

The MSU Bioeconomy Institute in Holland, Michigan offers specialty chemical scale-up and manufacturing services utilizing over 30,000 liters of Glass-Lined, Hastelloy and Stainless Steel reaction and distillation vessels. The facility has a Class 1, Division 1, Group D Electrical Rating, is Process Safety Management compliant and has a flexible State of Michigan Air Permit, which enables us to accommodate most standard solvents and reactions. The site employs engineers, chemists and chemical operators with extensive experience in specialty chemical processing.



EQUIPMENT OVERVIEW (>30,000 LITERS OF TOTAL CAPACITY)

STILLS

OPERATING PARAMETERS

- Temperature: -10 to 140°C
- Pressure: Full Vacuum to 75psig
- Variable Agitation

VESSEL SIZES

- 2 X 4000L Glass Lined
- 2 X 2000L Glass-Lined
- 2 X 800L Stainless Steel
- 800L Hastelloy C276
- 400L Glass-Lined
- 200L Glass-Lined
- 80L Glass-Lined

REACTORS

OPERATING PARAMETERS

- Temperature: -10 to 140°C
- Pressure: Full Vacuum to 75psig
- Variable Agitation

VESSEL SIZES

- 4000L Glass Lined
- 2 X 2000L Glass-Lined
- 800L Glass-Lined
- 400L Glass-Lined
- 200L Glass-Lined
- 120L Glass-Lined

TANKS

OPERATING PARAMETERS

- Pressure: Full Vacuum to 75psig

VESSEL SIZES

- 4000L Glass Lined
- 2000L Glass-Lined
- 800L Glass-Lined
- 120L Glass-Lined

CENTRIFUGES

- 2 x 40in Basket, Hastelloy C276

DRYERS

- Temperature Range: 30 to 95°C
- Pressure Range: Atmospheric to Full Vacuum
- Vacuum Tray Dryers (~250 kg capacity/each)
- 500L Glass-Lined Rotary Vacuum Dryer (~150 kg capacity)
- 850L Geudu Pan Dryer, Hastelloy C22

FILTERS

- Niagara Filters, 316 Stainless Steel
 - » 16 - Plate 18 in
 - » 4 - Plate 18 in
- Bag Filter
- Cartridge Filters

FILTER DRYERS

- 0.5 M² Filter Dryer, Agitated, Hastelloy C276
 - » Pressure: Full Vacuum to 75 psig
 - » Temperature: 20-90°C
- 1.6 M² Filter Dryer, Agitated, 316 Stainless Steel
 - » Pressure: Full Vacuum to 75 psig
 - » Temperature: 20-90°C

SPECIALIZED EQUIPMENT

- 400L Low Temp Temperature Hastelloy C276 Reactor
 - » Cooling capability with Liquid Nitrogen to -100°C at 5 psig; or
 - » Operating Temperature range: 25-80°C at 75 psig
- 400L Hastelloy C276 Reactor
- Operating Temperature range 25-80°C at 75 psig
- 120L GL High Temperature Still with 316 stainless steel Fractionation Column or 316 stainless steel Riser; Heating capability to 230°C
- 150 sq. ft. Cold Room



Please contact us to discuss your project needs and requirements.

PHONE: 517-336-4669

EMAIL: bioeconomy@msu.edu

BIOECONOMY.MSU.EDU

REV 07.11.2024