

**14 Sentro sa Pagsusuri, Pagsasanay at Pangasiwang Pang-agham at
Teknolohiya Corp. (SENTROTEK)**

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Field of Testing : Chemical Testing and
Microbiological Testing

Chemical Testing

Products	Specific Tests	Method/ Reference
I. Foods		
01,0 Milk and dairy products		
01.1 Milk powder and cream powder	Protein	Kjeldahl AOAC 2001.11/984.13
01.2 Whey and whey products	Fat	Ether Extraction (AOAC 920.39C)
01.3 Condensed milk		Acid Hydrolysis (AOAC 922.06/948.15)
01.4 Liquid Milk (evaporated and Cream (UHT/sterilized)	Moisture	Air Oven Method (AOAC952.08/950.46B/ 925.10/990.20)
01.5 Pasteurized milk	Ash	Direct Method-Furnace (AOAC923.03/938.08/900.02)
01.6 Pasteurized cream	Total Sugars	Luff-Schoorl Lane Eynon
01.7 Yogurt and other fermented milk	Total Dietary Fiber	Enzymatic-Gravimetric (AOAC 985.29)
01.8 Milk and buttermilk	Calories	By computation/ FNRI Phil Food Composition Tables
01.9 Cheese and cheese products (Cottage cheese, soft and semi-soft cheese		

01.10 Processed cheese spread 01.11 All raw milk cheese	Titrateable Acidity	Titrimetry (AOAC 965.33)
	Free Fatty acid	Titrimetry (AOAC 940.28)
	Sucrose, Glucose, Maltose, Lactose	HPLC – In-house validated method
	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)
	Cholesterol	GC (AOAC 994.10)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC 985.35/968.08)
	Iron, Calcium	
	Magnesium, Manganese, Zinc	
	Heavy Metals (Pb, Cd, Hg, As, Cr)	AAS/ICP-AES (USEPA 6010)
	Se	AFS/AAS Hydride
02.0 Fats and oils, and fat emulsions		
02.1 Fats and oils essentially free from water (vegetable oils and fats, lard, tallow, fish oil and other animal fats)	Free Fatty acid	AOCS Ca 5a-40
	Iodine Value	AOCS Cd 1-25
	Peroxide Value	AOCS Cd 8-53
	Color, Lovibond (Tintometer)	AOCS Cc 13e-92
	Saponification Value	AOCS Cd 3-25
02.2 Fat emulsions mainly of type water in-oil (butter, margarine)	Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1a-13)
	Vitamins A	HPLC (In-House Validated Method)
	Iron	AAS (AOAC)
03.0 Edible ices, including sherbet and sorbet		
03.1 Ice cream and sherbet	Protein	Kjeldahl AOAC 2001.11/984.13
03.2 Ice cream with added ingredients	Fat	Ether Extraction (AOAC 920.39C)
03.3 Flavored Ice		Acid Hydrolysis (AOAC 922.06/948.15)
	Moisture	Air Oven Method (AOAC 952.08/950.46B/ 925.10/990.20)

	Ash	Direct Method-Furnace (AOAC923.03/938.08/900.02)
	Total Sugars	Luff-Schoorl Lane Eynon
	Calories	By computation/ FNRI Phil Food Composition Tables
	Titrateable Acidity	Titrimetry (AOAC 965.33)
	Free Fatty acid	Titrimetry (AOAC 940.28)
	Sucrose, Glucose, Maltose, Lactose	HPLC – In-house validated method
	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)
	Cholestrerol	GC (AOAC 994.10)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC 985.35/968.08)
	Calcium, Iron	
	Magnesium, Manganese, Zinc	AAS (AOAC)
	Heavy Metals (Pb, Cd, Hg, As, Cr)	AAS/ICP-AES (USEPA 6010)
	Se	AFS/AAS Hydride
04.0 Confectioneries		
04.1 Cocoa powder 04.2Chocolate products; chocolate confectioneries 04.3Sugar confectioneries (hard and soft candy, nougats, etc.) 04.4Chewing gum 04.5Decorations a, toppings (non-fruit), and sweet sauces	Protein	Kjeldahl AOAC 2001.11/984.13
	Fat	Ether Extraction (AOAC 920.39C) Acid Hydrolysis (AOAC 922.06/948.15)
	Moisture	Air Oven Method (AOAC952.08/950.46B/ 925.10/990.20)
	Ash	Direct Method-Furnace (AOAC923.03/938.08/900.02)
	Total Sugars	Luff-Schoorl Lane Eynon
	Total Dietary Fiber	Enzymatic-Gravimetric (AOAC 985.29)

	Calories	By computation/ FNRI Phil Food Composition Tables
	Titrateable Acidity	Titrimetry (AOAC 965.33)
	Free Fatty acid	Titrimetry (AOAC 940.28)
	Sucrose, Glucose, Maltose, Lactose	HPLC – In-house validated method
	Caffeine	HPLC (AOAC 979.08)
	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)
	Cholestrerol	GC (AOAC 994.10)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC)
	Calcium, Iron	
	Magnesium, Manganese, Zinc	
	Heavy Metals (Pb, Cd, Hg, As, Cr)	AAS/ICP-AES (USEPA 6010)
	Se	AFS/AAS Hydride
05.0 Fruits and vegetables, seaweeds, nuts and seeds		
05.1 Frozen vegetables and fruits	Protein	Kjeldahl AOAC 2001.11/984.13
05.2 Fermented fruits and vegetables	Fat	Ether Extraction (AOAC 920.39C)
05.3 Fruits and vegetable products in hermetically sealed container		Acid Hydrolysis (AOAC 922.06/948.15)
05.4 Dried fruits and vegetables, seaweeds, nuts and seeds	Moisture	Air Oven Method (AOAC952.08/950.46B/ 925.10/990.20)
05.5 Coconut (desiccated)	Ash	Direct Method-Furnace (AOAC923.03/938.08/900.02)
05.6 Nut and seed purees and spreads (e.g., peanut butter)	Total Sugars	Luff-Schoorl Lane Eynon
05.7 Sun dried fruit	Total Dietary Fiber	Enzymatic-Gravimetric (AOAC 985.29)
05.8 Jams, jellies, marmalades and fruit fillings for pastries	Calories	By computation/ FNRI Phil Food Composition Tables
05.9 Fruit preparations (pulp, purees, fruit	Titrateable Acidity	Titrimetry (AOAC 965.33)
	Free Fatty acid	Titrimetry (AOAC 940.28)

toppings and coconut milk)	Sucrose, Glucose, Maltose, Lactose	HPLC – In-house validated method
	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)
	Cholestrol	GC (AOAC 994.10)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC 985.35/968.08) AAS (AOAC)
	Calcium, Iron	
	Magnesium, Manganese, Zinc	
	Heavy Metals (Pb, Cd, Hg, As, Cr)	AAS/ICP-AES (USEPA 6010)
	Se	AFS/AAS Hydride
06.0 Egg and egg products		
06.1 Egg products 06.1.1 Liquid egg products 06.1.2 Frozen egg products 06.1.3 Dried and/or heat coagulated egg products 06.2 Preserved eggs, including alkaline, salted, and canned eggs 06.3 Egg-based desserts (e.g. custard)	Protein	Kjeldahl AOAC 2001.11/984.13
	Fat	Ether Extraction (AOAC 920.39C) Acid Hydrolysis (AOAC 922.06/948.15)
	Moisture	Air Oven Method (AOAC952.08/950.46B/ 925.10/990.20)
	Ash	Direct Method-Furnace (AOAC923.03/938.08/900.02)
	Total Sugars	Luff-Schoorl Lane Eynon
	Total Dietary Fiber	Enzymatic-Gravimetric (AOAC 985.29)
	Calories	By computation/ FNRI Phil Food Composition Tables
	Titrateable Acidity	Titrimetry (AOAC 965.33)
	Free Fatty acid	Titrimetry (AOAC 940.28)
	Sucrose, Glucose, Maltose, Lactose	HPLC – In-house validated method
	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)

	Cholestrol	GC (AOAC 994.10)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC 985.35/968.08) AAS (AOAC)
	Calcium, Iron	
	Magnesium, Manganese, Zinc	
	Heavy Metals (Pb, Cd, Hg, As, Cr)	AAS/ICP-AES (USEPA 6010)
	Selenium	AFS/AAS Hydride
07.0 Cereals and cereal products		
07.1 Breakfast cereals 07.4 Soya flours concentrates and isolates 07.5 Flour, corn meal, corn grits, semolina 07.6 Frozen entrees containing rice or corn flour 07.7 Soy protein 07.8 Tofu 07.9 Pasta products and noodles (e.g. rice paper, rice vermicelli, soybean pastas and noodles) 07.10 Starch 07.11 Cereal and starch based desserts (e.g., rice pudding, tapioca pudding) 07.12 Batters (e.g., for breading or batters for fish or poultry)	Protein	Kjeldahl AOAC 2001.11/984.13
	Fat	Ether Extraction (AOAC 920.39C) Acid Hydrolysis (AOAC 922.06/948.15)
	Moisture	Air Oven Method (AOAC952.08/950.46B/ 925.10/990.20)
	Ash	Direct Method-Furnace (AOAC923.03/938.08/900.02)
	Total Sugars	Luff-Schoorl Lane Eynon
	Total Dietary Fiber	Enzymatic-Gravimetric (AOAC 985.29)
	Calories	By computation/ FNRI Phil Food Composition Tables
	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)
	Cholestrol	GC (AOAC 994.10)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC 985.35/968.08)
	Iron	

	Calcium	
	Heavy Metals (Pb, Cd, Hg, As, Cr)	AAS/ICP-AES (USEPA 6010)
	Other Minerals: Mg, Mn, Zn	AAS (AOAC 985.35)
	Selenium	AFS/AAS Hydride
08.0 Bakery Products		
08.1 Frozen bakery products (ready to eat and to be cooked) 08.2 Frozen and refrigerated dough 08.3 Breads and rolls 08.4 Crackers, excluding sweet crackers 08.5 Cakes, cookies and pies, doughnuts 08.6 Other ordinary bakery products (e.g., bagels, pita, English muffins) 08.7 Steamed breads and buns	Protein	Kjeldahl AOAC 2001.11/984.13
	Fat	Ether Extraction (AOAC 920.39C) Acid Hydrolysis (AOAC 922.06/948.15)
	Moisture	Air Oven Method (AOAC952.08/950.46B/ 925.10/990.20)
	Ash	Direct Method-Furnace (AOAC923.03/938.08/900.02)
	Total Sugars	Luff-Schoorl Lane Eynon
	Total Dietary Fiber	Enzymatic-Gravimetric (AOAC 985.29)
	Calories	By computation/ FNRI Phil Food Composition Tables
	Titrateable Acidity	Titrimetry (AOAC 965.33)
	Free Fatty acid	Titrimetry (AOAC 940.28)
	Sucrose, Glucose, Maltose, Lactose	HPLC – In-house validated method
	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)
	Cholesterol	GC (AOAC 994.10)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC 985.35/968.08)
	Iron	
	Calcium	
	Heavy Metals (Pb, Cd, Hg, As, *Cr)	**AAS/ICP-AES (USEPA 6010)

	Other Minerals: Mg, Mn, Zn	AAS (AOAC 985.35)
	Se	AFS Hydride
09.0 Ready-to-eat savouries		
09.1 Snacks foods - potato, cereal, flour or starch based	Protein	Kjeldahl AOAC 2001.11/984.13
	Fat	Ether Extraction (AOAC 920.39C) Acid Hydrolysis (AOAC 922.06/948.15)
	Moisture	Air Oven Method (AOAC952.08/950.46B/ 925.10/990.20)
	Ash	Direct Method-Furnace (AOAC923.03/938.08/900.02)
	Total Sugars	Luff-Schoorl Lane Eynon
	Total Dietary Fiber	Enzymatic-Gravimetric (AOAC 985.29)
	Calories	By computation/ FNRI Phil Food Composition Tables
	Titrateable Acidity	Titrimetry (AOAC 965.33)
	Free Fatty acid	Titrimetry (AOAC 940.28)
	Sucrose, Glucose, Maltose, Lactose	HPLC – In-house validated method
	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)
	Cholestrol	GC (AOAC 994.10)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC 985.35/968.08)
	Iron	
	Calcium	
	Heavy Metals (Pb, Cd, Hg, As,Cr)	AAS/ICP-AES (USEPA 6010)
	Other Minerals: Mg, Mn, Zn	AAS (AOAC 985.35)
	Se	AFS Hydride
11.0 Fish and fish products, including mollusks, crustaceans, and		

Echinoderms		
11.1 Processed fish and fish products, including molluscs, crustaceans, and echinoderms 11.2 Semi-preserved fish and fish products, including molluscs, crustaceans, and echinoderms 11.3 Fully preserved, including canned or fermented fish and fish products, including molluscs, crustaceans, and echinoderms	Protein	Kjeldahl AOAC 2001.11/984.13
	Fat	Ether Extraction (AOAC 920.39C) Acid Hydrolysis (AOAC 922.06/948.15)
	Moisture	Air Oven Method (AOAC 952.08/950.46B/ 925.10/990.20)
	Ash	Direct Method-Furnace (AOAC 923.03/938.08/900.02)
	Calories	By computation/ FNRI Phil Food Composition Tables
	Caffeine	HPLC (AOAC 979.08)
	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)
	Cholesterol	GC (AOAC 994.10)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC 985.35/968.08)
	Calcium, Iron	
	Mn, Mg, Zn	
	Heavy Metals (Pb, Cd, Hg, As, Cr)	AAS/ICP-AES (USEPA 6010)
	Se	AFS Hydride
	Histamine	Fluorometry (AOAC)
12.0 Spices, herbs, soups, sauces, salads, vinegars, seasonings and condiments		
12.1 Salt and salt substitutes 12.2 Herbs, spices, seasonings, and condiments (e.g. seasoning for instant noodles) 12.3 Vinegars 12.4 Mustards 12.5 Soups and broths 12.6 Sauces and like products	Protein	Kjeldahl AOAC 2001.11/984.13
	Fat	Ether Extraction (AOAC 920.39C) Acid Hydrolysis (AOAC 922.06/948.15)
	Moisture	Air Oven Method (AOAC 952.08/950.46B/ 925.10/990.20)
	Ash	Direct Method-Furnace (AOAC 923.03/938.08/900.02)
	Total Sugars	Luff-Schoorl Lane Eynon

12.6.1 Emulsified sauces and dips (e.g. mayonnaise, salad dressing, onion dips) 12.6.2 Non-emulsified sauces (e.g. ketchup, cheese sauce, cream sauce, brown gravy) 12.6.3 Mixes for sauces and gravies 12.6.4 Clear sauces (e.g. fish sauce) 12.7 Salads (e.g. macaroni salad, potato salad) and sandwich spreads excluding cocoa-and nut-based preads of food categories 12.8 Yeast and like products 12.9 Soybean-based seasonings and condiments 12.9.1 Fermented soybean paste (e.g. miso) 12.9.2 Soybean sauce 12.10 Protein products other than from soybeans	Total Dietary Fiber	Enzymatic-Gravimetric (AOAC 985.29)
	Calories	By computation/ FNRI Phil Food Composition Tables
	Titratable Acidity	Titrimetry (AOAC 965.33)
	Free Fatty acid	Titrimetry (AOAC 940.28)
	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)
	Cholestrol	GC (AOAC 994.10)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC 985.35/968.08)
	Cciualm , Iron	
	Mn, Mg, Zn	
	Heavy Metals (Pb, Cd, Hg, As, *Cr)	AAS/ICP-AES (USEPA 6010)
	Se	AFS Hydride
13.0 Beverages		
13.1 Non-alcoholic 13.2 Frozen juice concentrate 13.3 Powdered beverages 13.4 Coffee, coffee substitutes, tea, herbal infusions, and other hot cereal and grain beverages 13.5 Alcoholic beverages	Protein	Kjeldahl AOAC 2001.11/984.13
	Fat	Ether Extraction (AOAC 920.39C) Acid Hydrolysis (AOAC 922.06/948.15)
	Moisture	Air Oven Method (AOAC952.08/950.46B/ 925.10/990.20)
	Ash	Direct Method-Furnace (AOAC923.03/938.08/900.02)
	Total Sugars	Luff-Schoorl Lane Eynon
	Total Dietary Fiber	Enzymatic-Gravimetric (AOAC 985.29)

	Calories	By computation/ FNRI Phil Food Composition Tables
	Titratable Acidity	Titrimetry (AOAC 965.33)
	Sucrose, Glucose, Maltose, Lactose	HPLC – In-house validated method
	Caffeine	HPLC (AOAC 979.08)
	Vitamins A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E	HPLC (In-House Validated Method)
	Sodium, Potassium	AAS (AOAC 985.35/968.08)
	Calcium, Iron	
	Heavy Metals (Pb, Cd, Hg, As, *Cr)	AAS/ICP-AES (USEPA 6010)
	Other Minerals: Mg, Mn, Zn	AAS (AOAC 985.35)
	Se	AFS/Hydride
14.0 Foodstuffs intended for particular nutritional uses		
14.1 Infant formulae, follow-on formulae, and formulae for special medical purposes for infants	Protein	Kjeldahl AOAC 2001.11/984.13
14.2 Complementary foods for infants and young children	Fat	Ether Extraction (AOAC 920.39C) Acid Hydrolysis (AOAC 922.06/948.15)
14.3 Dietetic foods intended for special medical purposes (excluding products of food category 14.1)	Moisture	Air Oven Method (AOAC952.08/950.46B/ 925.10/990.20)
14.4 Dietetic formulae for slimming purposes and weight reduction	Ash	Direct Method-Furnace (AOAC923.03/938.08/900.02)
14.5 Dietetic foods (e.g. supplementary foods for dietary use) excluding products of food categories 14.1- 14.4 and 14.6	Total Sugars	Luff-Schoorl Lane Eynon
	Total Dietary Fiber	Enzymatic-Gravimetric (AOAC 985.29)
	Calories	By computation/ FNRI Phil Food Composition Tables
	Titratable Acidity	Titrimetry (AOAC 965.33)
	Free Fatty acid	Titrimetry (AOAC 940.28)
14.6 Food supplements	Sucrose, Glucose, Maltose, Lactose	HPLC – In-house validated method
	Caffeine	HPLC (AOAC 979.08)

	Saturated Fat, Transfat, Fatty Acid Composition	GC (AOAC 963.33, AOCS Ce-1c-89)
	Cholesterol	GC (AOAC 994.10)
	Sodium, Potassium	AAS (AOAC 985.35/968.08)
	Iron	
	Calcium	
	Heavy Metals (Pb, Cd, Hg, As, Cr)	AAS/ICP-AES (USEPA 6010)
	Other Minerals: Mg, Mn, Zn	AAS (AOAC 985.35)
	Se	AFS Hydride
14.6 Food Supplements	Vits. A, B1, B2, B3, B6, Calpan, Folic Acid, C, D, E,	HPLC
15.0 Sweeteners, including honey		
15.1 Refined and raw sugars	Calories	By computation/ FNRI Phil Food Composition Tables
15.2 Brown sugar	Sucrose, Glucose, Maltose, Lactose	HPLC – In-house validated method
15.3 Honey		
15.4 Other sugars and syrups (e.g. xylose, maple syrup, sugar toppings)	Heavy Metals (Pb, Cd, Hg, As, *Cr)	AAS/ICP-AES (USEPA 6010)
15.5 Table-top sweeteners, including those containing high-intensity sweeteners	Other Minerals: Mg, Mn, Zn	AAS (AOAC 985.35)
II. Drugs and Pharmaceuticals		
1.0 Drugs 2.0 Herbal Products 3.0 Parenteral solutions and fluids 4.0 Vitamins 5.0 Antibiotics	Identification Tests	U.S.Pharmacopeia Philippine Pharmacopeia
	Assay of Active Ingredients	
	Limits Tests	
	Organic Volatile Impurities (OVI)	
	Dissolution Disintegration	

	Heavy Metals	
	Minerals Content	
III. Cosmetics, Perfumes and Essential Oils		
1.0 Cosmetics	Heavy Metals (Pb, Cd, Hg, As)	ASEAN Harmonized Method/ USP 33

Microbiological Testing

Products	Specific Tests	Method/ Reference
I. Foods		
01.0 Milk and milk products		
01.1 Milk powder and cream powder	Aerobic Plate Count	CMMEF 4 th edition
	<i>Enterobacteriaceae</i>	BAM 8 th edition
	<i>Salmonella</i>	Rapid test Kit AOAC 989.13 BAM 8 th edition
01.2 Sweetened condensed milk	Aerobic Plate Count	CMMEF 4 th edition
	Yeast and Mold Count	BAM 8 th edition
	Coliform count	
01.3 Pasteurized milk	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform count	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 BAM 8 th edition
	<i>Listeria monocytogenes</i>	BAM 8 th edition

		Oxoid Manual 1998, 8 th edition
01.5 Pasteurized cream	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform count	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 BAM 8 th edition
	<i>Listeria monocytogenes</i>	BAM 8 th edition Oxoid Manual 1998, 8 th edition
01.6 Yogurt and other fermented milk	Coliform count	CMMEF, 4 th edition
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 Convention Method- BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	BAM 8 th edition
01.7 Cheese and cheese products; e.g. Cottage Cheese, soft and semi-soft cheese (moisture \geq 39%, pH > 5)	Coliform Count	BAM 8 th edition
	<i>E. coli</i>	BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 BAM 8 th edition
	<i>Listeria monocytogenes</i>	BAM 8 th edition Oxoid Manual 1998, 8 th edition
01.8 Processed cheese spread	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform count	BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	
01.8 Processed cheese spread		

01.9 All raw milk cheese; raw milk unripened cheese with moisture > 50%, pH > 5.0	<i>S. aureus</i> (coagulase +)	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 BAM 8 th edition
	<i>Listeria monocytogenes</i>	BAM 8 th edition Oxoid Manual 1998, 8 th edition
02.0 Fats and oils, and fat emulsion		
02.1 Butter (whipped, pasteurized)	Aerobic Plate Count Coliform Count	CMMEF, 4 th edition
	Yeast and Mold Count	BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	BAM 8 th edition
02.2 Butter made from unpasteurized milk or milk products	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform count <i>E. coli</i> <i>S. aureus</i> (coagulase +)	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 BAM 8 th edition
	<i>Listeria monocytogenes</i>	BAM 8 th edition Oxoid Manual 1998, 8 th edition
02.3 Margarine	Aerobic Plate Count	CMMEF, 4 th edition
	Yeast and Mold Count	BAM 8 th edition
	Fecal coliform count	BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	

02.3 Margarine	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 Convention Method- BAM 8 th edition
	<i>Listeria monocytogenes</i>	BAM 8 th edition Oxoid Manual 1998, 8 th edition
03.0 Edible ices, including sherbet and sorbet		
03.1 Ice cream and sherbet (plain and flavoured)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform count	BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 BAM 8 th edition
	<i>Listeria monocytogenes</i>	BAM 8 th edition Oxoid Manual 1998, 8 th edition
03.2 Ice cream with added ingredient (nuts, fruits, cocoa etc.)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform count	BAM 8 th edition Rapid Test Kit AOAC 989.13 BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	
	<i>Salmonella</i>	
	<i>Listeria monocytogenes</i>	BAM 8 th edition Oxoid Manual 1998, 8 th edition
03.3 Flavored ice (e.g. Ice candy) 03.3 Flavored ice (e.g. Ice candy)	Aerobic Plate Count	CMMEF, 4 th edition
	Yeast and Mold Count	BAM 8 th edition
	Coliform Count	
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 BAM 8 th edition
04.0 Confectioneries		

04.1 Cocoa powder	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Mold Count	
	<i>Salmonella</i>	Rapid Test Kit AOAC BAM 8 th edition
04.2 Chocolate products	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Mold Count	
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 BAM 8 th edition
04.3 Chocolate confectioneries (chocolate bars, blocks and bonbon)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Mold Count	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 BAM 8 th edition
04.4 Sugar confectioneries (hard and soft candies, toffees, caramel, fondants, creams, nougats and pastes)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Mold Count	
	<i>Salmonella</i>	Rapid Test Kit AOAC 989.13 BAM 8 th edition
05.0 Fruits and vegetables, nuts and seeds		
	<i>E. coli</i>	BAM 8 th edition

05.1 Frozen vegetables and fruits (pH > 4.5)		
05.4 Dried vegetables	<i>E. coli</i>	BAM 8 th edition
05.5 Coconut (desiccated)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count <i>E. coli</i>	BAM 8 th edition
	Yeast and Mold Count	
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
05.6 Peanut Butter & other Nut Butters	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
05.7 Sun dried fruit	<i>E. coli</i>	BAM 8 th edition
	<i>Mold Count</i>	
07.0 Cereals and cereal products		
07.1 Breakfast cereals	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Mold Count Yeast and Yeast-like fungi Count	
07.2 Cereal/cereal grains	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	

	Yeast and Mold Count	BAM 8 th edition
	<i>E. coli</i>	
07.3 Cultured seeds and grains	Coliform Count <i>E. coli</i>	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
07.4 Soya flours concentrates and isolates	Mold Count	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
07.5 Flour, corn meal, corn grits, semolina	Coliform Count	BAM 8 th edition
	Mold Count	
	Yeast and Yeast-like fungi Count	
07.6 Frozen entrees containing rice or corn flour	<i>Bacillus cereus</i>	Oxoid Manual 1998, 8 th edition
07.7 Soy protei	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count <i>E. coli</i>	BAM 8 th edition
	Yeast and Mold Count	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
07.8 Tofu	<i>E. coli</i> <i>S. aureus</i> (coagulase +) <i>Bacillus cereus</i>	BAM 8 th edition Oxoid Manual 1998, 8 th edition

	Aerobic Plate Count	CMMEF, 4 th edition
	<i>E. coli</i>	BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	
07.9 Pasta products and noodles Uncooked (wet and dry)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Yeast and Mold Count	
	<i>S. aureus</i> (coagulase +)	
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
07.10 Starch	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Yeast and Mold Count	
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
08.0 Bakery Products		
08.1 Frozen bakery products (ready to eat) with low acid or high a _w fillings or toppings	<i>S. aureus</i> (coagulase +)	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	BAM 8 th edition

08.2 Frozen bakery products (to be cooked) with low acid or high a_w fillings or toppings (e.g. meat pies and pizzas)	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
08.3 Frozen and refrigerated dough (Chemically leavened)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count <i>E. coli</i>	BAM 8 th edition
	Mold Count Yeast and Yeast-like fungi Count	
	<i>S. aureus</i> (coagulase +)	
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
08.4 Frozen and refrigerated dough	Coliform Count	BAM 8 th edition
	Mold Count Yeast and Yeast-like fungi Count	
08.5 Baked Goods (microbiologically sensitive types e.g. containing eggs and dairy products)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Yeast and Mold Count	BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	

08.6 Coated or Filled, Dried Shelf-Stable Biscuits	Coliform Count	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
09.0 Ready-to-eat savories		
09.1 Snack foods	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Mold Count Yeast and Yeast-like fungi	
11.0 Fish and fish products		
11.1 Fresh Frozen Fish and Cold-Smoked	Aerobic Plate Count	CMMEF, 4 th edition
	<i>E. coli</i>	BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	
	<i>Vibrio parahaemolyticus</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
11.2 Pre-cooked Breaded and Fish	Aerobic Plate Count <i>E. coli</i>	CMMEF, 4 th edition BAM 8 th edition
	Aerobic Plate Count	CMMEF, 4 th edition
	<i>E. coli</i>	

11.3 Frozen raw crustaceans	<i>S. aureus</i> (coagulase +)	BAM 8 th edition
	<i>Vibrio parahaemolyticus</i>	
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
11.4 Frozen cooked crustaceans	Aerobic Plate Count	CMMEF, 4 th edition
	<i>E. coli</i>	BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	
	<i>Vibrio parahaemolyticus</i>	
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
11.5 Cooked, chilled and frozen crabmeat	Aerobic Plate Count	CMMEF, 4 th edition
	<i>E. coli</i>	BAM 8 th edition
	<i>S. aureus</i> (coagulase +)	
	<i>Vibrio parahaemolyticus</i>	
11.6 Fresh and frozen bivalve molluscs	Aerobic Plate Count	CMMEF, 4 th edition
	<i>E. coli</i> count	BAM 8 th edition
	<i>Vibrio parahaemolyticus</i>	
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition

12.0 Spices, soups, sauces, salads and protein products		
12.1 Dry mixes for soup and sauces	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Yeast and Mold Count	
	<i>Salmonella</i>	
12.2 Yeast	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13
		BAM 8 th edition
12.3 Spices	Aerobic Plate Count	CMMEF, 4 th edition
	Mold Count	BAM 8 th edition
12.4 Spices (ready to eat)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Mold Count	
	<i>S. aureus</i> (coagulase +	
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
12.5 Salad dressing pH ≤ 4.6 (Mayonnaise, Thousand Island, Ranch, French etc.)	Aerobic Plate Count	CMMEF, 4 th edition
	Yeast and Mold Count	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition

	<i>Listeria monocytogenes</i>	BAM 8 th edition Oxoid Manual 1998, 8 th edition
13.0 Beverages		
13.1 Non-alcoholic (e.g. Ready to drink soft drinks, iced tea, energy drinks)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	Yeast and Mold Count	
13.2 Frozen juice concentrate	Aerobic Plate Count	CMMEF, 4 th edition
	Yeast and Mold Count	BAM 8 th edition
13.3 Powdered beverages (Juices)	Aerobic Plate Count	CMMEF, 4 th edition
	Yeast and Mold Count	BAM 8 th edition
14.0 Food for infants and young children		
14.1 Powdered infant formula with or without added lactic acid producing cultures (intended for 0 to 6 months old)	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count <i>E. coli</i>	BAM 8 th edition
	Enterobacteriaceae	
14.1 Powdered infant formula with or without added lactic acid producing cultures (intended for 0 to 6 months old)	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
	Aerobic Plate Count	CMMEF, 4 th edition

14.2 Follow up formula /milk supplement (intended for infants 6 months on and for young children 12-36 months of age)	Coliform Count <i>E. coli</i> Enterobacteriaceae	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
14.5 Dried and instant products requiring reconstitution	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count Enterobacteriaceae	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
	<i>Listeria monocytogenes</i>	BAM 8 th edition Oxoid Manual 1998, 8 th edition
14.6 Dried products requiring reconstitution and boiling before consumption	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
14.7 Cereal based foods for infants	Aerobic Plate Count	CMMEF, 4 th edition
	Coliform Count	BAM 8 th edition
	<i>Salmonella</i>	Rapid Test Kit-AOAC 989.13 BAM 8 th edition
	<i>Bacillus cereus</i>	Oxoid Manual 1998, 8 th edition
II. Drugs and Pharmaceuticals		
1.0 Drugs	Aerobic Plate Count	USP 36
	Coliform Count <i>E. coli</i>	
	Yeast and Mold Count	

	<i>Pseudomonas aeruginosa</i>	
	<i>S. aureus</i>	
	<i>Salmonella</i>	
III. Cosmetics		
1.0 Cosmetics	Aerobic Plate Count	ASEAN Harmonized Methods for Cosmetics
	Yeast and Mold Count	
	<i>Pseudomonas aeruginosa</i>	USP 36/Asean Harmonized Methods for Cosmetics
	<i>S.aureus</i>	
IV. Water		
1.0 Bottled Water	Heterotrophic Plate count	Pour Plate Method, SMEWW
	Coliform Count	Multiple Tube Fermentation Technique,/ SMEWW

Legend to Reference Methods

AOAC – Association of Official Analytical Chemists

BAM - Bacteriological Analytical Manual

SMEWW - Standard Methods for Examination of Water and Wastewater

***** Nothing Follows *****