



**U.S. FOOD & DRUG
ADMINISTRATION**

FDA Foods Program Compendium of Analytical Laboratory Methods: Chemical Analytical Manual (CAM)

METHOD NUMBER: C-009.01

POSTING DATE: September 23, 2019

POSTING EXPIRATION DATE: None

PROGRAM AREA: Toxic and Nutrient Elements

METHOD TITLE: [EAM 4.13: Inductively Couple Plasma-Mass Spectrometric Determination of Iodine in Food Using Tetramethyl Ammonium Hydroxide Extraction](#) (follow link for method write-up).

VALIDATION STATUS: Multi-laboratory Validated (MLV) under Foods Program Method Development, Validation and Implementation Program

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METHOD SUMMARY/SCOPE:

Analyte(s): Iodine

Matrices: Foods and dietary supplements

An analytical portion (0.5 to 5.0 g dependent on food composition) is mixed with tetramethyl-ammonium hydroxide (TMAH) and a hot block extraction system at 85°C is used to extract the available iodine. The supernatant contains extractable iodine in 1% TMAH at pH>9. The analytical solution is analyzed using an ICP-MS. Iodine mass fraction is quantified using an external calibration and quality controls are incorporated to ensure data quality.

REVISION HISTORY:

This method is currently posted as a single-laboratory method in the [FDA's Elemental Analysis Manual](#). The method has undergone a successful multi-laboratory validation (MLV) under the Foods Program Method Development, Validation and Implementation process and the updated version of the MLV method will be posted at the EAM website.

OTHER NOTES: