Chemical Contaminants Residues in Food
Metals Sub-group

December 12, 2008

Survery: Method Interest 2008-09-09

Instructions were: Indicate your interest for each Method Need listed by entering a number that most closely indicates your need.
5 = Need because no validated method available;
4 = Need to replace poorly performing method;
3 = Need improved method but current method sufficient;
2 = Not needed because have appropriate method;
1 = No current need but possible future need;
0 = No need envisioned for the near future.

Method Need	Purpose for Method	Capar	Bell	Bhandari	Murphy	Sigrist	Browne	Sturgeon	Rosso	Average
Arsenic Speciation	Determine the level of the toxic chemical forms of arsenic (arsenite, arsenate, monomethylarsonate and dimethylarsinate) in food (primarily juices, rice) and dietary supplements.	5	0	0	5	5	5	5	5	3.75
Arsenic, Cadmium, Lead, Mercury	Determine the level of arsenic, cadmium, lead, and mercury in food and dietary supplements. (Potentially using microwave digestion and inductively coupled plasma-mass spectrometry.)	4	4	4	3	1	0	2	5	2.88
Methylmercury	Improved method to determine the level of methylmercury in food, primarily seafood. (Potentially using liquid chromatography and inductively coupled plasma-mass spectrometry.)	4	1	0	5	3	0	2	5	2.50
Lead	Determine the level of lead in candy products. (Potentially using microwave digestion and graphite furnace-atomic absorption spectrometry.)	3	3	0	1	1	5	2	4	2.38
Selenium Speciation	Determine the level and chemical forms of selenium in food and dietary supplements.	1	0	0	5	5	0	2	5	2.25
Total Mercury	Improved method to determine the level of total mercury in food (including seafood) and dietary supplements. (Potentially using microwave digestion and cold vapor-atomic absorption spectrometry.)	4	3	0	2	2	0	2	5	2.25
Iodine	Improved method to determine the level of iodine in food (including infant formula).	3	1	5	1	0	0	2	4	2.00
Calcium, Copper, Iron, Magnesium, Manganese, Phosphorus, Potassium, Selenium, Sodium, Zinc	Improved method to determine the levels of these minerals in food. (Potentially using microwave digestion and inductively coupled plasma-atomic emission spectrometry.)	3	3	3	0	1	0	0	4	1.75
Calcium, Copper, Iron, Magnesium, Manganese, Phosphorus, Potassium, Selenium, Sodium, and Zinc	Improved method to determine the levels of these minerals in infant formula. Potentially using microwave digestion and inductively coupled plasma-atomic emission spectrometry.)	3	1	0	0	1	5	0	3	1.63
Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Thallium, Zinc	Improved method to determine the levels of these elements in bottled water. (Potentially using inductively coupled plasma-mass spectrometry.)	4	0	0	5	1	0	0	3	1.63
Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Thallium, Zinc	Improved method to determine the levels of these elements in beverages (non-alcoholic). (Potentially using inductively coupled plasma-mass spectrometry.)	4	0	0	5	1	0	0	3	1.63
Elements in Foods, Feeds, Food Supplements and Biological Materials by Flame Atomic Absorption Spectrometry, Inductively Coupled Plasma Atomic Emission Spectrometry, and Inductively Coupled Plasma Mass Spectrometry	Integrated analytical procedure incorporating a suitable sample digestion technique and the determination techniques of (1) flame atomic absorption, (2) inductively coupled atomic emission and (3) inductively coupled mass spectrometries to provide comprehensive, multielement analytical methods for the determination of elements such as: Al, As, B, Ba, Ca, Cd, Co, Cr, Cu, Fe, Li, La, Mg, Mn, Mo, Ni, P, Pb, Rb, S, Se, Sn, Sr, Th, Ti, U, V, Zn and other elements as may be required, in foods, feed, dietary supplements and biological materials.	3	1	0	0	1	5	0	3	1.63

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Method Need	Purpose for Method	Capar	Bell	Bhandari	Murphy	Sigrist	Browne	Sturgeon	Rosso	Average
Aluminum, Antimony, Nickel, Tin	Determine the level of aluminum, antimony, nickel, tin in food and dietary supplements. (Potentially using microwave digestion and inductively coupled plasma-mass spectrometry.)	1	0	0	3	1	5	0	2	1.50
Calcium, Copper, Iron, Magnesium, Manganese, Phosphorus, Potassium, Selenium, Sodium, Zinc	Improved method to determine the levels of these minerals in infant formula. (Potentially using microwave digestion and inductively coupled plasma-mass spectrometry.)	3	0	3	0	1	0	0	5	1.50
Calcium, Copper, Iron, Magnesium, Manganese, Phosphorus, Potassium, Selenium, Sodium, Zinc	Improved method to determine the levels of these minerals in food. (Potentially using microwave digestion and inductively coupled plasma-mass spectrometry.)	3	0	3	0	1	0	0	5	1.50
Cadmium, Lead (Foodware)	Improved method for determining cadmium and lead leached from ceramic foodware by shortening the time for leaching the ceramic ware.	3	1	4	0	0	0	0	3	1.38
Elements in Foods, Feeds, Food Supplements and Biological Materials by Flame Atomic Absorption Spectrometry	Integrated analytical procedure incorporating a suitable wet digestion technique and flame atomic absorption determination of Al, Ba, Ca, Cu, Fe, K, Mg, Mn, Na, Rb, Sr and Zn in foods, feeds, dietary supplements and biological materials.	3	0	0	0	4	0	0	2	1.13
Cadmium, Lead (Foodware)	Improved method for determining cadmium and lead leached from ceramic foodware using inductively coupled plasma-atomic emission spectrometry.	3	1	0	0	0	0	0	4	1.00
Arsenic, Cadmium, Lead, Mercury	Screening food for arsenic, cadmium, lead, and mercury content by X-ray fluorescence.	5	0	0	0	0	0	0	2	0.88
Cadmium, Lead (Foodware)	Improved method for determining cadmium and lead leached from ceramic foodware by broadening the acceptable temperature range for ceramic ware leaching.	3	1	0	0	0	0	0	3	0.88
Cadmium Speciation	Determine the level and chemical forms of cadmium in food.	0	0	0	1	1	0	0	5	0.88