

# OAKDALE, MN FACILITIES & EQUIPMENT LIST



## FACILITY INFORMATION

Pace® Life Sciences operates a network of 8 locations to provide contract product development (CDMO) 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® 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 ft<sup>2</sup> 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.

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

## LABORATORY INSTRUMENTS

CAPILLARY ELECTROPHORESIS (CE)	MANUFACTURER/MODEL
CE - SDS (Maurice)	Protein Simple
cIEF (Maurice)	Protein Simple
PA800 Plus	SCIEX

CHROMATOGRAPHY	MANUFACTURER/MODEL
HPLCs (UV/VIS, RI, PDA, CAD & Fluorescence Detection) <b>[56]</b>	Waters Alliance, Agilent 1100/1200/1260/1290
UPLC & UPLC/MS/MS <b>[13]</b>	Waters, Waters TQD, Waters H-Class
UPLC/MS-TOF <b>[2]</b>	Waters
Ion Chromatograph <b>[3]</b>	Dionex ICS-2100, Dionex ICS-5000+
Gas Chromatograph (FID, ECD & TCD Detection) <b>[16]</b>	Agilent 6890
GC/MS <b>[4]</b>	Agilent 7890B/5975, Agilent 6890/5973, Agilent 6890/5975
Headspace Analyzers <b>[7]</b>	Gerstel MPS 2 Twister, PAL RSI 850, Perkin Elmer HS 40, Agilent 7694

DISSOLUTION/ELUTION EQUIPMENT	MANUFACTURER/MODEL
Dissolution Bath Apparatus I, II, & V <b>[59]</b>	Hanson Research SR8, Distek 2100B, VanKel VK7000, Distek Premiere 5100, Distek 2100
Dissolution Bath Apparatus VII <b>[2]</b>	Agilent
Incubator Shaker <b>[13]</b>	Thermo Scientific SHKE4000, New Brunswick Scientific Excella E24R
Disintegration Apparatus	Agilent VK-100

ELEMENTAL METALS EQUIPMENT	MANUFACTURER/MODEL
Inductively Coupled Plasma (iCAP-OES)	Thermo Fisher iCAP 6500
Inductively Coupled Plasma (iCAP-MS) <b>[3]</b>	Thermo Fisher iCAP-Q
Atomic Absorption Spectrophotometer Flame & Graphite Furnace	Perkin Elmer AAnalyst 800
Mercury Analyzer	Perkin Elmer FIMS 1000
Microwave <b>[3]</b>	CEM/Milestone

GEL IMAGING	MANUFACTURER/MODEL
Calibrated Densitometer	Bio-Rad GS-900

## LABORATORY INSTRUMENTS

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	HACH DR-850
Flame Photometer (2)	Cole Palmer
SoloVPE	C Technologies
Colorimeter	Klett

PARTICLE SIZING	MANUFACTURER/MODEL
Particle Size Analyzer	Malvern Mastersizer X
RO-TAP Sieve Shaker	Tyler RX30

CONTAINER-CLOSURE INTEGRITY	MANUFACTURER/MODEL
Oxygen Headspace	Lighthouse FMS
Dye Ingress/Microbial Ingress	Custom Fabrication

STABILITY STORAGE	MANUFACTURER/MODEL
Stability Storage Chambers	See Website for Capacity

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

LABORATORY EQUIPMENT	MANUFACTURER/MODEL
Auto Titrators-Karl Fischer Coulometric	Mettler Toledo C30
Auto Titrator-Karl Fischer Potentiometric (2)	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, Fusion, Sievers M9
Polarimeter	Rudolph Research Autopol IV
Viscometers, Rotational (2)	Brookfield LVDV II+, RVDV II+P
Viscometers, Ubbelohde (Multiple)	Cannon
Inherent Viscosity Meter	Rheotek RPV-1
Kjeldahl Nitrogen Analyzer	Foss Kjeltex 8100
Moisture Balance	Arizona Instruments Computrac 4000XL
Osmometer (2)	Wescor Vapro 5520, AI OsmoTECH
Potent Compound Hood (2)	Flow Sciences FS10301
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	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