



CALL FOR METHODS

Methods for Determination of Vitamin A, D, E, and K in Food Ingredients such as Pre-blends, Pre-mixes, and Pure Materials, including Encapsulated and Oil Forms

AOAC INTERNATIONAL invites method developers to submit methods for consideration and possible evaluation through the AOAC *Official Methods*SM program. Prospective methods will be able to determine the individual concentrations of Vitamin A, D, E, and K in food ingredients such as pre-blends, pre-mixes, and pure materials, including encapsulated and oil forms. Methods that can measure the individual concentrations of more than one of the vitamins are preferred to methods that can only measure one vitamin. Chromatographic methods that utilize common instrumentation that are readily available worldwide are much preferred. All methods should be capable of measuring all concentrations of the vitamins in a range from 100 ppm to 100%. Methods must be practical and robust enough that trained technicians could obtain the same results from the same samples within any laboratory in the world.

For the purpose of this Fitness for Purpose statement:

- Vitamin A is defined as 13-cis and all-trans retinol, retinyl esters [retinyl palmitate, and retinyl acetate].
- Vitamin E is focused on D-alpha-tocopherol, DL-alpha-tocopherol and their esters. Other compounds of accepted vitamin E activity may be measured by a method if the compounds and accuracy of measure can be ascertained. Methods should be capable of reporting alpha-tocopherol and alpha-tocopherol esters separately.
- Vitamin D is defined as vitamin D₂ [ergocalciferol and its pre-vitamin isomer]; and vitamin D₃ [cholecalciferol and its pre-vitamin isomer].
- Vitamin K is defined as the cis and/or trans isomers of vitamin K₁ (phylloquinone or phytonadione or phytonadione), dihydro-K₁, and vitamin K₂ (the menaquinone series).
- Pre-blends and pre-mixes are mixtures of one or more food additives, with food materials or water used as a carrier, and not intended for direct consumption by humans.
- The Ingredients Working Group, working with the SPSFAM, shall determine the vitamins that candidate methods must be able to determine in specific food ingredient matrices.

The ultimate objective of this project is to select, evaluate, and validate reference methods that can be used for dispute resolution. Acceptable methods must be reliable and reproducible when used by trained analysts in accredited laboratories.

Interested method developers should provide a description of their proposed method and data demonstrating that the proposed method can meet the proposed performance requirements.

Please submit your method(s) and validation data by **March 2, 2012** to La'Kia Phillips, AOAC Standards Development Coordinator, AOAC INTERNATIONAL, at lphillips@aoac.org and Phone: 301-924-7077 Ext. 133.