

## **Facilities and Equipment Brashears Lab**

**The food microbiology laboratory is located in the new Experimental Sciences Building (ESB) on the Texas Tech University campus. The building is dedicated to research and houses only research activities. The food microbiology laboratory is 3500 ft<sup>2</sup> with additional rooms for media preparation, tissue culture, walk-in coolers, and instrumentation. Each floor of the building has 2 centralized autoclaves. The building houses a BSL-2 animal facility, plant growth chambers, as well as state of the imaging center that houses our electron microscopy program, and a CORE facility with sequencing facility, Microarray Scanner, Real-Time PCR, Mass Spectrometry (MALDI TOF/TOF) and other molecular biology or biochemistry tools and equipment. The following pieces of equipment are located in the laboratory:**

- 3 Spiral Plating Systems - Spiral Biotech
- 2 Q-count Automated Colony Counters with Software and Computer - Spiral Biotech
- Gel Doc System with Software and Computer - Bio-Rad
- BioNumerics Software for Genetic Fingerprint, Character and Cluster Analysis - Biosystematica
- GeneAmp PCR System - Applied Biosystems
- Large Autoclave, Centralized Steam Heated
- 5 Community Autoclaves in the Experimental Sciences Building
- Portable Sterilizer - Yamato
- Anaerobic Chamber - Coy
- Marathon High Speed Centrifuge - Fisher
- Mini-Centrifuge - Eppendorf
- 3 Darkfield Colony Counters - One with Digital Counter
- Datalogger Thermocouple Auto Recorder and Software - Campbell Scientific Inc.
- 4 Ultralow Upright Freezer - Revco
- Household Freezer
- Household Cold Room
- Large Biological Safety Cabinet - Fisher Hamilton
- Small Biological Safety Cabinet - BioPharm
- 9 Standard Incubators
- 3 Refrigerated Incubators
- 2 Microscopes - 400-1000x Magnification, One Brightfield and One Phase Contrast
- BAX<sup>®</sup> system
- pH/ISE Meter
- Digital Spectrophotometer
- 3 Stomachers - Seward
- 4 Waterbaths
- 15 Dell Computers (Laptops and Desktops), 6 Apple Laptops
- Anaerobic Jars
- Balance - Denver Instruments
- Balance - Mettler-Toledo Analytical Balance
- Balance - Ohaus Instruments
- UV Cabinet - Spectroline

- Small Upright Refrigerator
- Large Laboratory Refrigerator - Jewett
- Multi-pet Pipettes
- Repeater Pro Pipetter - Eppendorf
- E-pure Water Deionizer
- Stir Plates
- BioRad ChefMapper Pulsed Field Gel Electrophoresis
- Owl Electrophoresis System w/ 4 Gel Boxes
- 2-Benchtop Clean Bench Hood
- New Brunswick Media-Matic/ Pour-Matic
- Omnisense Media Dispenser - Wheaton
- Miscellaneous Glassware sufficient to complete projects including test tubes, beakers, pipets (and micro-pipets), flasks, dilution bottles, etc.
- Gravity Oven
- Shaker-Incubator (Refrigerated)
- 4 Programmable Multichannel Pipettes – Matrix
- Utility Vehicle (transport of media and other lab supplies among TTU facilities) - Polaris
- Light Microscope with Digital Camera and Monitor-Nikon
- 5 Laser-jet Printers (Dell); 1 Label-Maker Printer (Brady)
- Ice Maker

**In addition to the microbiology laboratory, a 750 ft<sup>2</sup> pathogen processing area is in a separate room from the lab in the Food Technology Building. In this area we conduct HACCP validation studies with pathogen inoculated foods and process them under industry conditions. Equipment housed in this area are as follows:**

- Bowl Chopper - Koch
- Pickle Injector - Gunther
- Mechanical Tenderizer - Jaccard
- Injectomatic Pi29 Automatic Brine Injector - Koch
- 2 Vacuum Packagers - Koch
- Modified Atmosphere Packaging Machine - G. Mondini S.p.A.
- Mini-Pak CVU-200E Processing Oven with Hot and Cold Smoking Capabilities – Enviro-Pak
- Small Capacity Mixer/Grinder
- 100 lb Capacity Mixer
- 100 lb Capacity Grinder
- Two Deli Slicers - Hobart
- Coffin-Type Display Cooler - Tyler
- Ice Machine - Ice-O-Matic
- 12'x13' Walk-in Cooler
- CHAD Spray Cabinet / belt
- Wire and Plastic Conveyor Belt System
- Miscellaneous small processing and safety equipment sufficient to complete projects including knives, stainless mesh gloves cutting boards, etc.

**We also have a mobile laboratory that can be taken to farms or processing plants for on-site sample collection and analysis. The mobile laboratory, a converted 26' travel trailer, is equipped with bathroom facilities and refrigerator/freezer from the original design. The trailer was retrofitted with workbenches and can house incubators, waterbaths, an autoclave and other supplies needed for on-site pathogen analysis.**