Standard Operating Procedures

Laboratory Specific – Biochemistry Shared Instrumentation Facility

Opticon 2 qPCR & Standard PCR Thermal-cyclers

Please fill out the form completely. Print a copy and insert into your
Laboratory Safety Manual and Chemical Hygiene Plan.
Refer to instructions for assistance.

Department: Chemistry and Biochemistry Date when SOP was written: Sept 20, 2012

Date when SOP was approved by the lab supervisor: _____

Supervisor Name and Signature: Margot Quinlan _____

Internal Laboratory Safety Coordinator/Lab Manager: Matthew Graf

Laboratory Phone: 310- Office Phone: 323-447-6288

Emergency Contact: Margot Quinlan (310) 206-8064

Location(s) covered by this SOP: Young Hall 5044, 5048A, 5048B

Type of SOP: ■ Process ☐ Hazardous Chemical ☐ Hazardous Class

Purpose

These instruments carry out Polymerase Chain Reaction (PCR) to amplify nucleic acid molecules. This process requires the cycling of temperatures from ~4°C - 95°C in the reaction chamber. In addition, the qPCR machine uses a diode array and detector to quantify and monitor the PCR reaction.
The PRIMARY HAZARD is the risk of burns from contact with the heating block. Take care when loading and unloading samples to prevent minor contact burns.

Potential Hazards/Toxicity

Inhalation – N/A
Skin – N/A
Eyes – N/A
Ingestion – N/A
Additional – Standard Electrical Hazard for all instruments - avoid touching electrical junctures and mind liquid spills which could damage electrical components.

Basic Training Requirements

- Lab personnel working with the **any facility instrument** must have attended the '*Laboratory Safety Fundamental Concepts'* classroom training course offered by EH&S and have read and signed the Shared Instrument Facility General Use Safety Policy.

- Lab personnel must have attended an instrument specific training session with the Biochemistry Instrument TA or Instrument facility approved manager prior to any use, covering general use and safe practices of the instrument in question.

Personal Protective Equipment (PPE)
No Additional PPE is required beyond what is stipulated by the General Use Safety Policy.

Respiratory protection
None required

Hand protection
None required unless by the demands of a users personal experiment.

Eye protection
Standard Goggles.

Skin and body protection
Lab coat, long pants, closed-toed shoes.

Hygiene measures
Avoid touching instrument surfaces with gloved hands. Wipe instruments with 20% EtOH - dampened towel following use.
NEVER TOUCH Computer surfaces (mouse, keyboard etc) with gloved hands.

Engineering Controls
None required.

First Aid Procedures
Treat if possible in accordance with the type of injury, consult a physician or seek emergency care if necessary.

Spill and Accident Procedure
Clean any spill according to the demands of the chemical nature of the experiment being conducted. See the General Use Safety Policy.

Medical Emergency Dial 911 or x52111

Life Threatening Emergency, After Hours, Weekends And Holidays – Dial **911** (or 310-825-1491 from cell phone) or contact the Ronald Reagan UCLA Medical Center (emergency room) directly at **x52111** (located at 757 Westwood Plaza, enter from Gayley Avenue). *Note: All serious injuries must be reported to EH&S at **x59797** within 8 hours.*

Non-Life Threatening Emergency– Go to the Occupational Health Facility (OHF), **x56771,** CHS room 67-120 (This is on the 6th floor, 7th corridor, room 120. Enter through the School of Dentistry on Tiverton Drive and proceed to the "O" elevator to the 6th floor.)Hours: M - F, 7:30 a.m. to 4:30 p.m. At all other times report to Ronald Regan UCLA Medical Center

(emergency room) at **x52111**. *Note: All serious injuries must be reported to EH&S at x59797 within 8 hours.*

Needle stick/puncture exposure
N/A

Decontamination/Waste Disposal Procedure

Label Waste
N/A

Store Waste
NO WASTE STORAGE ALLOWED IN FACILITY

Dispose of Waste
CHEMICAL WASTE TO BE DISPOSED OF BY USER OUTSIDE OF FACILITY
Gloves and towels free from exposure to Hazardous chemicals may be disposed of in provided trash cans.

Safety Data Sheet (SDS) Location
Copies Located in the "Facility Safety Binder" in Young Hall 5044

Protocol/Procedure

1) Remove any hand protection being worn.
2) Initialize instrument and computer (for qPCR) as demonstrated during training.
3) Set qPCR or PCR program.
4) Load samples into heating block
   *You may wear hand protection if demanded by experiment, remove before Step 5.
5) Securely close the qPCR or PCR door or lid, respectively, and begin cycle.
6) At the end of the cycle, open the PCR system.
7) Carefully remove samples and avoid extended contact with the heating block.
   *You may wear hand protection if demanded by experiment, remove before Step 8.
8) Close down the instrument, and computer if necessary.
9) Wipe instrument handles and with towel dampened with 20% EtOH, and computer if necessary and soiled during experiment.

NOTE
Any deviation from this SOP requires approval from a Facility Manager.

Documentation of Training (signature of all users is required)

I have read and understand the content of this SOP and have undergone training by an approved Facility Manager. I also attest that I have read and signed the Instrumentation Facility General Use Safety Policy prior to this instrument specific training.

Name	Signature	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____