UNIVERSITY OF LOUISIANA AT LAFAYETTE

STEP Committee

Technology Fee Application

New Autoclave for Biology Labs in VLW Hall
Title

Penny Powell, Sophie Plouviez
Name of Submitter

Department of Biology
Organization

Title: New Autoclave for Biology Labs in VLW Hall Date: 6/27/2023

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Department/College/Org: Department of Biology, College of Sciences

ABSTRACT

Being able to sterilize media and decontaminate materials is essential to doing any work in microbiology. The autoclave allows us to prepare media that is used to grow bacteria and fungi in the biology labs, and it allows us to sterilize the used glassware and cultures after the labs are complete. It is also used to sterilize reagent for molecular and cellular experiments.

a. Purpose of grant and impact on student body as a whole.

The purpose of this grant is to replace an autoclave that can no longer be serviced and isn't working and to provide an additional autoclave for the biology students to use. The Department of Biology used to have 5 large capacity autoclaves in Wharton Hall. We currently only have one large capacity functional autoclave on the fourth floor of VL Wharton Hall. At least 200 students every fall and spring take a microbiology or biology laboratories that require the use of an autoclave, and a single autoclave is not sufficient to serve the increasing needs.

The following labs regularly use the autoclave, BIOL 263 General Microbiology Lab which is the major's microbiology lab; BIOL 264 Microbiology Lab which has three or four sections every fall and spring. Each microbiology section has 20-28 students. BIOL264 lab is open to any major and is taken by students majoring in KNES, Education, Biology, and other majors. Students in the BIOL 400 Media Preparation lab use the autoclave to make all the media used in BIOL 263 and BIOL 264. In addition, many of our students take BIOL 410 Individual Projects in which they use the autoclave for their research projects.

There has been an increase in the number of courses being taught on the fourth floor of VL Wharton that require the use of an autoclave. New courses such as BIOL 202 (20 students every fall), BIOL 328 Microbial Physiology and Genetics lab (15-20 students every spring), BIOL 428G Advanced Cell Biology Labs (15-20 students every fall), BIOL 443 Immunology lab (15-20 students every spring), and BIOL 444G Advanced Molecular Techniques (15-20 students every other spring), are now being taught in Wharton and require usage of the autoclave to sterilize reagents or prepare media.

In addition, with the hiring of a new faculty starting fall 2023, Dr Ramona Moles, the need for an autoclave will increase even more as she will be offering BIOL 358 Pathogenic Microbiology lab, teaching students how to identify pathogenic organisms. Undergraduate and graduate students who will be doing research in her lab will also need access to a functional autoclave.

UL is now an R1 institution and opportunities for undergraduate students to do research as BIOL 410 Individual Projects, but also through various scholarships, paid or volunteered opportunities, are increasing and are expecting to keep increasing. All the Biology research labs in Wharton fourth and fifth floors and their students uses the autoclave.

Due to this increase in autoclave usage, the one current functional large-scale autoclave we currently have does not meet the needs and we need a 2nd large-scale autoclave in Wharton Hall.

a. Projected lifetime of enhancement – This autoclave should last 30-40 years.

b. The person responsible for the installation, maintenance and operation of the autoclave is Penny Powell who is the lab coordinator for all the microbiology labs.

The Getinge representative will install and train Penny Powell and Sophie Plouviez on the use of the new autoclave. Penny Powell and Sophie Plouviez will then train other users, including faculty, graduate and undergraduate students.
The Department of Biology will maintain the annual service agreement.

c. Justification
Replacing the non-functional and non-serviceable autoclave will allow us to continue to provide media for the teaching labs, decontaminate the used materials, and sterilize reagent for molecular and cellular experiments. It will allow to face the increasing needs in the department. In addition, having 2 functional autoclaves in Wharton is fundamental as back-up when one is undergoing maintenance to prevent disruption of experiment being done in both courses and research labs.

Previously funded STEP Grant:

2022: *Bringing Molecular/Cellular Grade Ultrapure Water to Billeaud and Wharton Biology Laboratories*. $14,188. PI: Sophie Plouviez, Co-PI: Ivan Moberly.
2021: *Virtual Cadaver Dissection Table and Wireless Access Improvement for The Anatomy & Physiology Teaching Laboratory*. $82,485.76 PI: Brandon Waltz, CoPI: Michael Fulbright, William Schmidt, Sophie Plouviez, Sherry Krayesky-Self
2021: *Idea Board & Audio Visual (AV) Equipment for Undergraduate Teaching Laboratories in the Department of Biology*. $31,878.70. PI: Sophie Plouviez, CoPIs: Sherry Krayesky-Self, William Schmidt, Ritwij Kulkarni
2018: *Physiology Lab Kits/Computer for Biol 221/318.* $30.718.00. PI: Penny Powell
2018: *New Autoclave for Microbiology Labs.* $43,577.00. PI: Penny Powell
2017: *Upgrading a Molecular Biology Teaching Lab*: $29,392.20. PI: Yi-Hong Wang, CoPI: Sophie Plouviez
2014: *Microbiology Lab Computer/Projector.* $2,512.78. PI: Penny Powell

Budget Proposal

1.	**Equipment**	**$42,941.00 (see attached Quote from Getinge for installation of new autoclave and removal of old autoclave.)**
2.	**Software**	**$0.00**
3.	**Supplies**	**$0.00**
4.	**Maintenance**	**$0.00**
5.	**Personnel**	**$0.00**
6.	**Other**	**$0.00**
TOTAL:		**$42,941.00**

See quote for new autoclave below.

University of Louisiana Lafayette

Penny Powell

6/22/2023

Quote number: **GETQ3377-02**

Project: **LSS 275**

Prepared by:

Alex Von Lange

Sr. Regional Account Manager

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QUOTATION

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Proposal For:

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Prepared By:

Alex Von Lange
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Email: alex.vonlange@getinge.com
Date: Jun 22, 2023
Quote Number: GETQ3377-02
Opportunity #: O-140929

Here is the quote you requested.

Line	Qty	Description	Unit Price	Ext. Price
001	1	LSS 275 (Single Door, Rack & 2 Shelves)	$35,000.00	$35,000.00

Getinge Lancer LSS 275 is a microcomputer controlled steam sterilizer that offers the option of either prevacuum or gravity displacement cycles for sterilization of laboratory, research and animal care supplies. All models feature the advanced 8.4-inch Avanti touch-panel control interface with 19 selectable pre-programmed cycles. Custom name cycles for quick and accurate identification. Select from four cycle-process output data screens: Bar Graph; Circle Graph; Detail Display; or Plot Graph. The PACS control system features – NetCOM enabled Ethernet connection for remote process monitoring; a thermal printer that documents cycle performance; and a user accessible connection for downloading cycle records to a USB flash drive. Program settings are password protected.

- 21"x21"x38" Chamber
- Single Manual Door
- With Interior Rack & 2 Shelves
- NetCOM enabled Ethernet for T-DOC or Getinge Online
- Exports cycle records to USB storage device

Catalog# 5SSVUMQRAAAA
**Catalog number subject to change based on final equipment order

Line	Qty	Description	Unit Price	Ext. Price
002	1	Getinge Professional Installation & Removal at Final Location - LSS 275 Services Provided: Single mobilization, relating to: • Equipment assembly • Identify final utility connection points • Perform equipment startup • Getinge will provide one (1) operator & supervisor training session at no charge during equipment startup. Training will cover equipment operation, HMI navigation, and common equipment questions. • Getinge personnel will be onsite during normal working hours Equipment Removal Includes equipment dis-assembly, rigging to loading dock. Off-site removal and disposal of equipment is not included. Note: Customer responsible for decommissioning, decontaminating, and emptying tanks and reservoirs, Lock Out/Tag Out and clear egress. Services Not Provided (unless purchased): • Union Labor, Certified Payroll, receiving and unloading of equipment on site, transporting equipment, rigging equipment, ingress pathway evaluation, protection of facility along ingress, building structural analysis, return trips, final utility connections, tooling, core drilling, piping insulation, and additional training/video-taped training sessions • Permits, licensing, inspection fees, site specific safety training/orientation, and fees for site specific background checks (drug screening, inoculations, etc.) • All vents (safety relief valves, blowdown tank exhaust, etc.) should be in accordance with local code requirements and accomplished by others. • Embedded anchors, installation and through slab anchoring, mounting/leveling pads. Notes: • It is Getinge's expectation that rigging and contractor crews will be staffed appropriately. In the event of an under staffed or non-professional rigging crew being utilized, Getinge will determine the length and time on site and it may result in additional charges • No overtime or understaffed supervision unless specifically noted • Class room training with literature is available at an additional cost. Customer specified training program is available at additional cost. • Please refer to our "Terms & Conditions" for additional information relating to Getinge Installation Services PLEASE NOTE Installation/Drawings: Customer is responsible for confirming proper fit and finish with approved drawings. If the proposed equipment does not fit in the allocated area, any modifications required to the equipment will be at additional cost to the customer. Customer is responsible to evaluate site conditions and review the Getinge installation inclusions and exclusions. Specifically, clear ingress from the loading dock to the installation area is expected: doorways, elevators, hallways, sprinkler heads, wall bumpers and floor protection must be reviewed and approved by the customer. Further, customer confirms adequate utilities, (steam, air, water, electric and drain) are readily available, properly terminated, and do not interfere with equipment placement.	$5,672.00	$5,672.00

Line	Qty	Description	Unit Price	Ext. Price
003	1	Final Utility Connections LSS 275 Services Provided: • Final utility connections to un-energized utility termination points within five (5) linear feet of equipment connections points Notes: • Final utility connections through any penetrations not included • Isolation valves and utility gauges are recommended and shall be provided by the customer • Refer to Getinge Professional Installation description	$2,269.00	$2,269.00

Local and/or State Tax not included.

Please contact me if I can be of further assistance.

SubTotal	$42,941.00
Estimated Shipping	Prepaid & Add
Total	**$42,941.00**

Customer Acceptance (please initial) _____