

## Speciation Results for Arsenic Analysis in Single-Strength Apple Juice Sampled Under the FDA's Toxic Elements in Food and Foodware, and Radionuclides in Food – Import and Domestic Compliance Program (FY2013-FY2022)

The data in this table represent samples of single-strength apple juice from FY2013 to FY2022 that were analyzed for selected arsenic species. The FDA first tests juice samples for total arsenic.

The method used does not distinguish between different forms of arsenic. In some cases, the FDA tested the samples further to determine the amount of inorganic arsenic (the type of arsenic considered harmful to humans) and two potentially harmful forms of organic arsenic (monomethylarsonic acid, MMA, and dimethylarsinic acid, DMA) present in the apple juice.

Fiscal year	Sample ID	Total As concentration (µg/kg, ppb) <sup>[a]</sup>	Inorganic As concentration (µg/kg, ppb) <sup>[b,c]</sup>	DMA concentration (µg/kg, ppb) <sup>[c]</sup>	MMA concentration (µg/kg, ppb) <sup>[c]</sup>
FY13	785662	26	33	<LOD	<LOD
FY14	815628	44	39	<i>1.0</i>	<LOD
FY14	827087	29	26	<i>0.4</i>	<LOD
FY14	850282	28	28	<LOD	<LOD
FY15	887409	11	11	<i>0.5</i>	<LOD
FY17	1005807	15	14	<i>0.3</i>	<LOD
FY18	1031835	11	8	<LOD	4.0
FY18	1049931	32	34	<LOD	<LOD
FY18	1077283	16	15	<LOD	<LOD
FY19	1099139	28	24	<LOD	<LOD
FY20	1134806	19	17	<LOD	<LOD
FY21	1144543	21	19	<i>1.1</i>	<LOD
FY21	1168543	11	9	<i>0.5</i>	<LOD
FY21	1168549	13	11	<i>0.6</i>	<LOD

<sup>[a]</sup> The sum of all arsenic species detected may not add up to 100% of total arsenic due to the inherent experimental variability in the different methods used for the two types of analyses.

<sup>[b]</sup> Inorganic arsenic = arsenite (AsIII) + arsenate (AsV).

<sup>[c]</sup> Concentrations of arsenic species reported are based on elemental arsenic concentration, *i.e.*, µg As/kg.

For samples collected from FY13 to FY20, the Limit of Detection (LOD) was 0.25 µg/kg for AsIII, AsV, DMA, and MMA; the Limit of Quantification (LOQ) was 2.0 µg/kg for AsIII, AsV, DMA, and MMA.

For samples collected in FY21, the LOD was 0.2 µg/kg each for AsIII, AsV, and MMA and 0.1 µg/kg for DMA; the LOQ was 2.4 µg/kg for AsIII, AsV, and MMA and 2.2 µg/kg for DMA.

Results less than the LOQ and greater than the LOD are reported in italics. Results less than the LOD are reported as <LOD.