes on to state that there is a “prevailing theory that dogs have a higher tolerance for heavy metals than humans, though what this theory is based on is up for debate.” Well, that is finally true. That theory is up for debate. A good hypothesis leading to testing and retesting is something we could all agree with — perhaps CLP could provide funding for this testing?

The [Pet Food Institute](#) (PFI) [stated in response](#) to the CLP report and media article: “Pet food is among the most highly regulated of all food products and must meet both federal and state regulations.” In support of this position, the advance of FSMA made the quality steps taken in pet food manufacturing, safety and health more uniform across production facilities.

Every person, group or organization has the right to express their opinions. But opinions without facts and scientific rigor are dangerous. They incite and do not build. We cannot accept allowing bad science to lead communication to consumers. Contamination can happen. A brand should not be guilty until proven innocent based upon one sample. Regulators, food companies, ingredient companies and universities must come together to push back on improper science when we see it.

Without transparency, peer-review, repetitive testing and collaborative scientific processes, CLP's report risks functioning more as a market-driven certification versus rigorous science. If CLP wants to offer standards, then be forthright, open and clear; run proper protocols, open results and communicate fairly. The media stated these findings were "alarming." I agree. A scientific report like this is alarming!

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