

LABORATORY INSTRUMENTS

OAKDALE, MN

Capillary Electrophoresis (CE)	Manufacturer/Model
CE - SDS (Maurice)	Protein Simple
cIEF (Maurice)	Protein Simple

Chromatography	Manufacturer/Model
HPLCs: including UV/VIS, RI, PDA & Fluorescence Detection • 30	Agilent 1100, Agilent 1200 Waters Alliance
UPLC & UPLC/MS/MS • 8	Waters, Waters TQD, Waters H-Class Waters
UPLC/MS-TOF	Waters
Ion Chromatographs (IC) • 2	Dionex ICS-2100, Dionex ICS-5000+
GCs: including FID, ECD & TCD Detection • 14	Agilent 6890
GC/MS • 3	Agilent 7890B/5975 Agilent 6890/5973, Agilent 6890/5975
Headspace Analyzers • 5	Gerstel MPS 2 Twister, Perkin Elmer HS 40, Agilent 7694

Dissolution/Elution Equipment	Manufacturer/Model
Dissolution Baths Apparatus I, II & V • 49	Hanson Research SR8, Distek 2100B, VanKel VK7000, Distek Premiere 5100, Distek 2100
Dissolution baths Apparatus VII • 2	Agilent
Incubator Shaker • 13	Thermo Scientific SHKE4000, New Brunswick Scientific Excella E24R

Elemental Metals Equipment	Manufacturer/Model
Inductively Coupled Plasma (iCAP-OES)	Thermo Fisher iCAP 6500
Inductively Coupled Plasma (iCAP-MS) • 2	Thermo Fisher iCAP-Q
Atomic Absorption Spectrometer Flame & Graphite Furnace	Perkin Elmer AAnalyst 800
Mercury Analyzer	Perkin Elmer FIMS 1000
Microwave • 2	CEM/Milestone

Inhalation Drug Delivery	Manufacturer/Model
Controlled Temp/Humidity Lab Space	Custom facility space
Next Generation Impactors	MSP Corp
Anderson Cascade Impactors (ACI)	Andersen/Copley
Dose-Uniformity Sampling Apparatus (DUSA)	Custom fabrication
USP Apparatus B	Custom fabrication
High-Volume Pumps	Copley
CITDAS Software	Copley

Spectroscopy	Manufacturer/Model
FTIR Spectrometer-Solid Phase • 2	Perkin Elmer
UV/VIS Spectrophotometer • 3	BeckmanDU-800, Thermo Evolution 220
EDXRF Spectrometer	Rigaku NEX CG EDXRF Analyzer
Flame Photometer • 2	Cole Palmer
SoloVPE	C Technologies
Colorimeter	Klett

Gel Imaging	Manufacturer/Model
Calibrated Densitometer	Bio-Rad GS-900

Laboratory Equipment	Manufacturer/Model
Auto Titrator - Karl Fischer Coulometric	Mettler Toledo C30
Auto Titrator - Karl Fischer Potentiometric	Metrohm (751 GPD Titrimo), Titrande
Auto Titrator - Karl Fischer Volumetric	Mettler Toledo V20
Multi-mode Plate Reader	Molecular Devices SpectraMAX ix3
Karl Fischer Titrator • 2	Accumet Model 100
Total Organic Carbon Analyzer • 3	Tekmar-Dohrmann Phoenix 8000, Tekmar-Dohrmann Fusion, Sievers M9
Polarimeter	Rudolph Research Model Autopol IV
Viscometer, Rotational • 2	Brookfield LVDV II+, Brookfield RVDV II+P
Viscometers, Ubbelohde (multiple)	Cannon
Inherent Viscosity Meter	Rheotek RPV-1
Disintegration Apparatus	Agilent VK-100
Kjeldahl Nitrogen Analyzer	Foss Kjeltec 8100
Moisture Balance	Arizona Instruments Computrac 4000XL
Osmometer	Wescor Vapro 5520
Potent Compound Hood • 2	Flow Sciences FS10301
RoTap Sieve Shaker	Tyler RX30
Accelerated Solvent Extractor	Dionex ASE 200
Freezer Mill	Spex 6850
Turbidimeter	HF Scientific MICRO 1000IR
Vacuum Oven • 3	Binder
RotoVap/Waterbath	Buchi (R114)/(B480)
Soxtherm Automated Extraction • 2	O I Analytical
Tapped Density	Varian 50-1000

Microbiology Testing Equipment	Manufacturer/Model
Liquid Particle Counting System • 2	HIAC Model 9703
Kinetic Bacterial Endotoxin System	Charles River Endosaf EndoScan V
SteriTest-Closed Sterility Test System	Millipore
Water Activity Meter	Decagon Devices AquaLab4
Active Air Sampler for Viable Microbial Particles • 8	Biotest, EMD
Laser Particle Counter, Active Air for Total Particulate • 7	HACH, EMD
Image Analyzer/Microscope • 2	Fryer Image Analyzer/Nikon Eclipse E400, Nikon Eclipse E600
Light Microscope with Florescent	Olympus BX50F4
Microbial Incubators • 19	Various
Stereoscope	Nikon SMZ-2T, Model H-III (camera)

Physical Testing Equipment	Manufacturer/Model
DSC/TGA	TA Instruments
Instron • 2	Instron 4201, MTSC41
Tablet Hardness Tester	Dr Schleuniger Pharmatron 8M
I-Mass	Instrumentors, Inc. SP-2000
Probe Tack Tester	TMI (Testing Machines, Inc) Lab Master
Seal Strength Tester	Carleton Technologies Test-A-Pack Model F100-2600
Durometer	Shore Type A/Type D
Heat Sealer	Sencorp 12AS/2
Penetrometer	Koehler Instrument Company

Stability Storage	Manufacturer/Model
Stability Storage	see website for current capacity

Our labs are cGMP-compliant, FDA registered, DEA registered and ISO/IEC 17025:2005 accredited.



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Working Together to Protect Our Environment, and Improve Our Health.



OAKDALE, MN

Pace Analytical Life Sciences operates a network of four (4) locations to provide contract product development and laboratory testing services to the pharmaceutical, biopharmaceutical / biologics, and medical device industries. Our customers range from new and innovative start-up companies through to the veteran industry leaders. Our contract product development services help bring new therapies to market and our contract laboratory services to ensure the purity, potency, safety, efficacy, and shelf life of marketed products.

Pace Analytical Life Sciences in Oakdale, Minnesota, has been providing chemistry and microbiology testing services to industry for more than 25 years. Steady growth of our business has contributed to recent expansion of this facility to increase our capacity and offer new capabilities. Key attributes of this facility include:

- 60,000 ft² facility with available capacity and the ability to expand
- FDA registered
- ISO / IEC 17025 accredited
- DEA registered for the handling of controlled substances, schedules I – V

The laboratory has robust risk-management strategies to ensure continuous reliable operations:

- Diesel-powered electrical generators supply backup power to key equipment, such as computer network systems, stability storage chambers and microbiology incubators.
- The computer network systems and certain laboratory areas utilize Uninterruptible Power Systems (UPS) to cover the momentary gaps in supply, ease the transition and ensure clean power to critical systems.
- A continuous monitoring system (CMS) captures data (e.g., temperature and/or humidity) every few minutes in designated ambient laboratory areas, stability storage chambers and microbiology incubator systems to ensure that environmental control systems are operating properly.



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