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January 6, 2011

Via Email: dsefcik@nist.gov
And U.S. Mail

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Re: Comments on Laws and Regulations Committee Interim Agenda for 2012 Regarding the Proposal for NIST Handbook 130, Section 10.3

Dear David:

This letter is in response to the request for comment to the proposal for NIST Handbook 130, Section 231-2 Section 10.3 Aerosols and Similar Pressurized Containers currently under consideration before the National Conference on Weights and Measures Laws and Regulations (L&R) Committee Interim Agenda. This letter also responds to the November 13, 2011 letter from the National Aerosol Association ("NAA"). We represent the interests of our client Blue Magic, Inc. that markets the product PURE CITRUS Air Freshener.

As explained in more detail below,

- The new bag-on-valve (BOV) technology is inherently and fundamentally different than the conventional aerosol technology since the propellant is not expelled with active ingredients.
- The consumer cannot make an accurate or meaningful comparison between the conventional aerosol products and the BOV technology products, when existing conventional aerosol regulations are applied to BOV products.
- Compliance with existing NIST and state standards inhibit this consumer comparison.
- A solution is to modify the conventional aerosol standards to require labeling of active ingredients (either net weight or volume) in lieu of total net weight or in addition to total net weight.
- Determining a volumetric amount of contents in a BOV technology product is relatively simple by just emptying the contents through the container nozzle into a container and measuring the volume.

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I. Aerosol and BOV Technologies Are Inherently and Fundamentally Different

A. Conventional Aerosol Design

Conventional aerosol technology uses a compressed liquid diluent and other liquids mixed with the active ingredients to create a mixture that is expelled through a release nozzle. The amount of active ingredients (such as a fragrance in an air freshener) is generally understood to be about 5% to 10%. Most of the weight (estimated at 90% to 95%) is from other ingredients, including water, propellants, emulsifiers, solubilizers, stabilizers, and other chemicals (for purposes herein termed "inactive ingredients").

The consumer is purchasing the container for the results that the *active ingredients* produce (such as, air freshness from air fresheners) and *not for the inactive ingredients*--but is paying for a container with 90% or more inactive ingredients.

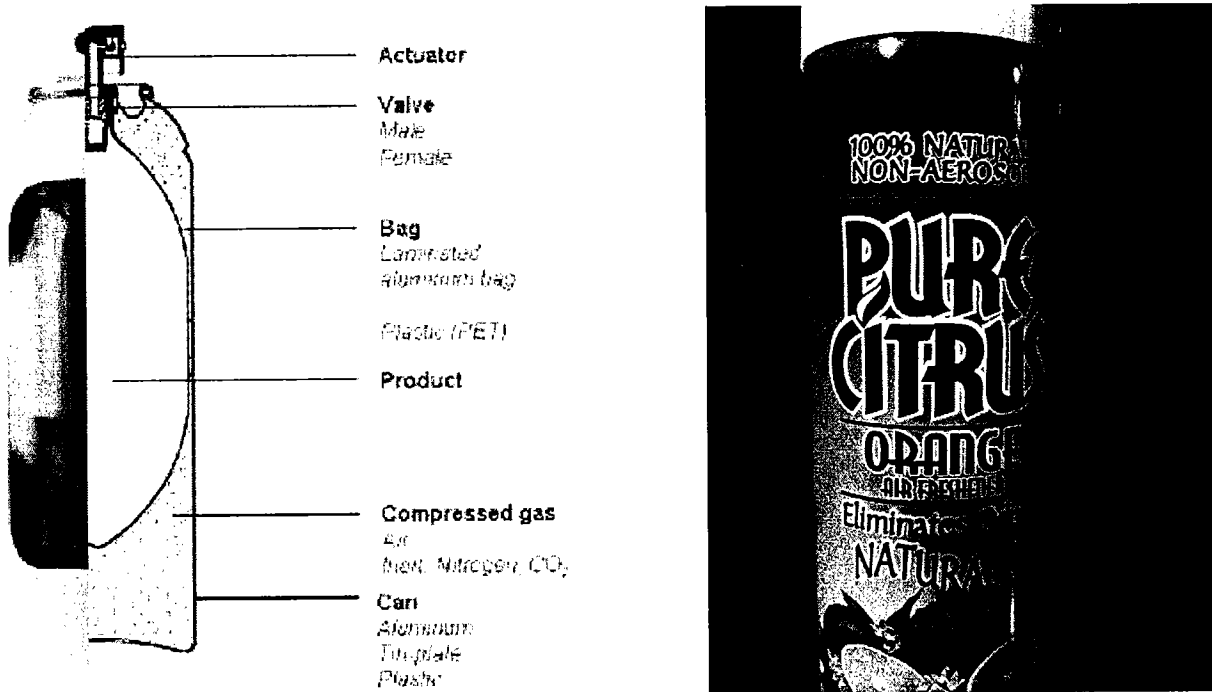
The propellants in a conventional aerosol are generally petroleum-based products having volatile organic products (VOCs). The most common propellants are propanes and butanes, with dimethyl ether (DME) and methyl ethyl ether also used. All of these chemicals have the disadvantage of being flammable. Nitrous oxide and carbon dioxide are also used as propellants to deliver foodstuffs (for example, whipped cream and cooking spray). Medicinal aerosols, such as asthma inhalers, use hydrofluoroalkanes (HFA): either HFA 134a (1,1,1,2-tetrafluoroethane) or HFA 227 (1,1,1,2,3,3,3-heptafluoropropane) or combinations of the two. Conventional aerosols are considered to be responsible for two percent (2%) of all human VOC emissions. Studies report health hazards from regular exposure to such aerosols.¹

¹ Supporting documents are provided as exhibits in our letter to you dated February 28, 2011.

B. BOV Design

In contrast, the newer BOV technology uses compressed gas (such as air, nitrogen, or inert gases) to pressurize an external surface of a bag filled with a material to be released and “squeezes” the material in the bag through the release nozzle. The active ingredients are expelled through the nozzle, but the compressed gases are *not* expelled through the nozzle. The active ingredients are not dependent on a mixture of other ingredients to be expelled. The BOV technology has therefore the advantage of using a gas rather than a liquid, because no propellant solution or suspension is necessary to expel the active ingredients. In contrast to the conventional aerosol technology, *the compressed gas in a BOV container has virtually no weight*. Because the gas used as a pressurized source around the bag is not expelled into the atmosphere in normal use, BOV technology is inherently environmentally-friendly. Additionally, the gas itself is generally a harmless gas, such as air, nitrogen, or an inert gas.

For illustrative purposes, a typical construction of a BOV technology container is shown below on the left. The contents of the bag are isolated from the compressed gas around the bag. The intended contents are expelled from the container; the compressed gas remains in the container. A PURE CITRUS® container constructed using BOV technology is shown on the right. It is labeled as a “NON-AEROSOL” product to differentiate from the conventional aerosol technology.



C. Exemplary BOV Products

Examples of BOV technology products currently on the market include: Simply Saline™ wound wash saline from Blarix Laboratories, Ultra Defense™ sunscreen from Banana Boat from Connecticut, Citrus Magic air freshener from Beaumont Products, Inc. (not from the supplier of the PURE CITRUS® air freshener) from Georgia, and Coppertone Sport® sunscreen from Schering-Plough from Tennessee, among others, including the PURE CITRUS® air fresheners by our client. It is common to designate BOV

Technology products in volume, such as fluid ounces.² *All five of the above BOV technology products designate their products in fluid ounces.*

The table below shows representative differences from the design and technology between a typical conventional aerosol air freshener and the PURE CITRUS non-aerosol product, and are believed to be a reliable calculation of the percentage based on laboratory tests by a vendor.

Feature	Conventional Aerosol	PURE CITRUS "Non-Aerosol"
Spray Content	Fragrance, water, odor reducers and other ingredients, and chemical propellant	Fragrance only (no added water or chemical propellant)
Inactive ingredients	90% - 95%	0%
Active ingredient (fragrance) expelled	5% - 10%	100% Fragrance

BOV technology represents a radical shift away from conventional aerosol technology. BOV technology delivers an intended substance without the weight, without the non-active ingredients, and without the potentially harmful effects on humans and the environment. Thus, comparisons between conventional aerosol technology products and BOV technology products are like comparing "apples and oranges."

II. Conventional Aerosol Technology Benefits From an Industry-Accepted Misnomer

A. Current Aerosol Regulations

The pertinent part of Section 10.3 in the Uniform Packaging and Labeling Regulations reads as follows:

10.3. The declaration of quantity on an aerosol package and on a similar pressurized package shall disclose the net quantity of the commodity (including propellant), in terms of weight, that will be expelled when the instructions for use as shown on the container are followed.

² On April 8, 2011, we forwarded to Mr. Charles H. Carroll examples of other BOV products with markings showing their contents in fluid ounces. Specifically, the list included Coppertone Sport Sunscreen (active ingredients 24%, 6 fl. oz.), Citrus Magic air freshener (not from the supplier of the PURE CITRUS air fresheners) (active ingredients 100%, 3.5 fl. oz.), Simply Saline, Wound Wash Saline (active ingredients 0.9%, 3.0 fl. oz.), and Banana Boat, Ultra Defense Sheer Protection (active ingredients 34%, 6 fl. oz.).

These regulations were written under the decades-old technology of conventional aerosols with the propellant and other inactive ingredients mixed with the active ingredients, so that the mixture of all contents is expelled. Therefore, the regulations specifically included the term “(including propellant)” as part of the “commodity” to be expelled, as the accepted method of indicating the contents. However, such regulations lead to at least three misperceptions with consumers.

B. Conventional Aerosol Products Labeling is Misleading to Consumers

1. Most Conventional Aerosol Consumers Unknowingly Purchase a Product With Only About 5 – 10% of Active Ingredient

First, the typical consumer purchases a product to deliver the results of the active ingredients in the product. An air freshener delivers fragrance to freshen air, a lubricant spray delivers lubricant to lubricate, and so forth. The consumer does not purchase a product for the inactive ingredients. Most consumers have no idea that only about 5% - 10% of the net weight in the container that they are purchasing is the intended product.

Consider the following example of a conventional aerosol technology air freshener purchased at a local grocery store. The container is labeled as a 9 oz. container and was purchased for \$1.19.³ Assuming the standard contents of about 5% to 10% fragrance, the active ingredients are about 0.5 to 0.9 wt. oz. with the remaining 9.1 to 9.5 wt. oz. being inactive ingredients. Thus, most of the advertised net weight of the contents is based on non-active ingredients—not the ingredients for which the consumer is purchasing the product. At an exemplary price of \$1.19 for a 9 wt. oz. aerosol, the consumer is paying \$0.13 per wt. oz., as might be labeled on the shelf next to the product, even though only a fraction of the contents is active ingredients. The equivalent price for the active ingredients in the container with 10% active ingredients is \$1.32 per wt. oz. (1.19 divided by (9 x 10%)). Stated differently, if the aerosol container expelled 9 ounces of active ingredients, then at the price of \$1.32 per wt. oz. of active ingredients, the aerosol container price would calculate to be \$11.90 for the 9 wt. oz. aerosol at 100% active ingredients. This misnomer by labeling the weight of *all* ingredients, even the inactive ingredients, creates a misrepresentation to consumers of more value from more net weight, and appears to have become entrenched in the conventional aerosol industry.

2. Conventional Aerosol Consumers Are Not Able to Compare Conventional Aerosol Products Based on the Actual Amount of Active Ingredients

Second, consumers cannot compare two conventional aerosol products under current regulations, even of the same type of product and even when both are labeled with the same weight. One brand of a conventional aerosol product with 9 wt. oz. might have 5% active ingredients (0.45 wt. oz.), yet another brand of conventional aerosol product with the same weight might have 10% active ingredients (0.90 wt. oz.). At an exemplary price of \$1.19 for the

³ Conventional GLADE aerosol container purchased on sale at Kroger grocery store in Houston, Texas on December 1, 2011—standard price is \$1.29. Interesting, the container simply states “9 OZ” --neither weight or volume, so is even more confusing to customers. It does have a secondary note in parenthesis of “(225 g)”, but the consumer would have to understand that the “g” is an abbreviation for grams and would have to then understand the measurement is for weight. It is likely that many consumers are not sophisticated to this understanding.

a conventional aerosol, the consumer is paying \$2.64 per wt. oz. of active ingredients for the 5% active ingredient aerosol and \$1.32 per wt. oz. of active ingredients for the 10% active ingredient aerosol.

Thus, the consumer does not know the *real* value for an *accurate comparison*, because the total net weight of water, propellant and other inactive ingredients is included in the net weight of the container with an *unknown quantity of active ingredients*.

C. Current Label Regulations Make the BOV Products Misleading to Consumers

Third, using the weight comparison for an entirely different technology, such as the BOV technology, only exacerbates the misnomer above. The use of a total net weight comparison, if applied under current regulations, will cause a misperception and consumer confusion. For example, the net weight of a PURE CITRUS® air freshener using the newer BOV technology is approximately 5.9 wt. oz. and retails at grocery stores for about \$4.49.⁴ The full amount is active ingredient. Because the gas is virtually weightless and the only material released is the active ingredients, then 100%, rather than 5% or 10%, of the net weight is calculated into a price of \$0.76 per wt. oz. of active ingredients.

This \$0.76 per wt. oz. of active ingredients in the BOV technology aerosol compares with the above \$1.32 to \$2.64 per wt. oz. of active ingredients for the conventional aerosol. Yet, the shelf label for the BOV technology aerosol will likely be \$0.76 per wt. oz. and the shelf label for the conventional aerosol will likely be \$0.13 per wt. oz., nearly 6 times *less*, even though in actuality, the amount of active ingredients using the conventional aerosol technology costs the consumer one and one-half (1 1/2) to three and one half (3 1/2) times *more* than the PURE CITRUS air freshener using BOV technology.

The table below summarizes the above calculations and shows the resulting confusion in an attempted comparison between existing conventional aerosol products and between a BOV product.

	Total (wt. oz.)	Active Ingredient (%)	Active Ingredient (wt. oz.)	Container Price (\$)	Price/Total (\$/wt. oz.)	Price/Active Ingredients (\$/wt. oz.)	Price of Container with 100% Active Ingredients (\$)
Exemplary conventional aerosol air freshener	9	5%	0.45	\$1.19	\$0.13	\$2.64	\$23.80
Exemplary conventional aerosol air freshener	9	10%	0.9	\$1.19	\$0.13	\$1.32	\$11.90
Exemplary BOV technology air freshener	5.88	100%	5.88	\$4.49	\$0.76	\$0.76	\$4.49

⁴ Based on PURE CITRUS® aerosol using BOV technology that was purchased at Kroger grocery store in Houston, Texas on December 1, 2011.

III. The Underlying Assumption of an Ability to Compare Using Conventional Aerosol Technology is Flawed

The underlying assumption in attempting to apply BOV technology to the current regulations drafted for conventional aerosol technology is that a weight comparison of the total contents (1) is appropriate, and (2) is accurate to the consumer.

The evidence shows that a weight comparison of the total contents is neither appropriate nor accurate. Such a comparison based on incomplete labeling under current practice in the conventional aerosol technology leads to a deception and misinformation to the consumer, *because the consumer does not have sufficient information from the conventional aerosol technology labeling.*

Consumers can be easily misled into purchasing a seemingly less expensive conventional aerosol product that in fact is much more expensive—potentially several times more expensive than the exemplary BOV technology product.

A forced net weight comparison of BOV technology products under existing regulations for conventional aerosol technology products also leads to unfair competition against the newer BOV technology. A forced net weight comparison of an inaccurate and unfair metric leads to a misrepresentation of the nature and quality of the product compared to non-equivalent conventional aerosol technology.

In summary, these reasons are sufficient to show why the apples of conventional aerosol technology should not be compared to the oranges of BOV technology based on total net weight of the contents, as NAA alleges. Conventional aerosol technology benefits from an industry-accepted misnomer that includes propellants in the net weight that are inactive ingredients and a large majority of the contents that are purchased. In contrast, BOV technology does not expel propellant and inherently has much less net weight for a given product without the expelling propellant. Conventional aerosol consumers are not able to compare conventional aerosol products based on the actual amount of active ingredients that may be 5-10% against BOV technology products that may contain much higher levels of active ingredients, such as 100% in PURE CITRUS air fresheners. Enforcing current label regulations against the BOV products would be confusing and misleading to consumers, because current regulations can result in the BOV products being perceived as having much less value per quantity of active ingredients compared to conventional aerosol products, when the above example shows quite the opposite could in fact be true. Thus, the underlying assumption of an ability to accurately compare BOV technology to conventional aerosol technology under the current regulations is flawed.

IV. NAA's Definitions Should Not Control A Different Technology

We also respond to the November 13, 2011 comments provided by the National Aerosol Association (NAA) on the BOV technology's inclusion under the conventional aerosol technology standards.

A. NAA's Three Citations to Regulations Do Not Apply to BOV Technology

We make the following observations to NAA's three citations in its letter. Quoted text below is taken from the NAA letter.

1. **NAA:** "NIST Handbook 130 sections 2.2.6 and 2.2.7 references the Office of Weights and Measures of the National Institute of Standards 10.3."

The NIST Handbook 130 that references the NIST section 10.3 for the weight of the "commodity (including propellant), that will be expelled" applies to "aerosols" and "similar pressurized packages." Consistent with the observations in our letter of February 28, 2011, this Section can apply to the BOV technology only if the BOV technology is deemed to be an "aerosol." We suggest that the BOV technically is not an "aerosol" as the term is conventionally defined and used. Even under this regulation, the BOV technology does not apply. The regulation requires, or at least assumes, the commodity to have a propellant that is expelled when it states a "commodity (including propellant)." Using BOV technology, *no propellant* is expelled. There is no solution, dispersion, or suspension of the propellant with the active ingredients to be expelled. The BOV technology is an inherent and foundationally different technology and so is not "a similar pressurized package," as well.

2. **NAA:** "CFR 49 section 171.8"

The 49 CFR 171.8 definition of an "aerosol" requires a receptacle containing a gas under pressure to expel a liquid, paste, or powder and fitted with a release device "allowing the contents [of the receptacle] to be ejected by the gas." (emphasis added). Here, too, the BOV technology does not apply to this definition, which is based on conventional aerosol technology. Under conventional aerosol technology, the propellant combined with the active ingredients constitutes the *contents* of the receptacle. In conventional aerosol technology, the *contents* are ejected. In BOV technology, the *contents* of the receptacle are *not* ejected, because the compressed gas *remains* in the receptacle. Thus, this definition actually illustrates the differences between BOV technology and conventional aerosol technology, and is further evidence that the BOV technology is not an "aerosol."⁵

3. **NAA:** "CFR 49 section 173.306a(3)"

Actually, the citation to 49 CFR 173.306(a)(3) can be understood as *supporting a labeling requirement by volume* rather than weight. This section relates to labeling requirements for a compressed gas based on *volumetric* quantities and pressures of the containers. The cited section specifically measures containers in terms of liters and not weight. It states "Capacity must not exceed 1 L". The full citation is noted in the footnote below."⁶

⁵ Further, some BOV technology products label in volume, such as fluid ounces. Please see examples in Note 2.

⁶ The 49 CFR 173.306(a)(3) subsection reads as follows:
(3) When in a metal container for the sole purpose of expelling a nonpoisonous (other than a Division 6.1 Packing Group III material) liquid, paste or powder, provided all of the following conditions are met. Special exceptions for shipment of aerosols in the ORM-D class are provided in paragraph (i) of this section.
(i) Capacity must not exceed 1 L(61.0 cubic inches).
(ii) Pressure in the container must not exceed 180 psig at 130 °F. If the pressure exceeds 140 psig at 130 °F., but does not exceed 160 psig at 130 °F., a specification DOT 2P (§ 178.33 of this subchapter) inside metal container must be used; if the pressure exceeds 160 psig at 130 °F., a specification DOT 2Q (§ 178.33a of this subchapter) inside metal container must be used. In any event, the metal container must be capable of withstanding without

NAA refers to the BOV as “simply one of the barrier pack aerosol options.” In reply, the nomenclature itself illustrates the fundamental differences between conventional aerosol technology and BOV technology in using the term “barrier pack”, that is, a package having a barrier between the pressurized gas and the contents to be expelled. The nomenclature of an “aerosol” applied to BOV technology is irrelevant to the fundamental differences between conventional aerosol technology and BOV technology.⁷ Such nomenclature is also irrelevant to the likely misperception and confusion to consumers when attempting to make a comparison between conventional aerosol technology and BOV technology.

NAA states that labeling the BOV with volume would be confusing to consumers. To the contrary, labeling the new BOV technology according to the conventional aerosol regulations of net weight results in confusion and deception to consumers. Consumers would misperceive that a greater quantity of useful material is in the conventional aerosol technology product due to the heavier weight of the large percentage--90% or more--of *inactive* ingredients that are expelled out of the container. By comparison, a BOV technology product can propel out 100% active ingredients with much less net weight, because it can have no inactive ingredients in the commodity to be expelled, and it can use a virtually weightless compressed gas external to the bag to expel the contents.

V. Additional Considerations for Testing of BOV Technology Products

A. Contents Are Easily Tested in BOV Containers

The question was raised at the 2011 Northeastern Weights and Measures Association (NEWMA) Interim Meeting on testing for contents as to whether the contents can easily be tested, just as manufacturers test the contents periodically for quality assurance and control (“QA/QC”). The answer is yes. The advantage of a BOV technology product is that there is no propellant in the expelled contents to compromise the testing in contrast to the volatile propellants in a conventional aerosol container. The procedure of testing BOV contents can be as simple as emptying the contents into a bottle and noting the volume.

bursting a pressure of one and one-half times the equilibrium pressure of the content at 130 °F.

(iii) Liquid content of the material and gas must not completely fill the container at 130 °F.

(iv) The container must be packed in strong outside packagings.

(v) Each container must be subjected to a test performed in a hot water bath; the temperature of the bath and the duration of the test must be such that the internal pressure reaches that which would be reached at 55 °C (131 °F) (50 °C (122 °F) if the liquid phase does not exceed 95% of the capacity of the container at 50 °C (122 °F)). If the contents are sensitive to heat, the temperature of the bath must be set at between 20 °C (68 °F) and 30 °C (86 °F) but, in addition, one container in 2,000 must be tested at the higher temperature. No leakage or permanent deformation of a container may occur.

(vi) Each outside packaging must be marked “INSIDE CONTAINERS COMPLY WITH PRESCRIBED REGULATIONS.”

⁷ It is possible that the term “aerosol” may have been loosely applied in initial inceptions of the BOV technology for commercial reasons of acceptability in the marketplace. However, if so, then such initial usage of the term does not reduce in any way the fundamental differences between the technologies and the impact that conventional aerosol regulations have on the labeling requirements of BOV technology that create misleading and inaccurate comparisons with consumers.

For example, a regulatory inspector can use the same method that the maker of PURE CITRUS uses to test for QA/QC the net volumetric content, such as the volume of PURE CITRUS fragrance extract. The inspector could use a simple tool that the manufacturer can provide or even more simply empty the BOV container in a few seconds by using the nozzle spray to spray the droplets of fragrance extract into some measuring cup to allow the droplets to form a liquid volume. The measuring cup can be a laboratory graduated cylinder that permits measurement of volume in fluid ounces to compare against the net fluid ounces indicated on the BOV container. This simple act does not require puncturing or otherwise destroying the BOV container in order to obtain the correct volume.

Even a consumer could use a similar measurement method to the one described above to verify the contents in volume. Using the same technique, a consumer could simply empty the container in a few seconds by using the nozzle to spray the droplets of fragrance or other contents from the BOV container into a measuring cup where the droplets form a liquid volume. The measuring cup could have fluid measuring marks on the side. The consumer could then read the amount of fluid ounces corresponding with the level of the liquid in the pitcher.

The method recommended above could measure accurately the volume of contents dispensed of what is delivered. These contents are in contrast to the deliverables dispensed in a conventional aerosol spray like Glade that include large amounts of flammable and noxious gas propellants, odor reducers, and water, and much small amounts of fragrance extract.

We suggest that the volumetric measurement method recommended is at least as simple and perhaps simpler than the standard methods inspectors use to measure the net weight in a conventional aerosol spray like Glade. Under current standards, simply placing a container of conventional aerosol spray on a weight scale will give net weight of the entire contents of the container, but will not give the net weight of the useful part that contains the active ingredients for which the consumer is purchasing. To test the net weight of a conventional aerosol container, an inspector could purchase a container, measure the total weight, release the contents of the container by pressing the nozzle, and reweigh the empty container to confirm the net weight. Thus, it appears that the effort to measure the volumetric contents of the BOV container would be a straightforward effort and no more complicated than current procedures.

B. Contents Are Generally Fully Expelled in BOV Containers

Another question that was raised at the 2011 NEWMA Interim Meeting was whether the entire contents of a BOV technology product is expelled. The answer is yes, where as usual sufficient pressure is loaded into the container surrounding the bag of deliverable product. The amount of pressure surrounding the bag with the deliverable contents is generally sufficient at least in the PURE CITRUS products to “squeeze” the contents out of the bag through the nozzle.

VI. Two Suggestions for Resolution

NAA's concerns can be addressed by one or more relatively simple and straightforward additions to the standards, such as Sections 6.4 and/or 10.3. There are two solutions listed below, either of which reduces the probable confusion and misrepresentations to consumers that would occur if conventional aerosol technology regulations were applied *carte blanche* to BOV technology products. Proposed adjustments to Section 10.3 are shown in underlined format below each suggestion.

1. NIST standards can require that the label for a BOV technology product differentiate it from a conventional aerosol technology product. Consumers would thus be under no illusion or confusion to compare fundamentally different technology products. There are several optional wordings that can show this differentiation, such as "Non-Aerosol", "Non-Propellant Based Technology", and others. For example, for Section 10.3, a subsection 10.3.1 could be added as follows:

10.3. The declaration of quantity on an aerosol package and on a similar pressurized package shall disclose the net quantity of the commodity (including propellant), in terms of weight, that will be expelled when the instructions for use as shown on the container are followed.

10.3.1 Containers that separate propellant from the expelled product so that the propellant is not expelled (such as containers using bag-on-valve technology) shall be prominently labeled NON-AEROSOL. The declaration of quantity shall disclose the net quantity of the commodity in terms of fluid measure.

(OR)

2. NIST can amend the standards to recognize that the BOV technology is so substantially different from the conventional aerosol technology and not require that containers with the BOV technology be labeled with net weight. That amendment would avoid the problem of inadvertently creating misperception and confusion in attempted comparisons among consumers as to the value of the BOV product. For example, Section 10.3 can be amended as follows:

10.3. The declaration of quantity on an aerosol package and on a similar pressurized package shall disclose the net quantity of the commodity (including propellant), in terms of weight, that will be expelled when the instructions for use as shown on the container are followed, provided however that containers that separate propellant from the expelled product so that the propellant is not expelled (such as containers using bag-on-valve technology) may be labeled either with weight or volume of the quantity of the commodity that will be expelled.

VII. Conclusion

BOV technology products are desirable. They are "green", environmentally-friendly products that can be used to help meet the increasing higher standards for EPA. The use of BOV technology will most likely increase with time. The current standards are outdated and were written in the context of and for conventional aerosol technology existent at the time. They fail to take into consideration recent advances in container technologies that are not only green but labeled in a way that clearly informs the consumer about the quality of the product and weight of the contents that they are purchasing.

Attempts to compare the BOV technology with the conventional aerosol technology under the current standards of weight results in more misinformation and misleading advertising to the consumer, primarily because of the lack of sufficient information labeled on conventional aerosol

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technology products that combines the large percentage of inactive ingredients with much smaller amounts of active ingredients.

Further, current standards written for conventional aerosol technology should not unfairly burden or hinder the deployment and sale of the newer BOV technology from becoming more widespread in the marketplace.

Either adjustments in the standards need to be initiated for the newer BOV technology or the BOV technology needs to be excluded from the current standards. Updating of the labeling standards is more appropriate than trying to fit the "square peg into a round hole."

Such adjustments in the standards or exclusion of the BOV technology from a net weight labeling applied to the different conventional aerosol technology allows the most important part of underlying public policy to be met: to avoid creating a misperception and confusion to the consumer.

Yours truly,



Paul C. Van Slyke

cc: Ms. Lisa Warfield (Technical Advisor, NIST)
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