



Guidelines Core Laboratories Facilities



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GUIDELINES FOR THE USE OF THE CORE LABORATORIES

The Core Instrumentation Laboratories, or Core Labs, consist of two laboratory rooms on the third and sixth floors of the Medical Sciences Building. These laboratories house large relatively expensive research instruments, which are shared among the faculty, students and staff on campus. Two of the labs are independently air-conditioned and available 24 hours per day, seven days a week. The remaining laboratory are the ultra-pure, water producing facility are available during normal working hours.

User training and assistance on all instruments is available for campus personnel through the Core Laboratory technician or the project director. Periodic user training on specific instruments is also provided through specialized seminars.

Description of the facility

A. Physical location:

1. Department of Physiology,
Room A-656, 6th Floor
2. Department of Pathology
Room-607-A, New Wing, 6th Floor
3. Department of Microbiology
Room B-326a, 3rd Floor

B. Dámaris Gavillán

Core Labs Technical

(787) 758-2525 Ext.1613

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Hours for technical assistance: 7:00am-3:00pm

I. Instrumentations (Appendix E)

1. Room A-656:
Core Lab Office

2. Room 607-A

- Beckman Ultra Centrifuges, an Optima L-100 XP (100,000 rpm), rotors in a variety of configurations for centrifuge.
- Beckman medium speed refrigerated centrifuge, Model J2-21 with rotors.
- Beckman Liquid Scintillation Counter, Model LS-6500, for multiple isotopes and dual label counting of C-14 and H-3, programmable, 200 samples.
- A Beckman DU-7 Spectrophotometer, for spectral, timed, controlled environment visible and UV and Printer.
- Beckman Gamma Counter, Model 5500 B with IsoSet Modules for I-125, Cs-137, Co-57, Cr-51, FE-59 and universal; 200-sample capacity.
- Shimadzu Spectrofluorophotometer, Model RF-5000U.
- VersaDoc, Imagine System, Bio Rad, Model 4000
- Two Ultra-Pure Water System (Millipore and Barnsted)
- Flaked ice, 600 lb. capacity.

3. Room. B-326a:

- Millipore Ultra Pure Water System
- Ice-maker machine, 400 lb. capacity.
- Beckman Ultra Centrifuge, Model L8-70, with rotors.
- Sorvall Model RC-2B, medium speed refrigerated centrifuge and rotors (21,00 rpm).
- Beckman Spectrophotometer DU-520, UV and Visible.
- Beckman Gamma Counter, Model 5500 with IsoSet Modules for I-125, Cs-137, Co-57, Cr-51, Fe-59 and universal; 200 samples capacity
- Beckman Scintillation Counter LS-6500, for multiple isotopes and dual label counting of C-14 and H-3

5. Rotors Available For Core Labs

The following rotors are available for Beckman Ultracentrifuges:

All rotors are kept in A-658

80 Ti Titanium rotor
SW 70 rotor
SW 55 Ti Swinging Bucket rotor
SW 50.1 Swinging Bucket rotor
SW 28 Swinging rotor
50 TI rotor
41 rotor
30 rotor

The following rotors are available for the Beckman J2-21 medium speed centrifuge:

JA 20.1 rotor
JA 17 rotor
JA 14 rotor
JS 13.1 Swinging Bucket rotor

The following rotors are available for the Dupont Sorvall medium speed centrifuge:

HB-4 Swinging Bucket rotor
HS-4 Swinging Bucket rotor
GSA rotor

II. Eligibility

- A. All investigators that justify the use of the laboratory with a research project will be eligible for the use of the facility. To facilitate this process, the Laboratory of Core Labs requires that users provide evidence of training in the use of the Ultra Pure Water System and Ultra Centrifuge.
- B. Priorities for the use of the facility are as follow:
 - 1st Priority: RCMI Active Investigator/ Technicians.
 - 2nd Priority: Investigators of Medical Sciences Campus.
 - 3rd Priority: Graduated student of Medical Sciences Campus and Technicians.
 - 4th Priority: Investigators of other campuses of the University Of Puerto Rico or private institutions / laboratories.

III. Rules and Regulations

A. Generals

1. **Required user I.D. card** to access to the Core Lab. Office A-658. **(Appendix A)**
2. **Sign up the Log Book for any instruments to be used. (Ex. Appendix B)**
3. Individual or group training is required for using any instrument located in the facilities.
4. Transport all samples in covered racks and properly labeled, especially radioactive samples. Radioactive Safety. **(Appendix D)**
5. The working area must be cleaned after use.
6. **The Principal Investigator of each lab will be responsible for any problem or situation related to the use of the facility by his/her personal laboratory staff.**
7. **Leaving samples and materials in the instruments of the Core Labs Facilities is prohibited.**
8. **If problem arise during the use of any of the instruments, fill out a Problem Report Form (Appendix C) and return it to the Lab. Technichian. In Case of Emergency, please call Dámaris at Ext. 1613 or RCMI Program Ext. 1634,1620.**

B. Ultra Pure Water System

1. Basic Training in the use of the Water System.
2. **Get the connection cable of the Millipore Water System** at the Core Lab. Office (A-658). When you finish bring it back to the office.

C. Centrifuge and Ultra Centrifuge

1. Have a four hours Basic Training in the use of the Ultra Centrifuge.
2. **Reserve the Rotors** at least 24 hours before you use the Ultra Centrifuge.
3. Clean and dry when you returned the rotor.

D. Scintillation Counter LS-6500

1. If you have samples more than read two hours, read the samples after 4:00pm
2. Please clean the equipment before leaving the Core Facility

IV. Recommended References

1. Training for Ultra Centrifuge Manual.
2. BioAnalytical Instruments Co. will provide advice related to Beckman Instruments.

V. RCMI Acknowledgment

All investigators using the Core Laboratories Facilities for their investigations should acknowledge this support by including the following sentence in their publications:

“THIS INVESTIGATION WAS SUPPORTED, IN PART, BY A RESECH CENTER IN MINORITY INSTITUTIONS AWARD, G12RR-03051, FROM THE NATIONAL CENTER FOR RESERCH RESOURCES, NATIONAL INSTITUTES OF HEALTH.”

Your cooperation in this respect is vital to the success of the program and the support of this facility.

Copies of publications acknowledging support to the RCMI Program should be sent to our office to include the reference in our progress report:

RCMI PROGRAM
OFFICE 621-A
6th FLOOR
UPR MEDICAL SCIENCE CAMPUS
Tel: (787) 763-9401
Fax: (787) 758-5206
E-mail: efernandez@rcm.upr.edu

VI. Approval of Guidelines:

Approved by: _____
Dr. Emma Fernández-Repollet
Director, RCMI Program

Date: _____

Appendix

Appendix D

MILLIPORE RO-90 ULTRA PURE WATER SYSTEM



MILLIPORE RIOS ULTRA PURE WATER SYSTEM



BECKMAN SPECTROPHOTOMETER DU-520



BECKMAN SPECTROPHOTOMETER DU-7



BECKMAN SCINTILLATION COUNTER LS-6500



BECKMAN ULTRACENTRIFUGE L8-70



BECKMAN ULTRACENTRIFUGE OPTIMA 100



BECKMAN GAMMA COUNTER 5500



SHIMADZU SPECTROFLUOROPHOTOMETER



ICE MACKER



BECKMAN CENTRIFUGE J2-21



BIO-RAD, GEL DOC



Appendix A

Name: _____		Date: _____	
Investigator: _____			
Department: _____		Student in: BS, MS, PhD, Lab. Tec.	
Extention: _____			
Emergency Phone: _____			
TRAININGULTRA CENTRIFUGE _____ approve			
Core Labs Instrumentations: _____			

Appendix C

Core Labs Facilities Problem Report Form

Date: _____

Time: _____

Operator: _____

Instrument: _____

Description of Problem:

Send to: _____

Rcvd/date: _____

Action Taken:

Appendix D

Radioactive Safety

Department of Radiological Sciences UPR School of Medicine

(At this moment is under revision by the Radioactive Safety Officer)

1. Wear lab coat and gloves.
2. The transportation rack of samples with isotopes must be identified with Principal Investigator's name, laboratory and isotope in use.
3. Every sample must be cover and identified as mention number 2.
4. Leaving racks of samples in the Core Labs Facilities is prohibited.
5. Pick up the samples once they are read by the instrument in use.
6. Samples that are not identified and not Muestras que no se recojan o no esten debidamente identificadas, se le informara a la Oficina de Seguridad Radiológica.