**#1 CONTACT INFORMATION:**

<table>
<thead>
<tr>
<th>Procedure Title</th>
<th>Use of plate reader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure Author</td>
<td>Phumvadee Wangtrakuldee</td>
</tr>
<tr>
<td>Date of Creation/Revision</td>
<td>1/19/2014</td>
</tr>
<tr>
<td>Name of Responsible Person</td>
<td>James R. Horn</td>
</tr>
<tr>
<td>Location of Procedure</td>
<td>Lat 444</td>
</tr>
</tbody>
</table>

**#2 THIS STANDARD OPERATING PROCEDURE (SOP) IS FOR A:**

- [x] Specific laboratory procedure or experiment
- [ ] Generic laboratory procedure that covers several chemicals
- [ ] Generic use of specific chemical or class of chemicals with similar hazards

**#3 PROCESS OR EXPERIMENT DESCRIPTION**

The plate reader can be used to perform spectrometric/fluorescence experiment in the plate-based manner.

**Frequency:**

- [ ] one time
- [x] daily
- [ ] weekly
- [ ] monthly
- [ ] other:________________

For assistance with this form contact NIU Environmental Health and Safety, 815-753-0404.
Duration per Expt: _______ minutes; or _______ hours

The length of the experiment varies from 15 mins to 12 hours

#4 SAFETY LITERATURE REVIEW & HAZARD SUMMARY

Gen5™ Getting Started Guide: Microplate Data Collection & Analysis Software
BioTek Instruments, Inc. March 2007 PN 5321002 Revision C
Stored in the Drawer of the desk the microplate reader located at
This is an electronic instrument.
Be sure liquid does not come in contact with electronic components of instrument

#5 STORAGE REQUIREMENTS

The machine is located in the corner of the room. The instrument should be turned off when the experiment is done.

#6 STEP-BY-STEP OPERATING PROCEDURE

1. Don personal protective equipment.
   ✔ appropriate street clothing (long pants, close-toed shoes)
   ✔ gloves; indicate type: _______ latex _____________________________
   ✔ safety goggles ☐ safety glasses ☐ face shield
   ✔ lab coats
   ☐ other: _____________________________

2. Check the location and accessibility of the safety equipment that serves your lab:
<table>
<thead>
<tr>
<th>ITEM</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Fume Hood/Glove Box or other</td>
<td>Location: Lat 444</td>
</tr>
<tr>
<td>Ventilation Control</td>
<td>Location: Lat 444</td>
</tr>
<tr>
<td>Eyewash/Safety Shower</td>
<td>Location: Lat 444</td>
</tr>
</tbody>
</table>

3. Turn on the machine. Open the Gen5 program from the desktop. If using fluorescence experiment, allow the lamp to warm up which usually takes 3 mins.

4. Create your own procedure. Please refer to the Gen5™ Getting Started Guide for instructions. If the procedure is already written, select the procedure. Start the experiment by putting the plate on the plate holder. Push the black button to insert the plate into the plate reader. Then click OK to start the reading process.

5. Dispose of hazardous solvents, solutions, mixtures, and reaction residues as hazardous waste. See EH&S Hazardous Waste Program
   [http://www.ehs.niu.edu/ehs/chemical/waste.shtml](http://www.ehs.niu.edu/ehs/chemical/waste.shtml)

6. Clean up work area and lab equipment.
   Remove the plate from the plate holder. Closer the holder and then turn off the machine. Close out of the Gen 5 program.

7. Remove PPE and wash hands.

7. WASTE DISPOSAL

The plate should be disposed in the trashcan or biohazard trashcan depending on the content on the plate

8. TRAINING REQUIREMENTS

**General Training (check all that apply):**
- XGeneral Safety & Emergency Preparedness

For assistance with this form contact NIU Environmental Health and Safety, 815-753-0404.
X Chemical Safety for Laboratories
☐ Radiation Safety
X Biosafety training
☐ Other: _______________________

| Location Where Records Maintained: | Stockroom Faraday 363 |

Laboratory-specific training (check all that apply):
X Review of SDS for other chemicals involved in process/experiment
X Review of this SOP
X Other: Gen5™ Getting Started Guide _______________________

| Location Where Records Maintained: | Stockroom: Faraday 363 |

#9 PRIOR APPROVALS

Prior approvals are required by the following University Committees:

Radiation Safety Committee: Radioactive material,
http://www.egr.niu.edu/ehs/lasersafety/RAM/index.shtml
Radiation Safety Committee: X-Ray machines
http://www.egr.niu.edu/ehs/lasersafety/XRay/index.shtml
Laser safety: Laser producing equipment Class 3b or above.
http://www.egr.niu.edu/ehs/lasersafety/Laser/index.shtml
IACUC: Animal use in research
http://www.orc.niu.edu/orc/animal_research/index.shtml
IBC: Recombinant DNA, potential pathogens, human tissue/body fluids
http://www.orc.niu.edu/orc/biosafety/niupolicy.shtml