

CERTIFICATE OF ACCREDITATION

ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

Morgan Schaffer, Inc. 8300 Saint-Patrick Street, Suite 150 LaSalle, QC H8N 1H1

has been assessed by ANAB and meets the requirements of international standard

ISO/IEC 17025:2005

while demonstrating technical competence in the field of

TESTING

Refer to the accompanying Scope of Accreditation for information regarding the types of tests to which this accreditation applies.



Certificate Valid: 03/08/2017-03/08/2019 Version No. 001 Issued: 03/08/2017



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Morgan Schaffer, Inc.

8300 Saint-Patrick Street, Suite 150 LaSalle, QC H8N 1H1 Contact: Denis Lafrance Phone: 514-739-1967 Email: dlafrance@morganschaffer.com Website: www.morganschaffer.com

TESTING

Valid to: March 8, 2019

Certificate Number: AT-2125

I. Chemical-

| Items, Materials or Products Tested | Specific Tests or Properties Measured | Specification, Standard Method, or Technique Used | Key Equipment or Technology* |
|--|---|---|----------------------------------|
| Dielectric Fluid | Corrosive Sulfur | ASTM D1275 | Oven, Cu strip, Tarnish Chart |
| Dielectric Fluid | Specific Gravity | ASTM D1298 | Hydrometer |
| Dielectric Fluid | Color of petroleum products | ASTM D1500 | ASTM Color Scale |
| Dielectric Fluid | Visual examination | ASTM D1524 | Visual Examination |
| Dielectric Fluid | Moisture by Karl-Fisher titration | ASTM D1533 | Karl Fisher Titrator |
| Dielectric Fluid | Dielectric Breakdown | ASTM D1816 | VDE Electrode |
| Dielectric Fluid | Dissolved Gas Analysis | ASTM D3612 | Gas Chromatograph (GC) |
| Dielectric Fluid | PCB in oil | ASTM D4059 | Gas Chromatograph (GC) |



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| Items, Materials or Products Tested | Specific Tests or Properties Measured | Specification, Standard Method, or Technique Used | Key Equipment or Technology* |
|--|--|---|---|
| Dielectric Fluid | Inhibitors content: 2,6-Ditertiary-Butyl Para-Cresol and 2,6- Ditertiary-Butyl Phenol in Insulating Liquids | ASTM D4768 | Gas Chromatograph (GC) |
| Dielectric Fluid | Furanic compounds | ASTM D5837 | High Performance Liquid Chromatograph (HPLC) |
| Dielectric Fluid | Dielectric Breakdown Voltage | ASTM D877 | Disk Electrodes |
| Dielectric Fluid | Power Factor | ASTM D924 | Power Factor Device |
| Dielectric Fluid | Interfacial Tension | ASTM D971 | Tensiometer |
| Dielectric Fluid | Total Acid number | ASTM D974 | Acid-Base Titration |
| Dielectric Fluid | Moisture in oil content | WI 017-00 | Water Sensor |

 Notes:

 1. * = as applicable.

 2. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-2125.







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This is to certify that

Morgan Schaffer Inc. 8300 Saint-Patrick Street, Suite 15 LaSalle, QC H8N 2H1

has been assessed by ANAB and meets the requirements of international standard

ISO Guide 34:2009

while demonstrating technical competence in the field of

Reference Material Producer

Refer to the accompanying Scope of Accreditation for information regarding the types of materials to which this accreditation applies.

AR-2126 Certificate Number

Certificate Valid 03/08/2017-03/08/2019 Version No. 001 Issued: 03/08/2017





SCOPE OF ACCREDITATION TO ISO GUIDE 34:2009

Morgan Schaffer, Inc.

8300 Saint-Patrick Street, Suite 150 LaSalle, QC H8N 1H1 Contact: Denis Lafrance Email: dlafrance@morganschaffer.com Kebsite: www.morganschaffer.com

REFERENCE MATERIAL PRODUCER

Valid to: March 8, 2019

Certificate Number: AR-2126

| Category and Sub-Category of Reference Material | ILAC RM Category | Class or Type of Reference Materials Produced (Include Range Where Applicable) | Methods or Techniques Used in the RMP Laboratory (if Appropriate) |
|---|---------------------|---|---|
| Gases (Certified Reference Material) | A7.1 | Gas mixture in dielectric fluids (5, 10, 50, 100, 500 and 1000 ppm (µg/g) of H ₂ , CH ₄ , C ₂ H ₆ , C ₂ H ₄ , C ₂ H ₂ , CO ₂ , O ₂ , N ₂ , and CO) | Gas Chromatography |
| Moisture (Certified Reference Material) | A3.5 | Moisture in dielectric fluids. 15 and 30 ppm (µg/g) | Karl Fisher Titrator |

Notes:

1. Please contact the RMP organization for more information on CRM uncertainty values, Ucrm values, and other specific lot values. Some of this information may also be available on the RMP's website.

2. This scope is formatted as part of a single document including Certificate of Accreditation No. AR-2126



