



SUMMARY OF CAPABILITES & EQUIPMENT

Alphaora Research Inc. currently employs a total of 87 people. Of these, 55 are scientists, with 12 being Ph.D. chemists. In addition, Alphaora employs 4 engineers as well as supporting administrative personnel.

Synthetic Organic Chemistry

- 300 MHZ Bruker NMR (H,C,F,P)
- SD-2 Varian Prep HPLC, 200ml/min
- 75M Flash Biotage LC
- Isolera-1 Biotage LC
- 6"x 4ft static chromatography columns
- 0.5 to 4L Parr Hydrogenators
- HEL Thermal Screening Unit
- Over 100 linear feet of fume hood space
- LC/MS: Agilent 1200 HPLC interfaced with Agilent XCT Ultra ion trap (high sensitivity trap capable of performing multiple MS/MS stages)
- MultiMax™ - Automated process development and calorimetry tool

Analytical

- 8 Agilent 1100/1200 HPLC's with diode array and variable wavelength detection
- 5 Agilent 1200 Rapid Resolution LC's with diode array detection.
- 5 Waters 2695 HPLC's with diode array, variable wavelength and ELSD detection.
- 5 Agilent 6890N GC's with FID and TCD detection, 3 with Headspace Autosamplers
- 1 Dionex ICS 3000 Ion Chromatograph (both Anion and Cation)
- 1 Bruker microTOF focus LCMS (Accurate mass capability)
- 1 FTIR
- 1 UV Spectrophotometers
- 1 Polarimeter
- Volumetric and Coulometric Karl Fisher Titrators
- Multi purpose potentiometric titrator
- 1 TA Instruments Q200 DSC System
- 1 TA Instruments Q5000IR TGA System
- ICP testing available through local contract laboratory through CDA
- Single Crystal and Powder X-ray Diffraction available through local university under CDA

Stability Testing

- 6 Stability Chambers set at:
 - o -80°C
 - o -20°C
 - o 5°C
 - o 25°C/60%RH
 - o 30°C/65%RH
 - o 40°C/75%RH
- ICH photostability testing capability

KiloLab

- 4L and 20L Parr Pressure Reactor
- 20L Rotary Evaporator
- 150M and 400L Biotage Flash Chromatography Systems
- Dedicated HVAC system with HEPA filtration
- Walk-in 12ft x 8ft fume hoods within separate room with air lock entry
- Walk-in 5ft x 3ft fume hood within separate room with air lock entry
- Warehouse and storage rooms
- 20L and 60L Buchi Glass Lined reactors -80 to 200C
- Associated addition and work up equipment
- Glass reaction vessels
- 50L Glass reactor -30 to 150C

Pilot Plant

- 200L Glass lined reactor -80 to 200C
- 400L Glass lined reactor -30 to 200C
- Supporting equipment and facilities

Alphaora Research Inc.

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