#1 CONTACT INFORMATION:

<table>
<thead>
<tr>
<th>Procedure Title</th>
<th>Surface Plasmon Resonance (SPR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure Author</td>
<td>Joy Blain</td>
</tr>
<tr>
<td>Date of Creation/Revision</td>
<td>January 16, 2014</td>
</tr>
<tr>
<td>Name of Responsible Person</td>
<td>James R. Horn</td>
</tr>
<tr>
<td>Location of Procedure</td>
<td>FW431</td>
</tr>
</tbody>
</table>

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

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

#3 PROCESS OR EXPERIMENT DESCRIPTION

Analysis of protein-protein and protein-small molecule binding.

Frequency:  
- [ ] one time  
- [ ] daily  
- [x] weekly  
- [ ] monthly  
- [ ] other: ___________________

Duration per Expt:  
- [ ] ________ minutes; or [ ] 2-3 hours

For assistance with this form contact NIU Environmental Health and Safety, 815-753-0404.
SAFETY LITERATURE REVIEW & HAZARD SUMMARY

Instrumentation Manual
SDS of required chemicals for experiments. (Ex. DMSO, EDC, NHS, etc)
This is an electronic instrument.
Be sure liquid does not come in contact with electronic components of instrument

STORAGE REQUIREMENTS

Instrument must be flushed with water and dried to avoid salt build up.

STEP-BY-STEP OPERATING PROCEDURE

#6 Keep chemicals in designated work area.

1. Don personal protective equipment.
   X appropriate street clothing (long pants, close-toed shoes)
   X gloves; indicate type: Nitrile
   X 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 Ventilation Control</td>
<td>Location: FW431 North Wall</td>
</tr>
<tr>
<td>Eyewash/Safety Shower</td>
<td>Location: FW431 North Wall</td>
</tr>
</tbody>
</table>

3. Prism surface should be cleaned with methanol and dried before mounting the desired SPR Chip. Run buffer through the system, check for leaks, until baseline is equilibrated. Coat with desired protein sample then switch to running buffer. Let running buffer equilibrate before starting experiments.

For assistance with this form contact NIU Environmental Health and Safety, 815-753-0404.
4. Clean instrument by flushing system with water when complete and any built up salt.

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

6. Clean up work area and lab equipment.

7. Remove PPE and wash hands.

### WASTE DISPOSAL

Organic waste if DMSO is required.

### TRAINING REQUIREMENTS

**General Training (check all that apply):**
- X General Safety & Emergency Preparedness
- X Chemical Safety for Laboratories
- □ Radiation Safety
- □ Biosafety training
- □ Other: ____________________________

**Location Where Records Maintained:**

<table>
<thead>
<tr>
<th>Stockroom</th>
</tr>
</thead>
</table>

**Laboratory-specific training (check all that apply):**
- X Review of SDS for other chemicals involved in process/experiment

For assistance with this form contact NIU Environmental Health and Safety, 815-753-0404.
Prior approvals are required by the following University Committees:

Radiation Safety Committee: Radioactive material,
Radiation Safety Committee: X-Ray machines
Laser safety: Laser producing equipment Class 3b or above.
IACUC: Animal use in research
- [http://www orc.niu.edu/orc/animal_research/index.shtml](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](http://www orc.niu.edu/orc/biosafety/niupolicy.shtml)