



# CERTIFICATE OF ACCREDITATION

## ANSI National Accreditation Board

11617 Coldwater Road, Fort Wayne, IN 46845 USA

This is to certify that

**Lucideon M+P**  
**2210 Technology Drive**  
**Schenectady, NY 12308**

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

**ISO/IEC 17025:2017**

while demonstrating technical competence in the field of

**TESTING**

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

L2287

Certificate Number

  
ANAB Approval

Certificate Valid Through: 04/21/2020  
Version No. 003 Issued: 04/23/2019



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. 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 April 2017).



**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017**

**Lucideon M+P**

2210 Technology Drive  
 Schenectady, NY 12308  
 David Behnke  
 518-382-0082

**TESTING**

Valid to: **April 21, 2020**

Certificate Number: **L2287**

**Chemical**

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Inductively Coupled Plasma – Optical Emission Spectroscopy (ICP-OES)	ASTM E1479 CHM1097; CHM1004 CHM1013; CHM1018 CHM1019; CHM1020 CHM1077; CHM1078	Metals, Alloys	
Carbon/Sulfur Combustion Analysis	ASTM E1019; CHM1029	Metals, Alloys	
Fourier Transform Infrared Spectroscopy (FTIR)	ASTM D3677 CHM1060 CHM1092	Organics Polymers Elastomers	
Ion Chromatography	ASTM D4327; CHM1000	Inorganics	
Thermo-mechanical Analysis (TMA)	ASTM E831 CHM1081	Organics Polymers Elastomers Metals Composites	
Differential Scanning Calorimetry (DSC): Transition Glass Transition Melt/Recrystallization Temperatures	ASTM D3418 ASTM E1356 ASTM E794 CHM1084	Organics Polymers Elastomers Composites	



Chemical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Thermo-gravimetric Analysis - Differential Scanning Calorimetry (TGA-DSC) Thermo-gravimetric Analysis - Differential Thermal Analysis (TGA-DTA)	ASTM E1356 CHM1093	Organics Polymers Elastomers Metals Composites	
Viscosity: Brookfield	ASTM D446 ASTM D1824 ASTM D2196 CHM1072	Liquids	
Density	ASTM D792 CHM1002 CHM1028	Liquids	
pH  (0 to 14)	ASTM E70 ASTM D664 CHM1007	Liquids	
Copper Purity (Electrodeposition, Gravimetry) (99.99999%)	ASTM E53 CHM1024	Copper Metal	
Solids (Dissolved, Total, Suspended)	NCASI Technical Bulletin No. 291, National Council of the Paper Industry for Air and Stream Improvement  CHM1045; CHM1046 CHM1052	Liquids	
Beilstein Qualitative Halides Test	D.J. Pasto, C.R. Johnson, Organic Structure Determination- Prentice-Hall + R.L. Shriner, The Systematic Identification of Organic Compounds, 6th Ed., John Wiley & Sons  CHM1017	Solid + Liquid Organics	
SEM/EDS	SEM1001 ASTM E986 ASTM E1508	Metals, Alloys	





**Mechanical**

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Shore Hardness (20 to 90) A, D (0 to 100) M	ASTM D2240 CHM1058	Polymers Elastomers	
Rockwell Hardness  (63 to 82) A (50 to 94) B (25 to 63) C (77 to 97) E (61 to 95) F (90 to 118) M	ASTM E18 ASTM D785 MCH1006 MCH1058	Metals, Alloys Polymers	
Brinell Hardness (48 to 99) Full Scale	ASTM E110 MCH1005	Metals, Alloys	
Room Temperature Tensile  (Up to 120) kip	ASTM E8 ASTM D638 ASTM D3039 MCH1001; MCH1016 MCH1049; ELM1072	Metals, Alloys Polymers Composites Thermoset Laminates	
Elevated Temperature Tensile (Up to 120) kip	ASTM E21 MCH1000	Metals, Alloys Polymers Composites	
Charpy Impact (Up to 264) ft-lbs	ASTM E23 MCH1002	Metals, Alloys	
Bend Testing of Welds	ASTM E190 ASME B&PVC, Sect. IX MCH1008	Metals, Alloys	
Flexural Testing  (Up to 50) kip	ASTM D790 ASTM D6272 ASTM C1161 MCH1012 MCH1063 MCH1064	Metals, Alloys Polymers Ceramics	



**Mechanical**

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Compression Testing (Up to 120) kip	ASTM E9 ASTM D695 MCH1004; MCH1042	Metals, Alloys	
Shear Testing (Up to 10 000) lbf	ASTM D5379 ASTM D3518 MCH1043	Metals, Alloys Polymers	
Knee Implant Wear Testing  Axial Load: (Up to 1 000) lbf Axial Displacement: (+/- 1) in Flexion/Extension: (+/- 100) degrees Flexion/Extension Torque: (Up to 700) in-lbs IE Rotation: (+/- 20) degrees IE Torque: (Up to 350) in-lbs AP Displacement: (+/- 1) in AP Load: (Up to 450) lbf ML Translation: (+/- 6) mm Valgus Rotation: (+/- 7) degrees	BS ISO 14243-1 BS ISO 14243-2 BS ISO 14243-3	Metals, alloys, polymers, ceramics	



**Mechanical**

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Hip Implant Wear Testing  Axial Load: (Up to 1 000) lbf Axial Displacement: (+/- 0.75) in Flexion/Extension: (+/- 50) degrees Flexion/Extension Torque: (Up to 180) in-lbs IE Rotation: (+/- 20) degrees IE Torque: (Up to 70) in-lbs Abduction/Adduction: (+/- 20) degrees Abduction/Adduction Torque: (Up to 180) in-lbs	ISO 14242-1, -2 MCH1099 MCH1081	Metals, alloys, polymers, ceramics	
Endurance Properties of Partial and Total Hip Joint Prostheses (Up to 5 000) lb	ISO 7206-4 MCH1094	Hip stems	
Surface topography Surface roughness	ASTM F2791 I&A 1002	Metals, alloys, polymers, ceramics	White Light Interferometry
Microindentation Hardness Knoop, Vickers	ASTM E384 MLG1008	Metals, Alloys	
Effective Case Depth	SAE J423 MLG1016	Metals, Alloys	Knoop, Vickers
Macroetch / Evaluation	ASTM E340 MLG1025	Metals, Alloys	
Metallographic Preparation	ASTM E407 ASTM E3 MLG1003 MLG1049	Metals, Alloys	
Microstructural Evaluation	ASTM E407 ASTM E3 SAEJ423 MLG1016	Metals, Alloys	



**Mechanical**

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Grain Size	ASTM E112; ASTM E930; ASTM E1181; MLG1017	Metals, Alloys	
Intergranular Attack / Intergranular Oxide	P3DAG1 P29TF73; MLG1029	Metals, Alloys	
Digital Image Correlation	MCH1093		
Weld Evaluation	AWS D17.1; MLG1058	Metals, Alloys	
Failure Analysis	ASM Metal Handbook, 9th Ed., Vol 11	Utilizing Test Methods in this Scope of Accreditation	

**Electrical**

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Volume + Surface Resistivity < 500 x 10 <sup>12</sup> ohm	ASTM D257 ELM1024	Plastic Laminates	
Dielectric Breakdown < 150 kV	ASTM D149 ELM1025	Plastic Laminates	
Permittivity	ASTM D150 ELM1041	Plastic Laminates	
Conductivity	GE A50A268 ELM1065	Suppressor Tape SiC Powder	
Dissipation Factor	ASTM D149 GE A50A555 ELM1076 ELM1082	Stator Bars	
Electrical Breakdown ≤ 150 kV	ASTM D149 ELM1077 ELM1081	Stator Bars	

Note:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. L2287.
2. This laboratory offers commercial testing service.

  
 Vice President