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The Five Levels of Cranberry Substantiation

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By **Guest** | September 17, 2013

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In my nearly 10 years as an ambassador for North American Cranberry Vacciniummacrocarpon I have traveled the world promoting the Urinary Tract Health benefits of cranberry. From a chance meeting at an industry trade show to the board room of leading nutritional supplement and pharmaceutical companies around the world it seems that customers always leave me with the same impression – they want proven, efficacious non-adulterated cranberry ingredients in their products.

Perhaps the reason that sales of cranberry supplements continue to grow even in mature markets is as simple as this; cranberry works. Well characterized cranberry ingredients have been clinically shown to prevent recurrent Urinary Tract Infections (UTI). As such cranberry consumers realize a tangible cause and effect.

The Cause: Daily consumption of an effective dose of cranberry.

The Effect: A reduction in recurrent UTI.

It is this cause and effect that keeps consumers coming back to their local pharmacy for their monthly ration of cranberry based urinary tract health (UTH) supplements. When a cranberry consumer finds a supplement that works she/he becomes a customer for life. These dedicated, repeat cranberry UTH customers offer brands a captive audience with whom to build incremental sales with other condition specific products in their portfolio. In short, an effective cranberry product gives brands credibility and builds a trust based relationship with theirvaluable consumers.

About Cranberries

Unfortunately, not all cranberry ingredients are created equal. In fact, not all cranberry ingredients are cranberry.

Cranberries are North America's superfruit and are packed with a potent blend of unique phytochemicals. There is a wealth of published literature on all the health benefits of cranberry.

Cranberries

North American Vacciniummacrocapon is the only species of cranberry that has been show to support urinary tract health. Urinary Tract Infections are an infection cause by E. coli bacteria. E. coli gain entrance to the bladder and adhere to urinary tract walls. Daily consumption of cranberry provides a level of bacterial anti-adhesion activity (AAA) in the bladder. This AAA helps to flush the E. coli bacteria from the urinary tract leading to a reduced risk of UTI. This unique bacterial AAA is the mechanism of action by which cranberry supports urinary tract health.

In my years I have seen beautifully packaged, well placed and positioned cranberry supplement products supported by brilliant marketing plans, world class sales forces and industry leading consumer outreach fail for one reason and one reason only – the cranberry ingredient was adulterated and therefore the very foundation of the product was flawed dooming it before it

ever had a chance.

Again, only North American Vaccinimummacrocarpon provides the urinary tract health benefits associated with cranberry. Brands that purposely or unwittingly choose an adulterated cranberry never have a chance to succeed. Not only do they waste precious product development, manufacturing, distribution and sales and marketing time and resources on a product bound to fail but they've also lost the most important currency of all for long term sustainable growth – brand equity. Simply put, consumers just will not have the same level of confidence in the brand's products once they've been proven ineffective. As the saying goes: "Trick me once, shame on you, trick me twice, shame on me." In this case consumers may be willing to try it but if it does not work they will not repeat buy it. Lost brands equity opens the door for competitors to gain consumer trial, acceptance and capture these loyal customers for themselves.

Fortunately, selecting an effective cranberry ingredient is quite simple. There are five levels of substantiation that all cranberry ingredients should be judged by. The more levels of substantiation your cranberry ingredient clears, the more efficacious the ingredient is likely to be and the better the long term prospects for your brands will be.

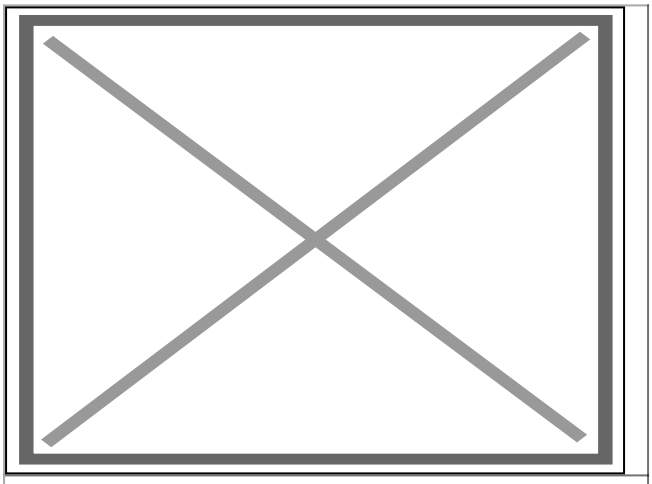
Different levels of substantiation processes

Level 1: Identify the species:

Confirming that your cranberry is Vacciniummacrocarpon is an absolute must. Any reputable cranberry supplier should clearly list the species on their specification and CofA (Certificate of Appropriateness). Any other species should immediately raise a red flag and be removed from consideration.

Adulterated cranberry products can be identified quickly through a cost effective High-performance liquid chromatography (HPLC) screening. Vacciniummacrocarpon contain a unique anthocyanin profile. An Anthocyanin Pigment Profile analysis can be assayed on any ingredient to determine whether or not it is indeed derived from Vacciniummacrocarpon and free from

adulteration. Ask your supplier to provide a copy of their cranberry's APP to ensure that their product has not been adulterated or misrepresented as Vacciniummacrocarpon.



Market samples were collected and analyzed at Krueger Food Labs via the HPLC APP identity test method described above. Notice the four distinct anthocyanin peaks in the cranberry sample as compared to the widely distributed peaks in the adulterated cranberry products.

Level 2: Determine Proanthodycanidin (PACs) standardization.

Selecting a non-adulterated cranberry is a great first step but the journey towards finding an efficacious dose of cranberry for urinary tract health is still not complete. Next you want to verify that your cranberry is standardized to the active phytochemical – proanthocyanidins (PACs).

PACs are widely considered the active ingredient in cranberry and have been shown to inhibit

theE. coli bacteria that cause over 75% of urinary tract infections from adhering to cell walls and causing an infection. Therefore it is important to verify that your ingredient is standardized to a minimum level of PACs thus ensuring a consistent product on a batch by batch basis.

There are many methods of analysis available for quantifying the content of PACs. Each method has its strengths and weaknesses including; reproducibility, cost, availability of reference standards, turn-around time, etc. It is import to compare products with the same PAC method.

36 mg of PACs

There has been a global trend towards defining an efficacious dose of cranberry as 36 mg of cranberry PACs. Should your candidate ingredient lack substantiation beyond level 2 then formulating your product to deliver 36 mg of PACs is a sound development strategy. However, as described below ingredients that achieve Level's 3, 4 and 5 are much more likely to provide consumers with the UT health benefits they are seeking.

Level 3: Confirm bacterial AAA capacity:

Many botanicals contain PACs yet do not have Cranberry's unique anti-adhesion properties. In 2005 Howell, et. al. published a breakthrough cross over study showing that urine collected after consumption of a host of non-cranberry, yet PAC rich botanicals, did not exhibit Ex vivo bacterial anti-adhesion while urine collected after consumption of cranberry juice cocktail, also shown to have PACs, did exhibit Ex vivo bacterial anti-adhesion. The analysis showed that the non-cranberry botanicals lacked a sufficient level of bacterial anti-adhesion PACs. This research suggests that only PACs derived from cranberry provide the anti-adhesion activity that inhibits bacteria from binding to cell walls and causing an infection. Adulterated non cranberry PACs do not deliver the health benefits.

Cranberry Anti-Adhesion Activity Beyond UTI:

Cranberry's unique bacterial anti-adhesion activity provides health benefits beyond the urinary tract. Cranberries have been shown to inhibit adhesion of H. pylori (leading cause of ulcers) in the gut* and S. mutans(anti cariers) in the mouth**.

*Helicobacter 2005 Nov: 10(2):139-145

**Crit Rev Food SciNutr. 2008 Aug;48(7):672-80

Level 4: Evaluate human clinical substantiation

Ultimately, the main concern is whether or not a formulation will deliver the consumer an efficacious dose of cranberry leading to satisfied customers for life. The best way to assure that an adequate dose is delivered is to rely on product specific clinical substantiation. Clinically substantiated ingredients take the guess work out of formulating and provide consumers with peace of mind knowing that the product has been independently tested and verified.

A commitment to conduct clinical trials is a substantial investment in research and development resources, capital and time.Studies should be conducted by qualified researchers and carried out at independent research facilities. Results should be published in a peer reviewed journal. Development of the proper protocols aimed at gathering the appropriate data for interpretation requires a strong knowledge of the ingredient, its mechanism of action, physiological effects, etc. Once completed and published in a peer reviewed journal clinical science provides the necessary foundation for product specific claims.

Level 5: Verify permissible UT claims

Ingredients with government sanctioned product specific health claims are always the best option.

Inorder to qualify for a government sanctioned health claim, ingredients must provide a detailed

dossier of evidence to prove origin, authenticity, quality, traceability, reproducibility, standardization, safety, bio-availability and of course efficacy. Only when all of this is shown will an ingredient be awarded a health claim.

Submission for a government sanctioned health claim is a painstaking process without shortcuts. Documentation associated with efficacy, safety and quality can take years to develop and finalize. Only stable suppliers with a long term vision will commit the resources necessary to see the process through to completion. In the end, the investment is beneficial to branding companies as they can make clear and concise condition specific claims on their products leading to increase consumer awareness, trial and repeat purchases.

Judging candidate ingredients vs. the five levels of cranberry substantiation will allow you to quickly identify the right product. In the end, a non-adulterated efficacious cranberry product coupled with smart branding and proactive education will help you loyal customers - informed and dedicated cranberry UT health consumers for life.

- Dan Souza, Sr. Director of Sales and Marketing, NATUREX-DBS, LLC.

Mr Souza is involved in technical product sales and marketing, finished good and raw material production, and strategic long range planning and product development at Naturex. He has developed and cultivated strategic partnerships that have led to increased global awareness of cranberry health benefits, resulting in the first ever government-sanctioned health food claim for a cranberry ingredient.

Read online: https://nuffoodsspectrum.in/views/24/10092/the-five-levels-of-cranberry-substantiation.html
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