REQUIRED CONTAINERS, PRESERVATION TECHNIQUES AND HOLDING TIMES

Soil Fertility Analyses - New Ulm, Minnesota and Nevada, Iowa (Sample Receipt only)

All analyses are conducted in New Ulm, Minnesota

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
All Soil Parameters	Soil	500 g	Poly Lined Bag	Dried at or below 36ºC	9 months
All Plant Parameters	Plant	20-40 plants	Poly Lined Bag	Dried at 80ºC	9 months

Organic Analyses - New Ulm Laboratory Only

By submitting samples to our laboratory facility in Bismarck for these analyses, you are agreeing to have these analyses subcontracted to our New Ulm Laboratory for analysis.

(LS = Light Sensitive)

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Aflatoxin	Food	100 g (LS)	Glass	None	Product Specific
Aflatoxin	Feed	100 g (LS)	Glass or Plastic	None	Product Specific
Allergen, Egg	Food	100 g	Glass or Plastic	None	Product Specific
Allergen, Gluten (Gliadin)	Food	100 g	Glass or Plastic	None	Product Specific
Allergen, Milk	Food	100 g	Glass or Plastic	None	Product Specific
Allergen, Soy	Food	100 g	Glass or Plastic	None	Product Specific
Amino Acids	Feed	100 g	Glass or Plastic	None	Product Specific
Biotin	Feed/Foods	100 g	Glass or Plastic	None	Product Specific
Caffeine	Water	1 L	Glass	Cool ≤6°C	14 days
Cannabinoids (THC, CBD)	Plant/Oil	100 g	Glass or Plastic (LS)	None	Product Specific
Cholesterol	Food	100 g	Glass or Plastic	None	Product Specific
Choline	Food	100 g	Glass or Plastic	None	Product Specific
Cysteine HCl	Food	100 g	Glass or Plastic	None	Product Specific
Isopropanol/Ethanol/Methanol	Water	100 mL	Glass	Cool 6°C	7 days
Fatty Acid Profile	Food	100 g	Glass or Plastic	None	Product Specific
Folic Acid	Feed	100 g	Glass or Plastic	Cool ≤6°C	Product Specific
Fumonisin	Feed	100 g	Glass or Plastic	None	Product Specific
Glycols - Propylene and Ethylene	Soil	150 g	Glass or Plastic	Cool ≤6°C	14 days
Glycols - Propylene and Ethylene	Water	100 mL	Glass or Plastic	Cool ≤6°C	14 days
Gluten (Gliadin) Allergen	Food	100 g	Glass or Plastic	None	Product Specific

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Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Lactic Acid	Feed	100 g	Glass or Plastic	None	Product Specific
Lactose Purity %	Food	100 g	Glass or Plastic	None	Product Specific
Niacin	Food	100 g	Glass or Plastic	None	Product Specific
Niacinamide	Food	100 g	Glass or Plastic	None	Product Specific
Ochratoxin	Feed	100 g	Glass or Plastic	None	Product Specific
Pantothenic Acid	Feed	100 g	Glass or Plastic	None	Product Specific
Pyridoxine	Feed	100 g	Glass or Plastic	None	Product Specific
Riboflavin	Feed	100 g	Glass or Plastic	None	Product Specific
Sorbic Acid	Feed	100 g	Glass or Plastic	None	Product Specific
Sugars	Food	100 g	Glass or Plastic	None	Product Specific
Sugars/Lactose/Carb	Food	100 g	Glass or Plastic	None	Product Specific
TBHQ	Food	100 g	Glass or Plastic	None	Product Specific
Thiamine	Food	100 g	Glass or Plastic	None	Product Specific
Vitamin A	Food	100 g	Glass or Plastic (LS)	None	Product Specific
Vitamin A	Feed	100 g	Glass or Plastic (LS)	None	Product Specific
Vitamin B_{12}	Feed	100 g	Glass or Plastic	None	Product Specific
Vitamin C	Food and Feed	100 g	Glass or Plastic (LS)	None	Product Specific
Vitamin D_3	Feed	100 g	Glass or Plastic	None	Product Specific
Vitamin E	Food and Feed	100 g	Glass or Plastic	None	Product Specific
Vitamin K_3 (Menadione)	Feed	100 g	Glass or Plastic	None	Product Specific
Vomitoxin (DON)	Feed	100 g	Glass or Plastic	None	Product Specific
Zearalenone	Feed	100 g	Glass or Plastic	None	Product Specific
Volatile Fatty Acids by Gas Chromatography	Wastewater	3 X 40 mL	3 - 40 mL VOC vials	Cool $\leq$6°C	14 Days

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Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
PCB and Pesticides Screens, including:	---	---	---	---	---
PCBs	Food and Feed	100 g	Glass or Plastic	None	Product Specific
Aldrin					
Alpha-BHC					
Alpha -Chlordane					
Beta-BHC					
Delta-BHC					
Dieldrin					
Endosulfan I (Alpha)					
Endrin					
Gamma-BHC					
Gamma-Chlordane					
Heptachlor					
Heptachlor Epoxide					
Hexachlorobenzene					
Methoxychlor					
Mirex					
2,4'-DDD					
2,4'-DDE					
2,4'-DDT					
4,4'-DDD					
4,4'-DDE					
4,4'-DDT					
Carbophenothion					
Diazinon					
Disulfoton					
Ethion					
Malathion					
Methyl Parathion					
Parathion					
Phorate					
Ronnel					

REQUIRED CONTAINERS, PRESERVATION TECHNIQUES AND HOLDING TIMES

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
MDA List I: Base Neutral Pesticides, including	---	---	---	---	---
Acetochlor	Soil or Water	150 grams soil 1 Liter Water (one sample per set should be collected in Triplicate for QC)	4 oz Amber Glass Jar for Soil (LS) Amber Glass 1 L jar for Water (LS)	Cool ≤6°C for both Soil and Water	14 days for both Soil and Water
Alachlor					
Atrazine					
Chlorpyrifos					
Cyanazine					
Decthylatrazine					
Deisopropylatrazine					
Dimethenamid (Frontier)					
Ethalfluralin					
EPTC					
Fonofos					
Metolachlor					
Metribuzin					
Pendimethalin					
Phorate					
Pramitol					
Propachlor					
Propazine					
Simazine					
Terbufos					
Triallate					
Trifluralin					
lambda Cyhalothrin					
Bifenthrin					
Base Neutral Acid (BNA) Priority Pollutants (EPA 625.1 and 8270E)	Water Wastewater Liquid Waste	1 L Water (one sample per set should be collected in triplicate for QC)	Amber Glass with Teflon-coated Cap	Cool ≤6°C	7 days
1,4-Dioxane (EPA 8270E)	Waters	500 mL (one sample per set should be collected in triplicate for QC)	Amber Glass with Teflon-coated Cap	Cool ≤6°C; 0.5 g sodium bisulfate to pH<4	28 days

REQUIRED CONTAINERS, PRESERVATION TECHNIQUES AND HOLDING TIMES

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Base Neutral Acid (BNA) Priority Pollutants (EPA 8270E)	Solid Waste Soil	150 grams	4 oz jar with a Teflon-coated cap	Cool ≤6°C	14 days
Volatile Organic Compounds Priority Pollutants (EPA 624.1 and 8260D)	Water Wastewater Liquid Waste	3 X 40 mL	3 - 40 mL glass vial with septum cap, zero headspace	0.5 mL 50% HCl, Cool ≤6°C	14 days
Ethanol (EPA 624.1, 8260D)	Waters	3 X 40 mL	3 - 40 mL glass vial with septum cap, zero headspace	0.5 mL 50% HCl, Cool <6°C	14 days
Volatile Organic Compounds Priority Pollutants (EPA 8260D) – MINNESOTA	Solid Waste Soil	25-35 grams, include a separate, small sample for moisture determination	60 mL pre-weighed Glass Wide Mouth Jar	Methanol, Cool ≤6°C	21 days
Volatile Organic Compounds Priority Pollutants (EPA 8260D) - NORTH DAKOTA	Solid Waste Soil	Jar Pack, no headspace	60 mL Glass Wide Mouth Jar	Cool ≤6°C	14 days
Organochlorine Pesticides (EPA 608.3 and 8081B)	Water Wastewater Liquid Waste	1 Liter Water (one sample per set should be collected in Triplicate for QC)	Amber Glass with Teflon-coated Cap	Cool ≤6°C	7 days
Organochlorine Pesticides (EPA 8081B)	Solid Waste Soil	150 grams	4 oz jar with a Teflon-coated cap	Cool ≤6°C	14 days
Polychlorinated Biphenyls (PCBs) (EPA 608.3 and 8082A)	Wastewater Liquid Waste	1 Liter Water (one sample per set should be collected in Triplicate for QC)	Amber Glass with Teflon-coated Cap	Cool ≤6°C	7 days
Polychlorinated Biphenyls (PCBs) (EPA 8082A)	Solid Waste Soil	150 grams	4 oz jar with a Teflon-coated cap	Cool ≤6°C	14 days
Volatile Organic Compounds TCLP	Liquid	500 mL	Amber Glass with Teflon-coated Cap - full	Cool ≤6°C	14 days
Volatile Organic Compounds TCLP	Solid	4 oz jar, packed 500 ml jar, packed (low density materials)	4 oz jar with a Teflon-coated cap OR 500 mL jar with a Teflon-coated cap if low density	Cool ≤6°C	14 days
Semi-volatile Compounds TCLP	Liquid	1 liter	Amber Glass with Teflon-coated cap	Cool ≤6°C	14 days
Semi-volatile Compounds TCLP	Solid	500 mL jar	Amber Glass with Teflon-coated cap	Cool ≤6°C	14 days

REQUIRED CONTAINERS, PRESERVATION TECHNIQUES AND HOLDING TIMES

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Pesticides TCLP	Liquid	1 Liter	Amber Glass with Teflon-coated Cap	Cool ≤6°C	14 days
Pesticides TCLP	Solid	200 grams	4 oz jar with a Teflon-coated cap	Cool ≤6°C	14 days
Underground Storage Tank Analytes	---	---	---	---	---
WI GRO, PVOC (WI 95)	Water	3 X 40 mL	3 - 40 mL glass vial with septum cap, zero headspace	0.5 mL 50% HCl, Cool <6°C	14 days
WI GRO, PVOC (WI 95)	Soil	≤ 35 g	60 mL(2 oz) pre-weighed Wide Mouth Glass Jar	Methanol, Cool ≤6°C	21 days
WI DRO (WI 95)	Water	1 L	Amber Glass with Teflon-coated Cap	Cool ≤6°C; 5 mL 50% HCl	7 days
WI DRO (WI 95)	Soil	≤ 35 g	60 mL (2 oz) pre-weighed Wide Mouth Glass Jar	Cool ≤6°C	7 days (solvent must be added in the laboratory within this time)
EPA GRO, BTEX (EPA 602, EPA 8015D, EPA 8021B)	Water	3 X 40 mL	3 - 40 mL glass vial with septum cap, zero headspace	0.5 mL 50% HCl, Cool <6°C	14 days
EPA GRO, BTEX (EPA 8015D, EPA 8021B)	Soil	2 oz jar, packed	2 oz jar with a Teflon-coated cap	Cool ≤6°C	14 days
EPA DRO (EPA 8015D)	Water	1 Liter	Amber Glass with Teflon-coated Cap	Cool <6°C	7 days
EPA DRO (EPA 8015D)	Soil	4 oz jar, packed	Amber Glass with Teflon-coated Cap	Cool ≤6°C	14 days
PFAS	---	---	---	---	---
PFAS (EPA 8327)	Water	5-6 mL (one sample per set should be collected in Triplicate for QC)	15 mL polypropylene tubes, pre-weighed at lab	Cool ≤6°C	14 days
PFAS (EPA 1633A)	Water	250 mL	PFAS-free 250 mL HDPE	Cool ≤6°C	28 days
PFAS (EPA 1633A)	Leachate	100 mL	PFAS-free 125 mL HDPE	Cool ≤6°C	28 days
PFAS (EPA 1633A)	Soil/Biosolid/ Sludge	¾ full	PFAS-free 125 mL HDPE	Cool ≤6°C	28 days

Inorganic Chemistry Environmental Water Analyses - New Ulm, Minnesota and Bismarck, North Dakota

Not all analyses are performed in both New Ulm and Bismarck laboratories. Please note if you submit samples to a laboratory that does not perform the analysis, you are agreeing to allow MVTL to subcontract the analysis to the other MVTL laboratory.

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Alkalinity, Total	Water/ Wastewater	300 mL	Glass or Plastic	Cool ≤6°C	14 days
Biochemical Oxygen Demand (BOD)	Water/ Wastewater	1000 mL	Glass or Plastic	Cool ≤6°C	48 hours
Biochemical Oxygen Demand (BOD), Carbonaceous	Water/ Wastewater	1000 mL	Glass or Plastic	Cool ≤6°C	48 hours
Bromide	Water/ Wastewater	200 mL	Glass or Plastic	None	28 days
Chloride	Water/ Wastewater	100 mL	Glass or Plastic	None	28 days
Chlorine, Total Residual	Water/ Wastewater	200 mL	Glass or Plastic	None	15 minutes
Chlorophyll-a	Water/ Wastewater	1000 mL	Amber	Cool ≤6°C	30 days
Chromium, Hexavalent	Water/ Wastewater	500 mL	Glass or Plastic	Cool ≤6°C	24 hours
Chemical Oxygen Demand (COD)	Water/ Wastewater	500 mL	Glass or Plastic	H_2SO_4 to pH <2, Cool ≤6°C	28 days
Conductance, Specific	Water/ Wastewater	1000 mL	Glass or Plastic	Cool ≤6°C	28 days
Cyanide	Water/ Wastewater	500 mL	Glass or Plastic	NaOH to pH>10, Cool ≤6°C	14 days
Fluoride	Water/ Wastewater	300 mL	Plastic	None	28 days
Hardness, Total	Water/ Wastewater	100 mL	Glass or Plastic	HNO_3 to pH <2	6 months
Metals	Water/ Wastewater	1000 mL	Glass or Plastic; Plastic only if testing for Boron	HNO_3 to pH <2	6 months
Metals	Nonaqueous	100 g	Glass or Plastic	Cool ≤6°C	6 months
Mercury	Water/ Wastewater	500 mL	Glass or Plastic	HNO_3 to pH <2	28 days
Low Level Mercury - New Ulm only	Water/ Wastewater	**Call to request sampling kit**			28 days
Mercury	Nonaqueous	100 g	Glass or Plastic	None	28 days
Nitrogen, Ammonia	Water/ Wastewater	500 mL	Glass or Plastic	H_2SO_4 to pH <2, Cool ≤6°C	28 days
Nitrogen, Kjeldahl	Water/ Wastewater	500 mL	Glass or Plastic	H_2SO_4 to pH <2, Cool ≤6°C	28 days
Nitrogen, Nitrate	Water/ Wastewater	100 mL	Glass or Plastic	Cool ≤6°C	48 hours
Nitrogen, Nitrite	Water/ Wastewater	100 mL	Glass or Plastic	Cool ≤6°C	48 hours
Nitrogen, Nitrate & Nitrite	Water/ Wastewater	100 mL	Glass or Plastic	H_2SO_4 to pH <2, Cool ≤6°C	28 days
Oil & Grease, HEM	Water/ Wastewater	1000 mL	Glass	H_2SO_4 or HCl to pH <2, Cool ≤6°C	28 days
Organic Carbon, Total - Bismarck only	Drinking Water	3 X 40 mLs	3 - 40 mL amber, glass vial with septum cap	H_3PO_4 to pH <2, Cool ≤6°C	28 days

REQUIRED CONTAINERS, PRESERVATION TECHNIQUES AND HOLDING TIMES

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Organic Carbon, Total - Bismarck only	Water/ Wastewater	3 X 40 mLs	3 - 40 mL glass vial with septum cap	H_3PO_4 to pH <2, Cool ≤6°C	28 days
Oxygen, Dissolved	Water/ Wastewater	500 mL	Glass Bottle & Top	None	15 minutes
pH	Water/ Wastewater	100 mL	Glass or Plastic	None	15 minutes
Phenols - Bismarck only	Water/ Wastewater	500 mL	Glass/Amber	H_2SO_4 to pH <2, Cool ≤6°C	28 days
Phosphorus, Total Dissolved	Water/ Wastewater	250 mL	Glass or Plastic	Filter On-site, H_2SO_4 to pH <2, Cool ≤6°C	28 days
Phosphorus, Total	Water/ Wastewater	125 mL - New Ulm 250 mL - Bismarck	Glass or Plastic	H_2SO_4 to pH <2, Cool ≤6°C	28 days
Phosphorus, Ortho	Water/ Wastewater	250 mL	Glass or Plastic	Filter, Cool ≤6°C	Filter within 15 minutes; 48 hours to analyze
Silica	Water/ Wastewater	500 mL	Plastic	Cool ≤6°C	28 days
Solids, Total	Water/ Wastewater	1000 mL	Glass or Plastic	Cool ≤6°C	7 days
Solids, Total Dissolved	Water/ Wastewater	1000 mL	Glass or Plastic	Cool ≤6°C	7 days
Solids, Suspended	Water/ Wastewater	1000 mL	Glass or Plastic	Cool ≤6°C	7 days
Solids, Suspended Volatile	Water/ Wastewater	1000 mL	Glass or Plastic	Cool ≤6°C	7 days
Solids, Total Volatile	Water/ Wastewater	1000 mL	Glass or Plastic	Cool ≤6°C	7 days
Sulfate	Water/ Wastewater	50 mL	Glass or Plastic	Cool ≤6°C	28 days
Sulfide	Water/ Wastewater	1000 mL	Glass or Plastic	NaOH to pH >9, Cool ≤6°C Add 2 mL Zinc Acetate No headspace	7 days
Sulfite	Water/ Wastewater	500 mL	Glass or Plastic	None	Immediate
Surfactants - New Ulm only	Water/ Wastewater	500 mL	Glass or Plastic	Cool ≤6°C	48 hours
Tannin and Lignin - Bismarck only	Wastewater	250 mL	Glass or Plastic	None	None Specified
Temperature	Water/ Wastewater	1000 mL	Glass or Plastic	None	Immediate
Metals, TCLP (Toxicity Characteristic Leaching Procedure	Liquid Waste Solid Waste	1 Liter 500 mL jar	Glass or Plastic Plastic	None	6 months (Mercury: 28 Days)
Turbidity	Water/ Wastewater	100 mL	Glass or Plastic	Cool ≤6°C	48 hours

Inorganic Chemistry Food Analyses-New Ulm, Minnesota Laboratory only

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Ash	Food Products	50 g	Sterile Container (bottle or whirlpack bag)	Ambient	NA
Ash Alkalinity	Food Products	50 g	Sterile Container (bottle or whirlpack bag)	Ambient	NA
Extraneous Matter	Food Products	50 g	Clean Container	Ambient	NA
Fat-Acid Hydrolysis	Food Products	50 g	Clean Container	Ambient	NA
Fat - Mojonnier	Food Products	50 g	Clean Container	Ambient	NA
Moisture - Forced Air	Food Products	50 g	Sterile Container (bottle or whirlpack bag)	Ambient	NA
Physical Appearance	Dairy Products	50 g	Clean Container	Ambient	NA
Protein - Kjeldahl	Food Products	100 g	Clean Container	Ambient	NA
Scorched Particles	Dairy Products	25 g	Clean Container	Ambient	NA
Sieve Rotap - Granulation	Food Products	100 g	Clean Container	Ambient	NA
Solubility Index	Dairy Products	50 g	Clean Container	Ambient	NA
Titratable Acidity	Dairy Products	50 g	Sterile Container (bottle or whirlpack bag)	Cool ≤10°C	NA
Titratable Acidity	Powders	50 g	Sterile Container (bottle or whirlpack bag)	Ambient	NA
Total Solids	Food Products	50 g	Sterile Container (bottle or whirlpack bag)	Ambient	NA
Whey Protein Nitrogen	Dairy Products	50 g	Sterile Container (bottle or whirlpack bag)	Ambient	NA

Microbiology Laboratory Food Analyses - New Ulm, Minnesota

Parameter	Sample Matrix	Optimum Amount Needed	Container	Preservation	Holding Time
Aerobic/Standard Plate Count-Plate or Petrifilm	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Aerobic Spores, Mesophilic	Food Products	50 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Aerobic Spores, Thermophilic	Food Products	20 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Anaerobic Plate Count	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Anaerobic Spores, Mesophilic	Food Products	50 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA

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Parameter	Sample Matrix	Optimum Amount Needed	Container	Preservation	Holding Time
Anaerobic Spores, Thermophilic	Food Products	20 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
APC FDA BAM Cosmetics	Cosmetics	at least 2 g	Sterile Container (bottle or whirlpack bag)	Ambient	NA
Bacillus cereus	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Clostridium or *Clostridium Perfringens*	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Coliform - Fecal MPN	Food Products	11 g but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Coliform or *E.Coli* - MPN	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Coliform or *E.Coli* - Plate or Petrifilm	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Cronobacter sakazakii	Food Products	30 to 100 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
***E.coli* USP**	Food Products	10-25 g	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
***E.coli* O157:H7 or Shiga-toxin producing *E.coli* (STEC)**	Food Products	25-375 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Enterobacteriaceae Plate/Petrifilm	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Enterobacteriaceae USP/MPN/Enrichment	Food Products	at least 10 g	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Flat Sour Spores	Food Products	20 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
KF Streptococci (Enterococcus)	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Lactobacilli, Lactic Acid Bacteria	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Listeria	Food Products	25 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA

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Parameter	Sample Matrix	Optimum Amount Needed	Container	Preservation	Holding Time
Molds & Yeasts	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Proteolytic Bacteria	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Pseudomonas	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Rapid APC Petrifilm	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Rapid Mold and Yeast Petrifilm	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Rapid Coliform/E.coli Petrifilm	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Salmonella	Food Products	25-1500 g	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Shigella	Food Products	25 g	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Staphylococci - Plate or Petrifilm	Food Products	11 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
M Green Mold, Yeast and Aciduric Bacteria	Water, Beverages, Beverage Ingredients	10-100 mL	Sterile Container (bottle or whirlpack bag)	Cool ≤10°C	NA
Staphylococcus USP	Food Products	10-25 g	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Staphylococcus Enterotoxin	Food Products	25 g	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Sulfide Spoilage Anaerobic Spores	Food Products	20 g, but may be varied to meet client's needs	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA
Water Activity	Food Products	25-50 g	Sterile Container (bottle or whirlpack bag)	Ambient, unless food product itself is perishable, then cool ≤10°C	NA

Microbiology Laboratory Water Analyses - New Ulm, Minnesota

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Legionella	Waters	100-250 mL	Sterile Container (bottle or whirlpack bag)	Cool ≤6°C	NA
Aerobic Plate Count-Filtration (TGE)	Waters	10-100 mL	Sterile Container (bottle or whirlpack bag)	Cool ≤6°C	NA
Coliform and *E. coli*	Drinking Water Wastewater	100 mL	Sterile Container (bottle)	Cool ≤6°C, sodium thiosulfate	30 hours 8 hours (EPA); 24 hours (non-regulatory)
Coliform - Private Wells	Drinking Water	100 mL	Sterile Container (bottle)	Cool ≤6°C	30 hours
Fecal Coliform - MPN or MF	Drinking Water Wastewater	100 mL	Sterile Container (bottle)	Cool ≤6°C	30 hours 8 hours (EPA); 24 hours (MPCA)
Nitrifying Bacteria	Water	at least 20 mL	Sterile Container (bottle)	Cool ≤6°C, sodium thiosulfate if treated water	<24 hours (EPA); < 30 hours (MPCA)
Sulfate-reducing Bacteria	Water	at least 20 mL	Sterile Container (bottle)	Cool ≤6°C, sodium thiosulfate if treated water	<24 hours (EPA); < 30 hours (MPCA)
Slime-forming Bacteria	Water	at least 20 mL	Sterile Container (bottle)	Cool ≤6°C, sodium thiosulfate if treated water	<24 hours (EPA); < 30 hours (MPCA)
Denitrifying Bacteria	Water	at least 20 mL	Sterile Container (bottle)	Cool ≤6°C, sodium thiosulfate if treated water	<24 hours (EPA); < 30 hours (MPCA)
Iron-related Bacteria	Water	at least 20 mL	Sterile Container (bottle)	Cool ≤6°C, sodium thiosulfate if treated water	<24 hours (EPA); < 30 hours (MPCA)
Heterotrophic Plate Count (formerly APC)	Drinking Water	at least 2 mL	Sterile Container (bottle or whirlpack bag)	Cool ≤6°C, sodium thiosulfate if treated water	30 hours

Energy Laboratory - Bismarck, North Dakota Laboratory

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Coals	Coals	500 g	Airtight Glass or Plastic	None	NA
Oils and Fuels	--	Sample and analysis dependent; call for instructions	Metal	None	NA
Overburdens	Soil	1000 g	Plastic	None	NA

REQUIRED CONTAINERS, PRESERVATION TECHNIQUES AND HOLDING TIMES

Microbiological Analyses - Bismarck, North Dakota Laboratory

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Coliform and *E. coli*, Colilert	Drinking Water Wastewater	100 mL	Sterile Container (bottle)	Cool ≤6°C, sodium thiosulfate	30 hours 8 hours
Heterotrophic Plate Count (formerly APC) Petrifilm	Water	100 mL	Glass or Plastic	Cool ≤6°C	30 hours

Feed Laboratory - New Ulm, Minnesota

Parameter	Sample Matrix	Amount Needed	Container	Preservation	Holding Time
Ash	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
Calcium	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
Fat - Randall (Soxtec)	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
Fat - Randall (Soxtec)	Feed/Ingredients	100 g	Clean Container	Ambient	NA
Fat - Mojonnier	Milk	50 g	Clean Container	Ambient	NA
Fat - Acid Hydrolysis	Pet Food	100 g	Clean Container	Ambient	NA
Fiber, Crude	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
Moisture	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
Moisture	Molasses	100 g	Clean Container	Ambient	NA
Moisture	Pet Food	100 g	Clean Container	Ambient	NA
Non-Protein Nitrogen (NPN)	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
Nitrates	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
Phosphorus	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
Protein - Combustion	Feed/Forage/Pet Food	50 g	Clean Container	Ambient	NA
Protein - Kjeldahl	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
Salt	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
pH	Feed/Forage/Pet Food	100 g	Clean Container	Ambient	NA
pH	Molasses	100 g	Clean Container	Ambient	NA
pH	Pet Food	100 g	Clean Container	Ambient	NA
Free Fatty Acid	Food Products	250 g	Clean Container	Ambient	NA
Peroxide Value	Food Products	Sample size that gives 5-10 g of fat; if fat content is unknown call MVTL	Clean Container	Ambient	NA
Sieve Rotap - Granulation	Food Products	250 g	Clean Container	Ambient	NA