

# Scientists approve new test for measuring flavanols and procyanidins in cocoa and chocolate products

*Revised and expanded analytical test adopted as new Official Method of Analysis by AOAC INTERNATIONAL food science experts*

ROCKVILLE, MD, US, August 18, 2020 /EINPresswire.com/ -- [AOAC INTERNATIONAL](https://www.aocinternational.org) today announced the approval of a new scientific method for measuring flavanols and procyanidins in cocoa powders, cocoa liquors, chocolates and cocoa extracts.

Flavanols and procyanidins are bioactive compounds found in many foods and drinks including apples, cranberries, and teas, but which are particularly abundant in cocoa beans. There is growing interest in these compounds, as a strong body of scientific evidence now shows they could have beneficial impacts on human health, including potential cardiovascular and cognitive benefits.

"As interest in the health potential of flavanols has grown, so has the need for accurate analysis of their properties," said Eurofins Director of Scientific Affairs Dr. Hong You, a member of the Expert Review Panel that approved the method. "This method addresses a critical gap in the analysis of these phytonutrients in cocoa-based products, enabling consistency in how these compounds are measured and reported."

The new method, employing hydrophilic interaction liquid chromatography, was developed and submitted by scientists at Mars Edge. It is a major improvement of the existing Official Method of Analysis 2012.24, validated for a wide range of cocoa-based products, including milk chocolates, dark chocolates, cocoa drink mixes and cocoa extract dietary supplements, spanning concentration of 0.5-500 mg/g.

"Our work builds on previous methodology to decrease experimental time more than five-fold and increase intermediate precision more than two-fold," said Ugo Bussy, Principal Scientist at Mars Edge. "This opens the door for consistent product labeling, ultimately empowering consumers by providing them reliable information to compare products, which is particularly important given the wide variability in flavanol content that exists in the marketplace today."

In an important advance, the method incorporates the first standardized reference material for



cocoa flavanol extract, developed by the U.S. National Institute of Standards and Technology (NIST).

While cocoa flavanols are naturally abundant in cocoa, these compounds are often destroyed in normal chocolate harvesting and processing. This new method employs advanced separation and sample clean-up technology provided by Waters Corporation, which will enable more accurate measurement of products that typically contain low and inconsistent amounts of cocoa flavanols, like milk chocolate.

Mars Edge is a new segment of Mars, Incorporated, dedicated to human health and wellness through targeted nutrition. Mars Edge is currently working, through a public-private partnership, with the U.S. National Institutes of Health and Harvard University Medical School in the Cocoa Supplement and Multivitamin Outcomes Study (COSMOS) – the largest clinical dietary study investigating the impact of nutritional status, lifestyle choices, and the intake of cocoa flavanols and multivitamins on health and the risks of heart disease and cancer. Study outcomes are expected in late 2021.

The method was evaluated against AOAC Standard Method Performance Requirement (SMPR®) 2012.001, which details criteria needed for determination of flavanols in foods and beverages.

Official Methods of Analysis of AOAC INTERNATIONAL are microbiological and chemical analysis procedures that have undergone rigorous formal validation by AOAC INTERNATIONAL. After a two-year tracking period, “First Action” methods are reviewed for approval as “Final Action” methods, which are published in the Official Methods of Analysis of AOAC INTERNATIONAL, a globally recognized standards resource for analytical scientists.

“Flavanol and Procyanidin (by Degree of Polymerization 1–7) Content of Chocolate, Cocoa Liquors, Powder(s), and Cocoa Flavanol Extracts” was approved during AOAC’s April 2020 Analytical Methods Week and will be published in the Official Methods of Analysis of AOAC INTERNATIONAL.

For more information, please contact Deborah McKenzie, AOAC INTERNATIONAL Senior Director of Standards, at [dmckenzie@aoac.org](mailto:dmckenzie@aoac.org).

#### About AOAC INTERNATIONAL

AOAC INTERNATIONAL is a globally recognized, 501(c)(3), independent, third party, not-for-profit association and voluntary consensus standards developing organization founded in 1884. When analytical needs arise within a community or industry, AOAC INTERNATIONAL is the forum for finding appropriate science-based solutions through the development of microbiological and chemical standards. The AOAC Official Methods of Analysis database is used by food scientists around the world to facilitate public health and safety and to promote trade.

For more information please visit [www.AOAC.org](http://www.AOAC.org).

## About Mars Edge

Mars Edge is a new segment of Mars, Incorporated dedicated to human health and wellness through targeted nutrition. It is set up to use the latest science, data and technology to create easy, enjoyable and tailored nutrition solutions. It offers evidence-based products for wider groups of people with shared nutritional and health needs, delivered by brands such as COCOAVIA™ or GOMO™, and is creating a business in personalized nutrition with FOODSPRING®.

In doing so, Mars Edge is partnering with start-up companies, academia, and philanthropic organizations to bring ideas to life. Mars Edge's purpose is to contribute to better lives through nutrition.

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