

State of Wisconsin  
Department of Natural Resources



recognizes

**Wisconsin Certification under NR 149**  
of  
**Davy Laboratories, Div. of Davy Engineering**

Laboratory Id: **632021390**

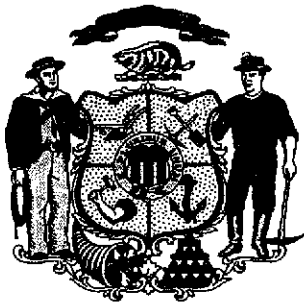
as a laboratory licensed to perform environmental sample analysis in support of covered environmental programs (ch. NR149.02 Note) for the parameter(s) specified in the attached Scope of Accreditation.

**August 31, 2019**

Expiration Date

**August 27, 2018**

Issued on



Steven Geis, Chief  
Environmental Science Services

Daniel L. Meyer, Secretary  
Department of Natural Resources

This certificate does not guarantee validity of data generated, but indicates the methodology, equipment, quality control practices, records, and proficiency of the laboratory have been reviewed and found to satisfy the requirements of ch. NR 149, Wis. Adm. Code.

# Scope of Accreditation

**Davy Laboratories, Div. of Davy Engineering**  
**115 South 6th Street**  
**La Crosse, WI 54601**

Laboratory Id: **632021390**  
 Expiration Date: **08/31/19**  
 Issued Date: **08/27/18**

## Wisconsin Certification under NR 149 Matrix: Aqueous (Non-potable Water)

<p><b>Class: General Chemistry</b></p> <p>Alkalinity <i>by Titration</i></p> <p>Ammonia as N <i>by ISE</i></p> <p>Ammonia as N <i>by Titration</i></p> <p>Biochemical Oxygen Demand (BOD) <i>by 5-d Assay</i></p> <p>Bromide <i>by IC</i></p> <p>Carbonaceous Oxygen Demand (cBOD) <i>by 5-d Assay</i></p> <p>Chemical Oxygen Demand (COD) <i>by Colorimetry</i></p> <p>Chloride <i>by Colorimetry</i></p> <p>Chloride <i>by Titration</i></p> <p>Chlorine, Total Residual (TRC) <i>by Colorimetry</i></p> <p>Chlorophyll <i>by Colorimetry</i></p> <p>Cyanide, Available <i>by Colorimetry</i></p> <p>Cyanide, Total <i>by Colorimetry</i></p> <p>Fluoride <i>by ISE</i></p> <p>HEM (Oil&amp;Grease, Hexane Ext. Material (HEM)) <i>by Grav-HEM</i></p> <p>Hardness, Total as CaCO<sub>3</sub> <i>by FLAA</i></p> <p>Hardness, Total as CaCO<sub>3</sub> <i>by Titration</i></p> <p>Kjeldahl Nitrogen, Total <i>by Colorimetry</i></p> <p>Nitrate <i>by ISE</i></p> <p>Nitrate + Nitrite <i>by Colorimetry</i></p> <p>Nitrite <i>by Colorimetry</i></p> <p>Orthophosphate <i>by Colorimetry</i></p> <p>Phenolics, Total <i>by Colorimetry</i></p> <p>Phosphorus, Total <i>by Colorimetry</i></p> <p>Residue, Filterable (TDS) <i>by Grav</i></p> <p>Residue, Nonfilterable (TSS) <i>by Grav</i></p> <p>Residue, Total <i>by Grav</i></p> <p>Residue, Volatile (TVS) <i>by Grav</i></p> <p>Residue, Volatile, Nonfilterable (TVSS) <i>by Grav</i></p> <p>SGT-HEM (Silica Gel Treated HEM) <i>by Grav-HEM</i></p> <p>Sulfate <i>by Colorimetry</i></p> <p>Sulfide <i>by Colorimetry</i></p> <p>Surfactants <i>by Colorimetry</i></p> <p>Turbidity <i>by Colorimetry</i></p> <p>pH <i>by ISE</i></p>	<p><b>Class: Metals</b></p> <p>Boron <i>by ICP</i></p> <p>Cadmium <i>by FLAA</i></p> <p>Cadmium <i>by GFAA</i></p> <p>Cadmium <i>by ICP</i></p> <p>Calcium <i>by FLAA</i></p> <p>Calcium <i>by ICP</i></p> <p>Chromium (Hexavalent) <i>by Colorimetry</i></p> <p>Chromium (Total) <i>by FLAA</i></p> <p>Chromium (Total) <i>by GFAA</i></p> <p>Chromium (Total) <i>by ICP</i></p> <p>Cobalt <i>by ICP</i></p> <p>Copper <i>by FLAA</i></p> <p>Copper <i>by GFAA</i></p> <p>Copper <i>by ICP</i></p> <p>Iron <i>by FLAA</i></p> <p>Iron <i>by ICP</i></p> <p>Lead <i>by FLAA</i></p> <p>Lead <i>by GFAA</i></p> <p>Lead <i>by ICP</i></p> <p>Lithium <i>by ICP</i></p> <p>Magnesium <i>by FLAA</i></p> <p>Magnesium <i>by ICP</i></p> <p>Manganese <i>by FLAA</i></p> <p>Manganese <i>by ICP</i></p> <p>Mercury <i>by Hyd-CVAA</i></p> <p>Molybdenum <i>by GFAA</i></p> <p>Molybdenum <i>by ICP</i></p> <p>Nickel <i>by FLAA</i></p> <p>Nickel <i>by GFAA</i></p> <p>Nickel <i>by ICP</i></p> <p>Potassium <i>by FLAA</i></p> <p>Potassium <i>by ICP</i></p> <p>Selenium <i>by GFAA</i></p> <p>Selenium <i>by ICP</i></p> <p>Silver <i>by FLAA</i></p> <p>Silver <i>by GFAA</i></p> <p>Silver <i>by ICP</i></p> <p>Sodium <i>by FLAA</i></p> <p>Sodium <i>by ICP</i></p> <p>Strontium <i>by ICP</i></p> <p>Thallium <i>by GFAA</i></p> <p>Thallium <i>by ICP</i></p> <p>Tin <i>by GFAA</i></p> <p>Tin <i>by ICP</i></p> <p>Titanium <i>by ICP</i></p>
<p><b>Class: Metals</b></p> <p>Aluminum <i>by ICP</i></p> <p>Antimony <i>by GFAA</i></p> <p>Antimony <i>by ICP</i></p> <p>Arsenic <i>by GFAA</i></p> <p>Arsenic <i>by ICP</i></p> <p>Barium <i>by ICP</i></p> <p>Beryllium <i>by GFAA</i></p> <p>Beryllium <i>by ICP</i></p>	

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 \* Analyte groups are defined and listed at <http://dnr.wi.gov> by searching keywords "Lab Certification:".

# Scope of Accreditation

**Davy Laboratories, Div. of Davy Engineering**  
**115 South 6th Street**  
**La Crosse, WI 54601**

Laboratory Id: **632021390**  
 Expiration Date: **08/31/19**  
 Issued Date: **08/27/18**

**Wisconsin Certification under NR 149**  
**Matrix: Aqueous (Non-potable Water)**

<p><b>Class: Metals</b>                  Vanadium <i>by ICP</i>                  Zinc <i>by FLAA</i>                  Zinc <i>by ICP</i></p>
<p><b>Class: Phenols (Acids)</b>                  Pentachlorophenol <i>by GC</i></p>
<p><b>Class: Chlorinated Hydrocarbons (BN)</b>                  1,2,4,5-Tetrachlorobenzene <i>by GC</i>                  Hexachlorobenzene <i>by GC</i>                  Hexachlorobutadiene <i>by GC</i>                  Hexachlorocyclopentadiene <i>by GC</i>                  Pentachlorobenzene <i>by GC</i></p>
<p><b>Class: Pesticides, Acid (Herbicides)</b>                  2,4,5-T <i>by GC</i>                  2,4-D <i>by GC</i>                  2,4-DB <i>by GC</i>                  Acifluorfen <i>by GC</i>                  Dalapon <i>by GC</i>                  Dicamba <i>by GC</i>                  Dichlorprop (2,4-DP) <i>by GC</i>                  Dinoseb (2-sec-butyl-4,6-Dinitrophenol) <i>by GC</i>                  Picloram <i>by GC</i>                  Silvex (2,4,5-TP) <i>by GC</i></p>
<p><b>Class: Pesticides, Nitrogen</b>                  Bentazon <i>by GC</i></p>
<p><b>Class: PCBs as Aroclors</b>                  ## PCB as AROCLORS (group) <i>by GC</i></p>
<p><b>Class: Volatile Organics</b>                  ## VOLATILE ORGANICS [VOC] (group) <i>by GC/MS</i></p>

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## Wisconsin Certification under NR 149 Matrix: Potable Water (Drinking Water)

<p><b>Class: SDWA - Disinfection Byproducts</b>                  ## HALOACETIC ACIDS (5) - EPA 552.2                  Bromide - EPA 300.0</p>	<p><b>Class: SDWA - Secondary Metals</b>                  Aluminum - EPA 200.7                  Calcium - EPA 200.7                  Calcium - SM 3111B                  Iron - EPA 200.7                  Iron - SM 3111B                  Magnesium - EPA 200.7                  Magnesium - SM 3111 B                  Manganese - EPA 200.7                  Manganese - SM 3111B                  Silver - EPA 200.7                  Silver - SM 3113B                  Sodium - EPA 200.7                  Sodium - SM 3111B                  Zinc - EPA 200.7                  Zinc - SM 3111B</p>
<p><b>Class: SDWA - Primary Non-metals</b>                  Cyanide - SM 4500-CN- C,E                  Cyanide, Amenable - SM 4500-CN- C,G                  Fluoride - EPA 300.0                  Fluoride - SM 4500F- C                  Nitrate + Nitrite - EPA 300.0                  Nitrate + Nitrite - EPA 353.2                  Nitrate - EPA 300.0                  Nitrate - SM 4500-NO3- D                  Nitrite - EPA 300.0                  Nitrite - SM 4500-NO2- B</p>	<p><b>Class: SDWA - SOC, Organochlorine Pesticides</b>                  Aldrin - EPA 505                  Chlordane - EPA 505                  Dieldrin - EPA 505                  Endrin - EPA 505                  Heptachlor - EPA 505                  Heptachlor epoxide - EPA 505                  Lindane (gamma-BHC) - EPA 505                  Methoxychlor - EPA 505                  Toxaphene - EPA 505</p>
<p><b>Class: SDWA - Primary Metals</b>                  Antimony - SM 3113B                  Arsenic - SM 3113B                  Barium - EPA 200.7                  Beryllium - EPA 200.7                  Beryllium - SM 3113B                  Cadmium - EPA 200.7                  Cadmium - SM 3113B                  Chromium - EPA 200.7                  Chromium - SM 3113B                  Copper - EPA 200.7                  Copper - SM 3111B                  Copper - SM 3113B                  Lead - SM 3113B                  Mercury - EPA 245.1                  Nickel - EPA 200.7                  Nickel - SM 3113B                  Selenium - SM 3113B                  Thallium - EPA 200.9</p>	<p><b>Class: SDWA - SOC, N/P Pesticides</b>                  Alachlor - EPA 505                  Atrazine - EPA 505                  Simazine - EPA 505</p>
<p><b>Class: SDWA - Secondary Non-metals</b>                  Alkalinity - SM 2320B                  Chloride - EPA 300.0                  Chlorine, Free - SM 4500-Cl G                  Conductivity - SM 2510 B                  Orthophosphate - EPA 365.1                  Orthophosphate - SM 4500-P E                  Sulfate - EPA 300.0                  TDS (Total Dissolved Solids) - SM 2540C                  Turbidity - SM 2130B                  pH - SM 4500-H+ B</p>	<p><b>Class: SDWA - SOC, Herbicides</b>                  2,4-D - EPA 515.3                  Dalapon - EPA 515.3                  Dicamba - EPA 515.3                  Dinoseb - EPA 515.3                  Pentachlorophenol - EPA 515.3                  Picloram - EPA 515.3                  Silvex (2,4,5-TP) - EPA 515.3</p>
	<p><b>Class: SDWA - SOC, Miscellaneous</b>                  Dibromochloropropane (DBCP) - EPA 504.1                  Ethylene Dibromide (EDB) - EPA 504.1                  Hexachlorobenzene - EPA 505                  Hexachlorocyclopentadiene - EPA 505</p>

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**Wisconsin Certification under NR 149**  
**Matrix: Potable Water (Drinking Water)**

<b>Class: SDWA - Trihalomethanes</b> ## THM (group) - EPA 524.2
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<b>Class: SDWA - Volatile Organics</b> ## VOCS, REGULATED (group) - EPA 524.2
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## Wisconsin Certification under NR 149 Matrix: Solid (Waste, Soil & Tissue)

<p><b>Class: General Chemistry</b>                  Chloride <i>by Titration</i>                  Cyanide, Available <i>by Colorimetry</i>                  Cyanide, Total <i>by Colorimetry</i>                  Phenolics, Total <i>by Colorimetry</i>                  Phosphorus, Total <i>by Colorimetry</i>                  Residue, Total <i>by Grav</i>                  Sulfate <i>by Colorimetry</i></p>	<p><b>Class: Metals</b>                  Sodium <i>by ICP</i>                  Strontium <i>by ICP</i>                  Thallium <i>by ICP</i>                  Tin <i>by ICP</i>                  Titanium <i>by ICP</i>                  Vanadium <i>by ICP</i>                  Zinc <i>by FLAA</i>                  Zinc <i>by ICP</i></p>
<p><b>Class: Metals</b>                  Aluminum <i>by ICP</i>                  Antimony <i>by ICP</i>                  Arsenic <i>by GFAA</i>                  Arsenic <i>by ICP</i>                  Barium <i>by ICP</i>                  Beryllium <i>by ICP</i>                  Boron <i>by ICP</i>                  Cadmium <i>by FLAA</i>                  Cadmium <i>by ICP</i>                  Calcium <i>by FLAA</i>                  Calcium <i>by ICP</i>                  Chromium (Hexavalent) <i>by Colorimetry</i>                  Chromium (Total) <i>by FLAA</i>                  Chromium (Total) <i>by ICP</i>                  Cobalt <i>by ICP</i>                  Copper <i>by FLAA</i>                  Copper <i>by ICP</i>                  Iron <i>by FLAA</i>                  Iron <i>by ICP</i>                  Lead <i>by FLAA</i>                  Lead <i>by ICP</i>                  Magnesium <i>by FLAA</i>                  Magnesium <i>by ICP</i>                  Manganese <i>by FLAA</i>                  Manganese <i>by ICP</i>                  Mercury <i>by Hyd-CVAA</i>                  Molybdenum <i>by GFAA</i>                  Molybdenum <i>by ICP</i>                  Nickel <i>by FLAA</i>                  Nickel <i>by ICP</i>                  Potassium <i>by FLAA</i>                  Potassium <i>by ICP</i>                  Selenium <i>by GFAA</i>                  Selenium <i>by ICP</i>                  Silver <i>by FLAA</i>                  Silver <i>by ICP</i>                  Sodium <i>by FLAA</i></p>	<p><b>Class: Phenols (Acids)</b>                  Pentachlorophenol <i>by GC</i></p> <p><b>Class: Chlorinated Hydrocarbons (BN)</b>                  1,2,4,5-Tetrachlorobenzene <i>by GC</i>                  Hexachlorobenzene <i>by GC</i>                  Hexachlorobutadiene <i>by GC</i>                  Hexachlorocyclopentadiene <i>by GC</i>                  Pentachlorobenzene <i>by GC</i></p> <p><b>Class: Pesticides, Acid (Herbicides)</b>                  2,4,5-T <i>by GC</i>                  2,4-D <i>by GC</i>                  2,4-DB <i>by GC</i>                  3,5-Dichlorobenzoic acid <i>by GC</i>                  5-Hydroxydicamba <i>by GC</i>                  Acifluorfen <i>by GC</i>                  Dalapon <i>by GC</i>                  Dicamba <i>by GC</i>                  Dichlorprop (2,4-DP) <i>by GC</i>                  Dinoseb (2-sec-butyl-4,6-Dinitrophenol) <i>by GC</i>                  Picloram <i>by GC</i>                  Silvex (2,4,5-TP) <i>by GC</i></p> <p><b>Class: Pesticides, Nitrogen</b>                  Bentazon <i>by GC</i></p> <p><b>Class: PCBs as Aroclors</b>                  ## PCB as AROCLORS (group) <i>by GC</i></p> <p><b>Class: Volatile Organics</b>                  ## VOLATILE ORGANICS [VOC] (group) <i>by GC/MS</i></p> <p><b>Class: Waste Characterization Extractions</b>                  TCLP Extraction <i>by Waste Extractions</i></p> <p><b>Class: Waste Characterization Assays</b>                  Corrosivity, Liquids <i>by Waste Assays</i></p>

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