INGREDIENT TECHNOLOGY GROUP

Press Information

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OCEAN SPRAY CRANBERRIES, INC AND COMPLETE PHYTOCHEMICAL SOLUTIONS, LLC ANNOUNCE PROJECT FOR IMPROVEMENT OF PAC TESTING

Ocean Spray ITG, stand 2D41, Fi Europe 2011, 29 November – 1 December, Paris

Ocean Spray Cranberries, Inc and Complete Phytochemical Solutions, LLC announce their collaboration on a project to improve the accuracy of measuring and quantifying of proanthocyanidins (PACs) in cranberries. The goal of the collaboration is to develop a cranberry based/cranberry specific PAC standard (derived from cranberry fruit) as an alternative to the Procyanidin A2 (dimer) standard currently utilised in the DMAC[1] method.

In recent years, scientific studies have shown that cranberries contain the unique A-type PACs that may "help reduce the adhesion of certain *E. coli* bacteria to the urinary tract walls,"[2] with a minimum of 36 mg cranberry PACs delivering an efficacious dose. Doubts have arisen, however, over the accuracy of the current methods of PAC measurement in cranberries. The two colorimetric methods currently used by the industry can deliver vastly different results. The recently introduced DMAC method provides an accurate quantification of PAC content based on the use of the Procyanidin A2 standard which is a dimer (chain length of 2), but can lead to an under-estimation of PAC content in products that are enriched in PACs of different sizes and lengths (degree of polymerization from 2-8 up to >10). Variations in processing techniques for cranberry products can lead to significant differences in PAC composition. The industry is calling for an improvement to the current standardised method to provide product specific quantification for compounds in a natural product like cranberry, which will help pave the way for further advancement in cranberry science.

[1] 4-dimethylaminocinnamaldehyde (Prior et al, 2010)
[2] Avis 2003-SA-0056, 6 April 2004, Agence françise de sécurité sanitaire des aliments (AFSSA)

Accurate quantification of PAC content in cranberry products is a vital component in establishing dosage guidelines for consumers. Additionally, it is essential for monitoring efficacy and shelf-life of dietary supplements, as well as helping standardise test materials used in research studies.

Ocean Spray and Complete Phytochemical Solutions hope to make the cranberry PAC standard developed in this collaboration commercially available to the cranberry industry, academic institutes and contract research organisations worldwide.

Amy Howell, associate research scientist at Rutgers University and member of the project team comments, “Since DMAC is now considered to be the industry standard method, we are committed to improving its accuracy for all cranberry products by developing a more robust, commercially available cranberry PAC standard. We are proud to partner with leading cranberry supplier, Ocean Spray, on this initiative. We anticipate this new methodology will provide more confidence for suppliers, consumers and regulatory agencies in the assessment of PAC content which will have a significant impact on the cranberry industry.”

Tom Jones, senior manager, business development, Ocean Spray ITG, said, “We are committed to supporting scientific research on the health and wellness benefits of cranberries and have made this investment to support the industry’s quest for a solution to the long standing debate on PAC measurement. An improved standardised method will add further scientific validation to our high quality, innovative ingredient portfolio as well as establish an industry-wide standardised testing methodology.”

ENDS

Editor’s note

About the project

Ocean Spray is funding the project with Complete Phytochemical Solutions, LLC. The company provides intellectual and technical expertise in phytochemistry to enable clients to develop,

manufacture and market high quality and efficacious food products. Consultants at Complete Phytochemical Solutions have more than 80 years of collective research experience in developing and applying analytic methods to assess the bioactivity, authenticity and standardisation of fruits, extracts and value-added products and include:

Christian Krueger: Director of Operations for the Reed Research Group's Basic and Translational Research Program at the University of Wisconsin-Madison, WI

Jess Reed: Professor of Animal Nutrition at the University of Wisconsin-Madison, WI

Amy Howell: Associate Research Scientist at the Marucci Center for Blueberry and Cranberry Research at Rutgers University, MA.

About Ocean Spray

Ocean Spray is an agricultural cooperative owned by more than 600 cranberry growers as well as more than 50 grapefruit growers. Ocean Spray is North America's leading producer of canned and bottled juices and juice drinks, and has been the best-selling brand name in the canned and bottled juice category since 1981. Ocean Spray posted fiscal 2010 sales of $2.0 billion. Ocean Spray's Ingredient Technology Group (ITG) sells cranberry concentrate worldwide, and offers an extensive portfolio of other fruit ingredients including sweetened dried cranberries, BerryFusions® Fruits, cranberry powders and purée – with total annual sales of approximately $143 million.

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