



**Minnesota Department of Health
Environmental Laboratory Accreditation Program**

Issues accreditation to

State Laboratory ID: 027-137-152

EPA Lab Code: MN00037

**Pace Analytical Services, LLC - Duluth, MN
4730 Oneota Street
Duluth, MN 55807**

**for fields of accreditation listed on the laboratory's accompanying Scope of Certification
in accordance with the provisions in Minnesota Laws and Rules.**

**Continued accreditation is contingent upon successful on-going compliance with Minnesota Statutes 144.97 to 144.98, 2009 TNI
Standard and applicable Minnesota Rules 4740.2010 to 4740.2120. The laboratory's Scope of Certification cites the specific
programs, methods, analytes and matrices for which MDH issues this accreditation.**

This certificate is valid proof of accreditation only when associated with its accompanying Scope of Certification.

**The Scope of Certification and reports of on-site assessments are on file at the Minnesota Department of Health,
601 Robert Street North, Saint Paul, Minnesota. Customers may verify the laboratory's accreditation status in
Minnesota by contacting MNELAP at (651) 201-5324.**

Effective Date: 12/09/2020

Expires: 12/31/2021

Certificate Number: 1989318



**Issued under the authority
delegated by the
Commissioner of Health,
State of Minnesota**



Environmental Laboratory Accreditation Program
Scope of Certification

**THIS LISTING OF FIELDS OF ACCREDITATION MUST BE
ACCOMPANIED BY CERTIFICATE NUMBER: 1989318**

State Laboratory ID: 027-137-152

EPA Lab Code: MN00037

Issue Date: 12/9/2020

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Clean Water Program

EPA 120.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 120.1	Conductivity	NPW	MN	

EPA 160.4

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 160.4	Residue-volatile	NPW	MN	

EPA 1664A (HEM)

Preparation Techniques: Extraction, separatory funnel liquid-liquid (LLE); Extraction, solid phase (SPE);

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1664A (HEM)	Oil & Grease	NPW	MN	

EPA 1664A (SGT-HEM)

Preparation Techniques: Extraction, separatory funnel liquid-liquid (LLE); Extraction, solid phase (SPE);

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1664A (SGT-HEM)	Oil & Grease	NPW	MN	

EPA 180.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 180.1	Turbidity	NPW	MN	

EPA 350.1

Preparation Techniques: Gas Diffusion; Distillation, micro; Distillation, MIDI;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 350.1	Ammonia as N	NPW	MN	

EPA 351.2

Preparation Techniques: Digestion, hotplate or HotBlock; Distillation, MIDI;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 351.2	Kjeldahl nitrogen - total	NPW	MN	

EPA 351.2 minus EPA 350.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 351.2 minus EPA 350.1	Organic nitrogen	NPW	MN	

EPA 353.2

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 353.2	Nitrate-nitrite as N	NPW	MN	
CWP	EPA 353.2	Nitrite as N	NPW	MN	

EPA 353.2 (calc.)

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 353.2 (calc.)	Nitrate as N	NPW	MN	

EPA 365.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 365.1	Total Phosphorus	NPW	MN	

EPA 365.3

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 365.3	Orthophosphate as P	NPW	MN	
CWP	EPA 365.3	Total Phosphorus	NPW	MN	

EPA 365.3

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 365.3	Orthophosphate as P	NPW	MN	

EPA 420.1

Preparation Techniques: Distillation, MIDI;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 420.1	Total Phenolics	NPW	MN	

Hach 10360

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	Hach 10360	Biochemical oxygen demand	NPW	MN	
CWP	Hach 10360	Carbonaceous BOD, CBOD	NPW	MN	
CWP	Hach 10360	Oxygen, dissolved	NPW	MN	

SM 2120 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2120 B-2011	Color	NPW	MN	

SM 2320 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2320 B-2011	Alkalinity as CaCO ₃	NPW	MN	

SM 2510 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2510 B-2011	Conductivity	NPW	MN	

SM 2540 C-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 2540 C-2011	Residue-filterable (TDS)	NPW	MN	

SM 4500-CI E-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-Cl E-2011	Total residual chlorine	NPW	MN	

SM 4500-Cl G-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-Cl G-2011	Total residual chlorine	NPW	MN	

SM 4500-Cl⁻ E-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-Cl ⁻ E-2011	Chloride	NPW	MN	

SM 4500-CN⁻ E-2011

Preparation Techniques: Distillation, MIDI;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-CN ⁻ E-2011	Cyanide	NPW	MN	
CWP	SM 4500-CN ⁻ E-2011	Total Cyanide	NPW	MN	

SM 4500-CN⁻ G-2011

Preparation Techniques: Distillation, MIDI;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-CN ⁻ G-2011	Amenable cyanide	NPW	MN	

SM 4500-H⁺ B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-H+ B-2011	pH	NPW	MN	

SM 4500-O C-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-O C-2011	Oxygen, dissolved	NPW	MN	

SM 4500-S2⁻ D-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 4500-S2 ⁻ D-2011	Sulfide	NPW	MN	

SM 5220 D-2011

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 5220 D-2011	Chemical oxygen demand	NPW	MN	

SM 5540 C-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 5540 C-2011	Surfactants - MBAS	NPW	MN	

USGS I-1338-85

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	USGS I-1338-85	Total hardness as CaCO ₃	NPW	MN	

USGS I-3765-85

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	USGS I-3765-85	Residue-nonfilterable (TSS)	NPW	MN	

EPA 1631E

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1631E	Mercury	NPW	MN	

SM 3500-Cr B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 3500-Cr B-2011	Chromium VI	NPW	MN	

Colilert®-18 (Fecal Coliforms)

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	Colilert®-18 (Fecal Coliforms)	Fecal coliforms	NPW	MN	

SM 9223 B (Colilert-18 Quanti-Tray)-2004

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	SM 9223 B (Colilert-18 Quanti-Tray)-2004	Escherichia coli	NPW	MN	

EPA 1000 Fathead Minnow Chronic MHSF

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1000 Fathead Minnow Chronic MHSF	IC25 (ON) Growth	NPW	MN	
CWP	EPA 1000 Fathead Minnow Chronic MHSF	NOEC (ON) Growth	NPW	MN	
CWP	EPA 1000 Fathead Minnow Chronic MHSF	NOEC Survival	NPW	MN	

EPA 1002 Ceriodaphnia Chronic MHSF

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 1002 Ceriodaphnia Chronic MHSF	IC25 Reproduction	NPW	MN	
CWP	EPA 1002 Ceriodaphnia Chronic MHSF	NOEC Reproduction	NPW	MN	
CWP	EPA 1002 Ceriodaphnia Chronic MHSF	NOEC Survival	NPW	MN	

EPA 2000 Fathead minnow Acute MHSF 25°C

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 2000 Fathead minnow Acute MHSF 25°C	LC50 Survival	NPW	MN	

EPA 2002 Ceriodaphnia dubia Acute MHSF 25°C

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 2002 Ceriodaphnia dubia Acute MHSF 25°C	LC50 Survival	NPW	MN	

EPA 2021 Daphnia magna Acute MHSF 20°C

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
CWP	EPA 2021 Daphnia magna Acute MHSF 20°C	LC50 Survival	NPW	MN	

Resource Conservation Recovery Program

EPA 350.1

Preparation Techniques: Gas Diffusion; Distillation, micro;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 350.1	Ammonia as N	SCM	MN	

EPA 351.2

Preparation Techniques: Digestion, hotplate or HotBlock; Distillation, MIDI;

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 351.2	Kjeldahl nitrogen - total	SCM	MN	

EPA 365.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 365.1	Total Phosphorus	SCM	MN	

Safe Drinking Water Program

EPA 180.1

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 180.1	Turbidity	DW	MN	

EPA 353.2

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 353.2	Nitrate as N	DW	MN	
SDWP	EPA 353.2	Nitrite as N	DW	MN	

SM 2320 B-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 2320 B-2011	Alkalinity as CaCO ₃	DW	MN	

SM 2510 B

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 2510 B	Conductivity	DW	MN	

SM 2540 C

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 2540 C	Residue-filterable (TDS)	DW	MN	

SM 4500-Cl G-2011

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 4500-Cl G-2011	Total residual chlorine	DW	MN	

SM 4500-CN⁻ E-2011

Preparation Techniques: Distillation, MIDI;

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 4500-CN ⁻ E-2011	Cyanide	DW	MN	

Colisure®

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	Colisure®	Escherichia coli	DW	MN	
SDWP	Colisure®	Total coliforms	DW	MN	

SimPlate®

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SimPlate®	Heterotrophic plate count	DW	MN	

SM 9223 B (Colilert-18 Quanti-Tray)-2004

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 9223 B (Colilert-18 Quanti-Tray)-2004	Escherichia coli	DW	MN	
SDWP	SM 9223 B (Colilert-18 Quanti-Tray)-2004	Total coliforms	DW	MN	

SM 9223 B (Colilert®-18)

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	SM 9223 B (Colilert®-18)	Escherichia coli	DW	MN	
SDWP	SM 9223 B (Colilert®-18)	Total coliforms	DW	MN	

Note: Method beginning with "SM" refer to the approved editions of Standard methods for the Examination of Water and Wastes. Approved methods are listed in the applicable parts of Title 40 of the Code of Federal Regulations (including its subsequent Federal Register updates), MN Statutes and Rules, and state-issued permits.