1 Applicability

Determination of vitamin A, defined as 13-cis and all-trans retinol, retinyl esters [retinyl palmitate, and retinyl acetate], in food ingredients such as pre-blends, pre-mixes, and pure materials, including encapsulated and oil forms.

2 Analytical Technique

Chromatographic methods that utilize common instrumentation that are readily available worldwide.

3 Definitions

Pre-blends and pre-mixes.—Mixtures of one or more food additives, with food materials or all other carriers, and not intended for direct consumption by humans.

Limit of quantitation (LOQ).—The minimum concentration or mass of analyte in a given matrix that can be reported as a quantitative result.

Repeatability.—Variation arising when all efforts are made to keep conditions constant by using the same instrument and operator, and repeating during a short time period. Expressed as the repeatability standard deviation (SD\(_r\)); or % repeatability relative standard deviation (%RSD\(_r\)).

Reproducibility.—The standard deviation or relative standard deviation calculated from among-laboratory data. Expressed as the reproducibility standard deviation (SD\(_p\)); or % reproducibility relative standard deviation (%RSD\(_p\)).

Recovery.—The fraction or percentage of spiked analyte that is recovered when the test sample is analyzed using the entire method.

4 Method Performance Requirements

See Table 1.

5 System Suitability Tests and/or Analytical Quality Control

Suitable methods will include blank check samples, and check standards at the lowest point and midrange point of the analytical range.

6 Reference Material(s)

Use suitable materials.

7 Validation Guidance

Recommended level of validation: Official Methods of Analysis℠.

8 Maximum Time-to-Results

No maximum time.