

**DOD Food Analysis and Diagnostic Laboratory
Routine Food Testing Panel**

DD JUN 2014

This document lists the tests routinely performed by the FADL on various food commodities. Unless a submitter requests specific tests on the sample submission form (DA 7539), the FADL will conduct the tests listed below for that particular commodity. The FADL will test all destination monitoring samples in accordance with this document.

Refer to the current version of USAPHC Circular 40-1, Appendix O, for a list of critical limits for each test. Samples exceeding these limits will be flagged in the final laboratory report. Any pathogen or other adulterant detected follows established notification and response procedures directed in AR 40-657. These include contacting the appropriate public health authority and purchasing agency, medical hold actions and possible product suspension and recall (ALFOODACT) actions.

Refer to the FADL website (<http://phc.amedd.army.mil/topics/labsciences/fad/Pages/default.aspx>); the FADL Sample Submission Guide; or contact the FADL at 210-295-4604 (DSN 421) for questions or additional guidance.

Federal Supply Class	Food Category	Microbe or toxin ^N	Notes
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ALL FOOD PRODUCTS^P

	Pesticides
	All food products ^P must meet EPA and/or FDA tolerances for pesticide residues.

8905: MEAT, POULTRY, FISH, SHELLFISH

Raw meats (excluding poultry) ^B	E. coli O157:H7/STEC ^R	performed in beef only
	percent fat	
	Psychrotrophic Plate Count	
Ready-to-eat meats and poultry ^A	Bacillus cereus	
	Campylobacter jejuni	
	Clostridium perfringens (vegetative cells)	performed in anaerobic products
	E. coli O157:H7/STEC ^R	performed in beef only
	Listeria monocytogenes	
	Salmonella spp.	
All fish (these tests apply to all following categories of fish in addition to what is listed individually)	Staphylococcus aureus	
	Salmonella spp.	
	Staphylococcus aureus	
Cured, salted, smoked fish	Clostridium perfringens	performed in anaerobic products
	Water phase salt (WPS)	
Raw fish	Chloramphenicol	
	Methylmercury	

Federal Supply Class	Food Category	Microbe or toxin ^N	Notes
	Ready-to-eat fish ^C	Listeria monocytogenes	
		Vibrio vulnificus	
	Tuna, Mahi-Mahi, and related fish	Histamine	
	Clams, oysters, mussels, and whole and roe-on scallops, fresh or frozen	APC	sample size must be 5
		E. coli	sample size must be 5
		Salmonella spp.	
		Vibrio cholerae	
		Vibrio parahaemolyticus	
		Vibrio vulnificus	

8910: ALL DAIRY FOOD & EGGS

Grade A pasteurized milk and/or milk products ^D	Acidity	performed on whole milk only
	Coliforms	
	Phosphatase	Does not apply to acidified or cultured milk and/or milk products, eggnog, cottage cheese.
	Standard Plate Count (SPC)	Does not apply to acidified or cultured milk and/or milk products, eggnog, cottage cheese.
	Drug Residues ^U	Does not apply to acidified or cultured milk and/or milk products; eggnog; cottage cheese; pasteurized and ultra-pasteurized flavored (non-chocolate) milk and/or milk products; and other milk and/or milk products as identified in the latest revision of M-a-98.
	Acidity	performed on whole milk only

Federal Supply Class	Food Category	Microbe or toxin ^N	Notes
	Grade A ultrapasteurized ^T milk and/or milk products	Coliforms	Does not apply to acidified or cultured milk and/or milk products, eggnog, cottage cheese.
		Standard Plate Count (SPC)	
		Drug Residues ^U	Does not apply to acidified or cultured milk and/or milk products; eggnog; cottage cheese; pasteurized and ultra-pasteurized flavored (non-chocolate) milk and/or milk products; and other milk and/or milk products as identified in the latest revision of M-a-98.
	Grade A pasteurized concentrated (condensed) milk and/or milk products	Coliforms	
	Sour Cream	Coliforms	
		yeasts and molds	
	Cottage Cheese	Coliforms	
		yeasts and molds	
	Ice Cream Products	Coliforms	
		Salmonella spp.	
		Standard Plate Count (SPC)	
	Fresh eggs and egg products ^Q	Salmonella spp.	
	Cheeses ^G	Bacillus cereus	
		E. coli	
		E. coli O157:H7/STEC ^R	
		Listeria monocytogenes	
		Salmonella spp.	
		Staphylococcus aureus	

Federal Supply Class	Food Category	Microbe or toxin ^N	Notes
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8915: FRUITS & VEGETABLES

Fresh fruits and vegetables ^H	E. coli O157:H7/STEC ^R
	E. coli
	Listeria monocytogenes
	Salmonella spp.
	Staphylococcus aureus
Kimchee	Bacillus cereus
	E. coli
	Total coliforms
	Listeria monocytogenes
	Salmonella spp.
	Staphylococcus aureus
	Acidity (total, as lactic acid)
	salt content
Juices and Nectars	E. coli
	E. coli O157:H7/STEC ^R
	Salmonella

8940: DIETARY FOODS & SPECIALTY PREPARATIONS

Infant Formula	Aerobic Plate Count
	Bacillus cereus
	Cronobacter sakazakii
	E. coli O157:H7
	Listeria monocytogenes
	Salmonella spp.
	Staphylococcus spp.
	Staphylococcal enterotoxin
	Total coliforms

Federal Supply Class	Food Category	Microbe or toxin ^N	Notes
Ready-to-Eat Products ¹ and Ready-to-Cook Products ^o		Bacillus cereus	
		Campylobacter jejuni	performed in RTE products
		Clostridium perfringens (vegetative cells)	performed in anaerobic products
		E. coli O157:H7/STEC ^R	performed in beef products only
		Listeria monocytogenes	
		Salmonella spp.	
		Staphylococcus aureus	

8960: BEVERAGES, NON-ALCOHOLIC

	Microbiological	
	E. coli	
	Total coliforms	
	Heterotrophic Plate Count	
	P. aeruginosa	
	Physical	
	Turbidity	
	Color	
	Odor	mineral water exempt
	pH	mineral water exempt
	Chemical	
	Chloride	
	Manganese	
	Sulfate	
	Zinc	
	Inorganic	
	Aluminum	
	Antimony	
	Arsenic	
	Barium	

Federal Supply Class	Food Category	Microbe or toxin ^N	Notes		
	Bottled Water, non-carbonated	Beryllium			
		Cadmium			
		Chromium			
		Copper			
		Cyanide			
		Fluoride			
		Lead			
		Mercury			
		Nickel			
		Nitrate			
		Selenium			
		Silver			
		Thallium			
		Pesticides			
		Aalachlor			
		Atrazine			
		Chlordane			
		Endrin			
		Heptachlor			
		Heptachlor Epoxide			
		Hexachlorobenzene			
		Hexachlorocyclopentadiene			
		Lindane			
		Methoxychlor			
		Simazine			
		Toxaphene			
		Radiological			
		Gross Alpha Activity			
		Gross Beta Activity			
		E. coli			
		Total coliforms			

Federal Supply Class	Food Category	Microbe or toxin ^N	Notes
	Ice	Heterotrophic Plate Count	
		P. aeruginosa	
		Turbidity	
		Antimony	
		Arsenic	
		Barium	
		Beryllium	
		Cadmium	
		Chloride	
		Chromium	
		Copper	
		Cyanide	
		Fluoride	
		Lead	
		Manganese	
		Mercury	
		Phosphate	
		Nickel	
		Total Nitrate and Nitrite	
		Selenium	
	Sulfate		
	Thallium		
	Uranium		
	Zinc		

MISCELLANEOUS

Surface swab of food service equipment- military establishments only	Aerobic Plate Count
	E. coli
	Total coliform

Federal Supply Class	Food Category	Microbe or toxin ^N	Notes
		Listeria spp.	

DEFINITIONS

A	Processed meats including beef, pork, lamb/mutton, goat and poultry: 1) thermally processed, commercially sterile; 2) not-heat treated shelf-stable; 3) Perishable, cured, canned; 4) cooked, uncooked fermented, dried or semi-dried sausages; 5) fully cooked and partially cooked, fresh or frozen; 6) sliced, cured packed under vacuum; 7) dried, including gelatin.
B	Ground, unground, comminuted meat, edible organs, boneless meat (beef, pork, lamb/mutton, goat), carcass meat (frozen and refrigerated)
C	The term "fish" refers to fresh or saltwater finfish, crustaceans, mollusks, and other forms of aquatic life other than birds or mammals, where such animal life is intended for human consumption. Ready-to-Eat fish include smoked, fresh or frozen seafood salad and cocktails; cooked fresh or cooked frozen; thermally processed, commercially sterile; not-heat treated shelf stable; perishable, cured, canned; cooked or uncooked fermented, fully or partially cooked, fresh or frozen; cured packed under vacuum.
D	Cream, sour cream, half & half, acidophilus, buttermilk and other fermented milks, flavoured milk or skim milk drinks, egg nog, and fresh cheese (cottage, ricotta), yogurt, including soft serve mix
E	Powdered or canned milk, ripened cheese, butter, powdered whey, lactose, and sterilized or UHT milk and simple ice cream (milk, cream, sugar, stabilizers, gelatin, flavouring), sherbets
F	Complex ice cream (simple ice cream plus any of the following: fruits, nuts, chocolate, meringue, biscuit, vegetable fat, synthetic sweeteners), novelties, ice milk mixes.
G	Cheese: includes raw and pasteurized, ripened or unripened soft cheese made from milk or whey
H	Including unprocessed, pre-cut, prepackaged, fresh and frozen, and hermetically sealed, including bagged salads. Includes sprouts, sprout seeds, mushrooms, juices and nectars
I	Including prepared salads with a primary ingredient other than meat or vegetables such as egg salad, macaroni salad, tunafish salad, sandwiches. Includes sunflower seeds which are considered snacks in the federal supply system.
J	Minced meat: means boned meat that has been minced into fragments and contains less than 1% salt

K	Mechanically separated meat (MSM): means the product obtained by removing meat from flesh-bearing bones after boning or from poultry carcasses, using mechanical means resulting in the loss or modification of the muscle fiber structure
L	Meat preparations: means fresh meat ^M , including meat that has been reduced to fragments, which has had foodstuffs, seasonings or additives added to it or which has undergone processes insufficient to modify the internal muscle fiber structure of the meat and thus eliminate the characteristics of the fresh meat
M	Fresh meat: means meat that has not undergone any preserving process other than chilling, freezing or quick-freezing, including meat that is vacuum-wrapped or wrapped in a controlled atmosphere
N	The pesticides, herbicides and other hazardous chemicals listed in Appendix O represent those which have FDA- or USDA-approved tolerances. Many more chemicals are considered adulterants at any level, and will be identified and reported as such.
O	Includes ready to cook items such as pot pies, soups, stews, ravioli, pizza and vegetarian burgers.
P	Food products other than bottled water.
Q	Including fresh, shell-on and shell-off liquid, frozen, and dried egg products
R	Includes E. coli O157:H7 testing as well as 6 additional serotypes of Shiga Toxin-producing E. coli (STEC): O26, O45, O103, O111, O121, and O145
S	Unless otherwise specified, "not detected" refers to a 25g sample size.
T	Products that have been thermally processed at or above 138°C (280°F) for at least two (2) seconds, either before or after packaging, to produce a product which has an extended shelf life (ESL) under refrigerated conditions
U	Beta lactam testing is required. Sulfonamide, chloramphenicol and tetracycline testing may be performed to validate the raw milk testing for these drugs by the dairy.