TESTING AND CALIBRATION LABORATORY ACCREDITATION PROGRAM (LAP)

Scope of Accreditation

La présente portée d'accréditation existe également en français et est publiée séparément.

Legal Name of Accredited Laboratory:	**Bureau Veritas Canada (2019) Inc.**
Location Name or Operating as (if applicable):	Bureau Veritas (Edmonton)
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SCC File Number:	15229
Accreditation Standard(s):	ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories
Fields of Testing:	Biological Chemical/Physical
Program Specialty Area:	Environmental Testing (ET)
Initial Accreditation:	1995-03-06
Most Recent Accreditation:	2025-05-10
Accreditation Valid to:	2027-03-06

SCC Group Accreditation:
This laboratory is a part of a Group Accreditation with the following facilities in accordance with SCC's policy on Group Accreditation documented in the Accreditation Services Accreditation Program Overview.

151039 - Bureau Veritas - Unit D, 675 Berry St., Winnipeg, MB, R3H 1A7, Accredited Laboratory No. 837

Canada

151043 - Bureau Veritas - 2021 - 41st Avenue, N.E., Calgary, AB, T2E 6P2, Accredited Laboratory No. 836

Note: Environmental Testing except for Adsorbable Organic Halides, Total Sulfide by Titration, and Air Matrices are performed at:

Bureau Veritas
Edmonton Environmental
4326 76 Avenue NW
Edmonton, AB
T6B 2H8

ENVIRONMENTAL AND OCCUPATIONAL HEALTH AND SAFETY

Environmental:

Air

PTC SOP – 00128	VOCs by Thermal Desorption Diffusive Tube (EPA 325B)
	Technique / Equipment: GCMS with Thermal Desorption
	Analytes: 1, 3-Butadiene, Benzene, Ethylbenzene, m,p-Xylenes, o-Xylene, Toluene
PTC SOP – 00148	Monitoring NO2 in the Atmosphere by using All-Season Passive Samplers (AWMA 91st PAPER 98-TP44.03)
	Technique / Equipment: All-Season Passive Samplers
	Analytes: Nitrite
PTC SOP – 00149	Monitoring SO2 in the Atmosphere by using All-Season Passive Samplers (H. Tang, B. Brassard, R. Brassard and E. Peake, "A New Passive Sampling System for Monitoring SO2 in the Atmosphere" Proceedings, Clean Air '96: Second North American Conference and Exhibition, Nov. 19-22,1996 Orlando USA)
	Technique / Equipment: All-Season Passive Samplers
	Analytes: Sulfite
PTC SOP – 00150	Monitoring H2S in the Atmosphere by using All-Season Passive Samplers (Hongmao Tang "A New All-Season Passive Sampling System for Monitoring H2S in Air" The Scientific World, (2002)2, 155-168)
	Technique / Equipment: All-Season Passive Samplers
	Analytes: Hydrogen Sulfide
PTC SOP – 00157	Monitoring NH3 in the Atm by using the Ogawa Passive Samplers (ASTM D6919)
	Technique / Equipment: Ogawa Passive Samplers

	Analytes: Ammonia
PTC SOP – 00197	Monitoring Ozone in the Atmosphere by using Maxxam All-Season Passive Samplers (H. Tang and T. Lau "A New All-Season Passive Sampling System for Monitoring Ozone in Air", Environmental Monitoring and Assessment, 65 (1-2) 129-137, 2000.)
	Technique / Equipment: Maxxam All-Season Passive Samplers
	Analytes: Ozone
EMS SOP-00110	Anions by Ion Chromatography (Methods 42526, 44546, 47071 and 52121((Modified), Methods Manual for Chemical Analysis of Atmospheric Pollutants, 4thEdition, 1993, AECV93-M1)
	Technique / Equipment: Ion Chromatography – Conductivity Detector
	Analytes: Chloride, Fluoride, Nitrate, Sulfate

Air Filter

PTC SOP – 00151	Mass Determination of Particulate Matter (PM 2.5 and 10) Gravimetric (Modified from US EPA, Quality Assurance Guidance Document, 2.12: Monitoring PM2.5 in Ambient Air Using Designated Reference or Class I Equivalent Methods)
	Technique / Equipment: Gravimetric
	Analytes: PM10, PM2.5
PTC SOP – 00180	Dustfall, Total and Fixed, Gravimetric (Modified from AMD, Appendix 4-6)
	Technique / Equipment: Gravimetric
	Analytes: Dustfall (Fixed), Dustfall (Total)
EMS SOP-00115	Particulate Analysis for Stationary Sources - Lab (Method 5, Determination of Particulate Emissions from Stationary Sources, Alberta Stack Sampling Code, 1995, Publication Number: REF.89. (Modified))
	Technique / Equipment: Gravimetric
	Analytes: Particulate

Water (Inorganic)

AB SOP-00016	Chemical Oxygen Demand (Total and Dissolved) (Modified From SM 5220 D)
	Technique / Equipment: Colorimetric
	Analytes: COD
AB SOP-00061	Total Suspended Solids, Total Fixed Solids, and Total Volatile Solids (Modified from SM 2540 D and E)
	Technique / Equipment: Gravimetric

	Analytes: Fixed Solids, Total Suspended Solids, Volatile Suspended Solids
EENVSOP-00159	pH Analysis in Bioassay Lab (Modified From SM 4500-H+ B)
	Technique / Equipment: pH Meter
	Analytes: pH
SM 4500-S2 F	Sulphide - Total, Titration Method [PTC SOP-00173]
	Technique/Equipment: Titration
	Analytes: Total Sulphide

Water (Organic)

PTC SOP-00056	Adsorbable Organic Halogens [AE128.1]
	Technique/Equipment: Coulometric Titration
	Analytes: Organic Halogens/Halides
AB SOP-00040	Analysis of Extractable Hydrocarbons in Water and Soils by GCFID [Modified from Static Sheen Test (EPA Method 1617),]
	Technique / Equipment: Visual
	Analytes: Sheen

Water (Toxicology)

EENVSOP-00154	48-Hr Acute Static Bioassay using Daphnia magna (EPS 1/Rm/11 and EPS 1/RM/14)
	Technique / Equipment: Acute Lethality (Survival) Assay
	Analytes: Daphnia magna LC50 (48 h), Daphnia magna Single Concentration (48h)
EENVSOP-00155	Ceriodaphnia dubia Reproduction Inhibition and 7-Day Survival Chronic (EPS 1/RM/21)
	Technique / Equipment: Survival and Reproduction Inhibition Assay
	Analytes: *Ceriodaphnia dubia* (7d)
EENVSOP-00156	Fathead Minnow Larval Growth and Survival 7 Day Chronic Test (EPS 1/RM/22)
	Technique / Equipment: Survival and Growth Inhibition Assay
	Analytes: Fathead Minnow (7d)
EENVSOP-00160	96-Hour Acute Static Bioassay using Rainbow Trout (EPS 1/RM/9 and EPS 1/RM/13)
	Technique / Equipment: Acute Lethality (Survival) Assay
	Analytes: Rainbow Trout LC50 (96 h), Rainbow Trout Single Concentration (96h)
EENVSOP-00190	96-Hour Acute Static Bioassay using Rainbow Trout with pH Stabilization (EPS 1/RM/50 and EPS 1/RM/13 (

	Technique / Equipment: Acute Lethality (Survival) Assay with pH Stabilization
	Analytes: Rainbow Trout LC50 (96 h), Rainbow Trout Single Concentration (96h)

NON-METALLIC MINERALS AND PRODUCTS

Petroleum Refinery Products (including asphalt materials, petrochemicals, fuels and lubricants):

Fuels and Lubricants

Water %. Crackel test.	Determination of Water in Lubricating Oil by the Visual Crackle Test. Fitch, J. C., The Lubrication Field Test and Inspection Guide, Noria Publishing. (PTC SOP-00010)]
	Technique / Equipment: Visual Crackle Test
	Analytes: Water
ASTM D5185	Additives, Wear Metals and Contaminants in Lubricating Oils by ICPOES (PTC SOP-00011)
	Technique / Equipment: ICPOES
	Analytes: Aluminum, Antimony, Barium, Beryllium, Boron, Calcium, Chromium, Copper, Iron, Lead, Lithium, Magnesium, Molybdenum, Nickel, Phosphorous, Potassium, Silicon, Silver, Sodium, Tin, Titanium, Vanadium, Zinc
ASTM D7279	Kinematic Viscosity of Lubricating Oils (PTC SOP-00012)
	Technique / Equipment: Viscosity
ASTM D7418	Oxidation, Nitration, Sulphation and Soot of Engine oils by FTIR (PTC SOP-00013)
	Technique / Equipment: FTIR
ASTM D7593	Determination of Fuel Dilution for In-Service Engine Oils by GC (PTC SOP-00014)
	Technique / Equipment: GCFID
	Analytes: Hydrocarbon Oil (Fuel)
ASTM D4739 (Modified)	Base Number of Lubricating Oils by Potentiometric Titration (PTC SOP-00017)
	Technique / Equipment: Potentiometric Titration
ASTM D6304	Water Content in Lubricating Oils by Coulometric KF Titration (PTC SOP-00018)
	Technique / Equipment: Coulometric KF Titration
	Analytes: Water Content

ISO 11500:2008 (Modified)	ISO Particle Count of Lubricating Oils Using an Optical Particle Counter (PTC SOP-00020)
	Technique / Equipment: Optical Particle Counter
GPA 2286 (Modified) and GPA 2261 (Modified)	Analysis of Hydrocarbon Condensates by Heated Flash (PTC SOP-00029(
	Technique / Equipment: Heated Flash
	Analytes: Hydrocarbons
GPA 2177 (Modified)	Analysis of C4- Components in Condensate (PTC SOP-00030)
	Technique / Equipment: GCTCD
	Analytes: N_2, C_1, CO_2, C_2, C_3, iC_4, nC_4
ASTM D-5504 (Modified)	Calibration and Analysis of Trace Sulfur Compounds in Petroleum Products (PTC SOP-00031)
	Technique / Equipment: GCSCD
	Analytes: Trace Sulfur Compounds
ASTM D5623 (Modified)	Calibration and Analysis of Trace Sulfur Compounds in Petroleum Products (PTC SOP-00033)
	Technique / Equipment: GCSCD
	Analytes: Trace Sulfur Compounds
ASTM D2887/CAN/CGSB 3.0, No.14.3 (Modified)	Hydrocarbon C30 Analysis by Gas Chromatography (PTC SOP-00036)
	Technique / Equipment: GCFID
	Analytes: Hydrocarbon C30
ASTM D4052/ ASTM D5002	Density of Light Hydrocarbons (condensate) by Digital Densitometer (PTC SOP-00037)
	Technique / Equipment: Digital Densitometer
PTC SOP-00038	Trace Methanol by Gas Chromatography
	Technique / Equipment: GCFID
	Analytes: Trace Methanol
ASTM D7900	Boiling Range Distribution by ASTM D7900 [PTC SOP-00039]
	Technique / Equipment: GCFID
	Analytes: Hydrocarbons
GPA 2186 (Modified)	Analysis of LPG/NGL to C15+ (Extended) (PTC SOP-00044)
	Technique / Equipment: GCTCD
	Analytes: Hydrocarbons
CAN/CGSB 3.0 No. 14.3 and ASTM D6729 (Modified)	Ponau Analysis (PTC SOP-00045)

	Technique / Equipment: GCFID
	Analytes: Paraffins, Olefins, Naphthenes, Aromatics, and Unknowns
UOP 523 (Modified)	Component Analysis of Glycols, Amines, and Sulfinols by GC (PTC SOP-00049)
	Technique / Equipment: GCTCD
	Analytes: Glycols, Amines, and Sulfinols
ASTM D4929	Total Organic Halogens and Organic Chlorides (PTC SOP-00050)
	Technique / Equipment: Microcoulometric-Titration Detector
	Analytes: Organic Halides containing Chlorides, Bromides, and Iodides
ASTM D2887	Boiling Range Distribution of Petroleum Fractions by Gas Chromatography (PTC SOP-00051)
	Technique / Equipment: GCFID
ASTM D4052/5002	High Pressure Density (PTC SOP-00052)
	Technique / Equipment: Density Meter
Molecular weight	Molecular Weight by Freezing Point Depression. Cryette A Petroleum Cryoscope. (PTC SOP-00058)
	Technique / Equipment: Cyroscope
GPA 2286 (Modified)	Analysis of Hydrocarbon Gas (PTC SOP-00062)
	Technique / Equipment: GCFID/TCD
	Analytes: Hydrocarbons
ASTM D445	Measurement of Viscosity by Cannon - Fenske Opaque Viscometer (PTC SOP-00067)
	Technique / Equipment: Fenske Opaque Viscometer
ASTM D97; ASTM D5853	Pour Point Analysis of Petroleum Products (PTC SOP-00068)
	Technique / Equipment: Pour Point Determination
ASTM D86	Distillation of Petroleum Products at Atmospheric Pressure (PTC SOP-00071)
	Technique / Equipment: Distillation
ASTM D323A	Reid Vapor Pressure of Petroleum Products (PTC SOP-00072)
	Technique / Equipment: Reid Vapor Pressure Apparatus
ASTM D5972	Freezing Point Determination (PTC SOP-00079)
	Technique / Equipment: Automatic Phase Transition Method

ASTM D93	Flash-Point by Pensky-Martens Closed Cup Tester (PTC SOP-00082)
	Technique / Equipment: Pensky-Martens Closed Cup Tester
ASTM D130; ASTM D1838	Detection of Copper Corrosion from Petroleum Products by the Copper Strip (PTC SOP-00083)
	Technique / Equipment: Copper Strip
ASTM D4007; ASTM D1796; ASTM D2709	Water and Sediment in Crude by the Centrifuge Method (Laboratory Procedure) (PTC SOP-00084)
	Technique / Equipment: Centrifugation
ASTM D611	Aniline Point of Petroleum Products (PTC SOP-00089)
	Technique / Equipment: Aniline Point, (does not include Mixed Aniline Point)
ASTM D2624	Electrical Conductivity of Aviation and Distillate Fuels (PTC SOP-00091)
	Technique / Equipment: Digital conductivity meters
ASTM D4176	Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures) (PTC SOP-00092)
	Technique / Equipment: Visual Appearance
ASTM D4539	Filterability of Diesel Fuels by Low Temperature Flow Test (LTFT) (PTC SOP-00093)
	Technique / Equipment: LTFT
ASTM D5452	Particulate Contamination, Filter Memb. Color ratings in Aviation by Filt (PTC SOP-00095)
	Technique / Equipment: Filt
OSRD Method 1.0	Determination of Bitumen, Water, Solids by Dean Stark Method. ARC. Oil Sands Analytical Method 1.00 (PTC SOP-00097)
	Technique / Equipment: Modified Dean Stark Extractor
ASTM D4052	Density and Relative Density of Liquids by Digital Density Meter (PTC SOP-00099)
	Technique / Equipment: Digital Density Meter
ASTM D5002	Density and Relative Density of Crude Oils by Digital Density Analyzer (PTC SOP-00100)
	Technique / Equipment: Digital Density Analyzer

ASTM D664	Total Acid Number of Petroleum Products by Potentiometric Titration (PTC SOP-00103)
	Technique / Equipment: Potentiometric Titration
ASTM D4928; ASTM D6304	Water in Petroleum Products by Coulometric Karl Fischer Titration (PTC SOP-00105)
	Technique / Equipment: KF Titration
ASTM D4530	Standard Test Method for Determination of Carbon Residue (Micro Method) (PTC SOP-00107)
	Technique / Equipment: Micro Carbon Residue Tester
	Analyte: Micro Carbon Residue
ASTM D1319	Hydrocarbon Types in Liquid Petroleum Products by Fluorescence Indicator (PTC SOP-00109)
	Technique / Equipment: Fluorescence Indicator
	Analyte: Saturates, Olefins, and Aromatics
ASTM D1322	Smoke Point of Kerosine and Aviation Turbine Fuel (PTC SOP-00110)
	Technique / Equipment: Smoke Point
ASTM D5453-S(Sulfur); ASTM D5762 – N(Nitrogen); ASTM D4629 – N(Nitrogen)	Total Nitrogen Sulphur in Hydrocarbons (PTC SOP-00111)
	Technique / Equipment: Elemental Analyzers
	Analyte: Sulfur and Nitrogen
ASTM D4807	Sediment in Oil by Membrane Filtration (PTC SOP-00115)
	Technique / Equipment: Membrane Filtration
ASTM D4294	Sulfur in Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectroscopy (PTC SOP-00116)
	Technique / Equipment: Energy-Dispersive X-Ray Fluorescence Spectroscopy
	Analyte: Sulfur
ASTM D3227	Mercaptan Sulphur of Petroleum Products (PTC SOP-00117)
	Technique / Equipment: Potentiometric Method
	Analyte: Mercaptan Sulphur
ASTM D613	Cetane Number of Diesel Fuel Oil (PTC SOP-00120)
	Technique / Equipment: Combustion
ASTM D240; ASTM D4809; ASTM D3338; D3338M	Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (PTC SOP-00121)
	Technique / Equipment: Bomb Calorimeter
ASTM D6079	Lubricity of Diesel Fuels by High Frequency Reciprocating Rig (PTC SOP-00122)

	Technique / Equipment: High Frequency Reciprocating Rig (HFRR)
ASTM D974	Acid Number by Color-Indicator Titration (PTC SOP-00126)
	Technique / Equipment: Color-Indicator Titration
ASTM D482	Ash Content (PTC SOP-00175)
	Technique / Equipment: Muffle Furnace
ASTM D6468	High Temperature Stability of Distillate Fuels (PTC SOP-00204)
	Technique / Equipment: High Temperature Heating Bath
ASTM D5708; ASTM D5185; ASTM D4951	Metals Analysis in Organics by ICPOES (PTC SOP-00206):
	Technique / Equipment: ICPOES
	Analytes: Silver (Ag), Aluminum (Al), Arsenic (As), Boron (B), Barium (Ba), Beryllium (Be), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chromium (Cr), Copper (Cu), Iron (Fe), Lithium (Li), Potassium (K), Magnesium (Mg), Manganese (Mn), Molybdenum (Mo), Sodium (Na), Nickel (Ni), Phosphorus (P), Lead (Pb), Selenium (Se), Silicon (Si), Tin (Sn), Strontium (Sr), Titanium (Ti), Vanadium (V), Zinc (Zn)
ASTM D5442M; ASTM D2887 (Modified)	Trace Hydrocarbon Analysis by GC (PTC SOP-00209)
	Technique / Equipment: GCFID

	Analytes: Methane, Ethane, Propane, Isobutane, n-Butane, Isopentane, n-pentane, methylcyclopentane, benzene, cyclohexane, methylcyclohexane, toluene, ethylbenzene, meta and para-xylene, ortho-xylene, trimethylbenzene, hexanes (C6), heptanes (C7), octanes (C8), nonanes (C9), decanes (C10), undecanes (C11), dodecanes (C12), tridecanes (C13), tetradecanes (C14), pentadecanes (C15), hexadecanes (C16), heptadecanes (C17), octadecanes (C18), nonadecanes (C19), eicosanes (C20), heneicosanes (C21), docosanes (C22), triacosanes (C23), tetracosanes (C24), pentacosanes (C25), hexacosanes (C26), heptacosanes (C27), octacosanes (C28), nonacosanes (C29), triacontanes plus (C30+)
ASTM D2887 (Modified)	Light End Analysis in Stabilized Hydrocarbon Liquids (PTC SOP-00211)
	Technique / Equipment: GCFID
	Analytes: Hydrocarbon Components
ASTM D7169	Boiling Range distribution by ASTM D7169 (PTC SOP-00218)
	Technique / Equipment: GCFID
ASTM D5373; ASTM D3176; ASTM D4239	Carbon, Hydrogen, Nitrogen and Sulphur Analysis (PTC SOP-00241)
	Technique / Equipment: TCD
	Analytes: Carbon, Hydrogen, Nitrogen and Sulphur
ASTM D7582	Proximate Analysis of Coal and Coke (PTC SOP-00242)
	Technique / Equipment: Thermo-Gravimetric Analyzer
ASTM D2013/D2013M and ASTM D3302/D3302M	Preparation of Coal Samples and Determination of Moisture in Coal (PTC SOP-00250)
ASTM D5865/D5865M	Heating Value of Coal and Coke by Bomb Calorimeter (PTC SOP-00254)
	Technique / Equipment: Bomb Calorimeter
ASTM D7042	Viscosity by Stabinger (PTC SOP-00267)
	Technique / Equipment: Viscosity Meter
Beckman Coulter PSD	Particle Size Distribution by Beckman Coulter Laser Analyzer (PTC SOP-00275)
	Technique / Equipment: Beckman Coulter Laser Analyzer
ASTM D6722	Total Mercury in Coal and Coal Combustion Residues (PTC SOP-00279)
	Technique / Equipment: Mercury Analyzer
ASTM D7978	Determination of Microbial Content in Jet Fuel (PTC SOP-00287)
	Technique / Equipment: Microbial detection assay

	Analytes: viable microorganisms
ASTM D156	Saybolt Color of Petroleum Products (PTC SOP-00289)
	Technique / Equipment: Saybolt chromometer
ASTM D56	Flash Point by Tag Closed Cup (PTC SOP-00291)
	Technique / Equipment: TAG Flash Point Tester
ASTM D3241	Thermal Oxidation Stability (PTC SOP-00292)
	Technique / Equipment: Thermal Oxidation Stability Tester
IP 540	Existing GUM (PTC SOP-00293)
	Technique / Equipment: Gum Bath
ASTM D7224	Water Separation Characteristics (PTC SOP-00294)
	Technique / Equipment: Micro-Separometer
ASTM D1840	Naphthalene Hydrocarbons in Aviation Turbine Fuels by UV Spectrometry (PTC SOP-00297)
	Technique / Equipment: Spectrophotometer
	Analytes: Naphthalene Hydrocarbons
ASTM D7797	Determination of the Fatty Acid Methyl Esters Content (FAME) (PTC SOP-00298)
	Technique / Equipment: FA-FTIR
	Analytes: FAME
ASTM D3242	Acidity in Aviation fuel (PTC SOP-00299)
	Technique / Equipment: titration

Number of Scope Listings: 96

Notes:

ISO/IEC 17025: 2017: General Requirements for the Competence of Testing and Calibration Laboratories
ASTM: American Society for Testing and Materials
NIOASH: The National Institute for Occupational Safety and Health
CCME: Canadian Council of Ministers of the Environment
EPA: Environment Protection Agency
AEC: Alberta Environmental Centre
GPA: Gas Producers Association

This document forms part of the Certificate of Accreditation issued by the Standards Council of Canada (SCC). The original version is available in the Directory of Accredited Laboratories on the SCC website at www.scc-ccn.ca.

Elias Rafoul
Vice-President, Accreditation Services
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