Designing PMT Optical Interface

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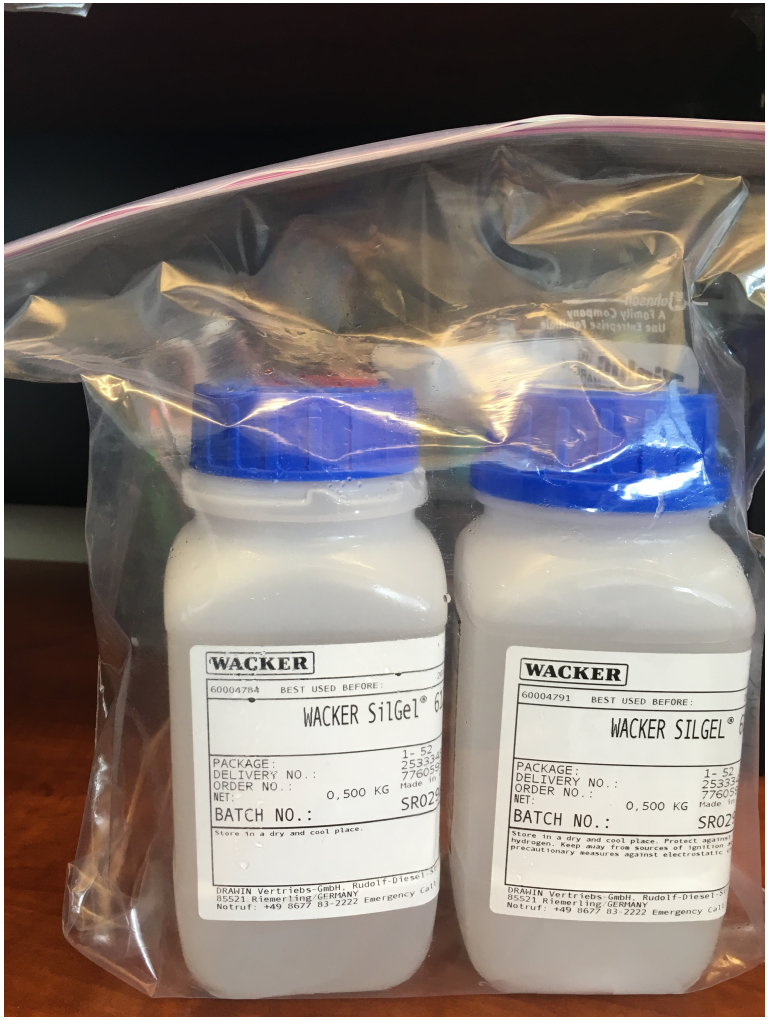
Update

Gel Making with Wacker Silgel 612 - Materials

- Lab Coat
- Gloves
- Isopropyl Alcohol
- Wacker Silgel Compound A and B
- Plastic container
- Tongue Depressor
- Scale
- Vacuum System
- Gel Mould
- Probably Saran Wrap

Gel Making with Wacker Silgel 612 - First Trial

- I was using compound A and B in a 50:50 ratio
- I used a plastic spoon instead of a tongue depressor to stir the two compounds together



Gel Making with Wacker Silgel 612 - First Trial

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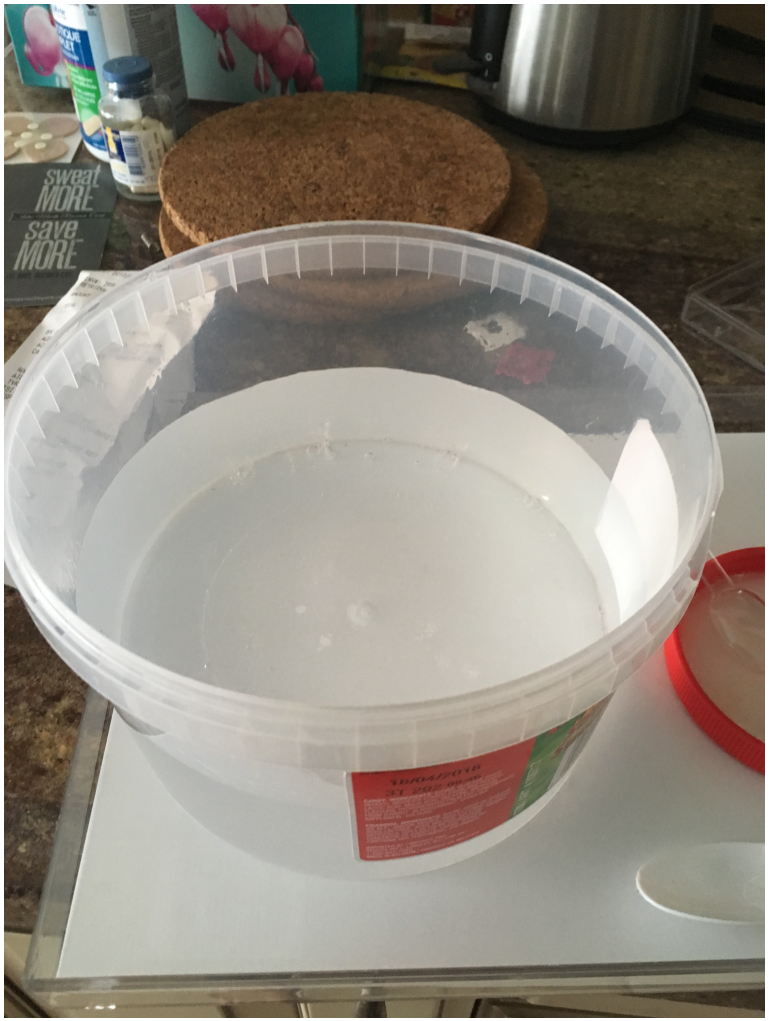

- Qiqi wrote in her work term report: *"Place container into vacuum system (30 ft of water) to deaerate"*
- I thought she meant submerge the container with the gel in water

Gel Making with Wacker Silgel 612 - First Trial Outcomes

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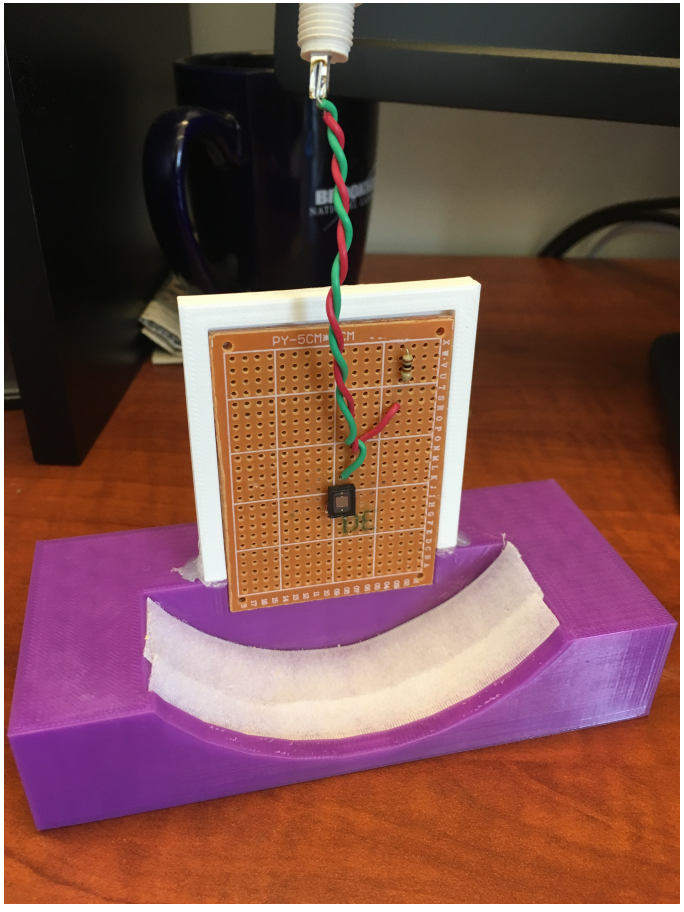
Sample Mount

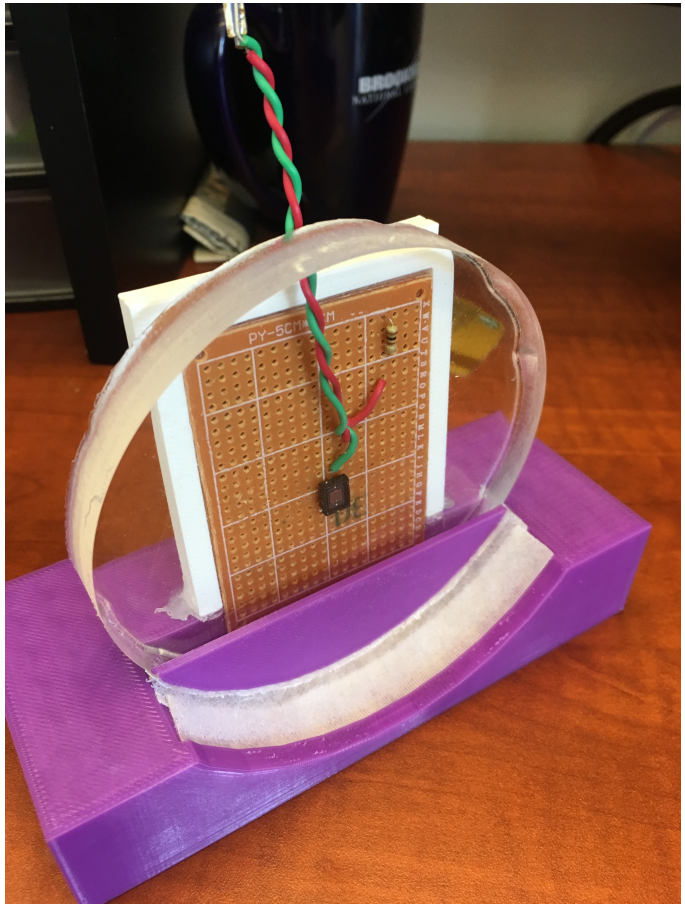
- Continued to work on sample mount
- Ultimately decided to use a clamp to further push sample against photodiode board to minimize air gap between gel and photodiode

Sample Mount - Description of Use

Step 1:

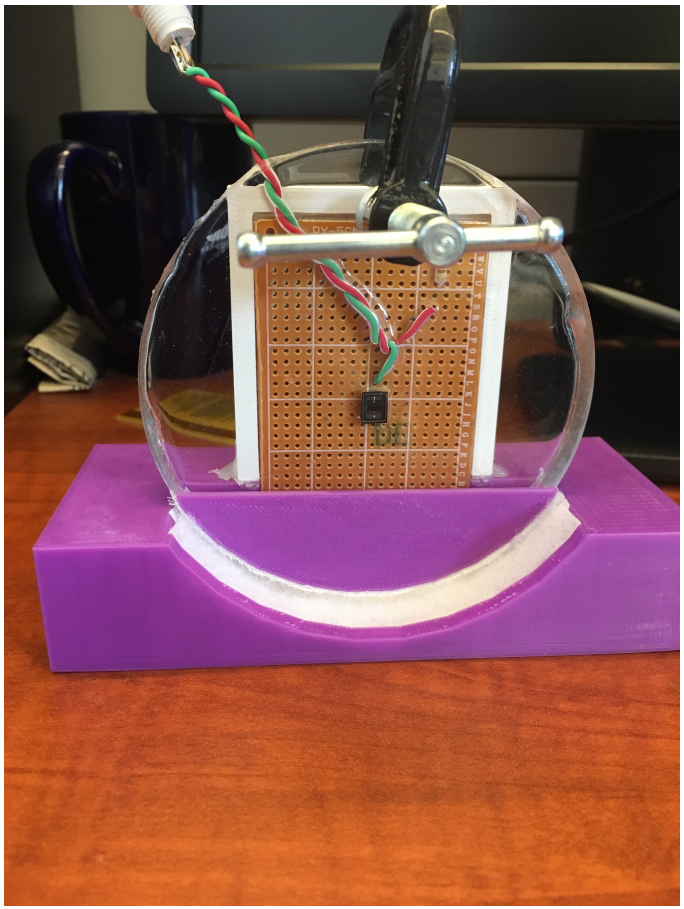


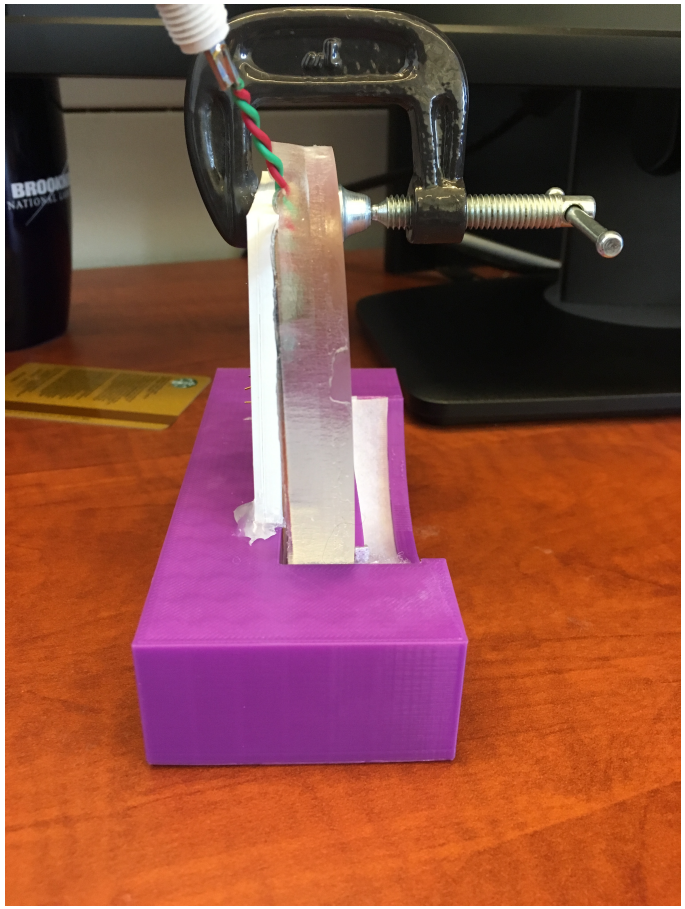
Step 2:



Sample Mount - Description of Use

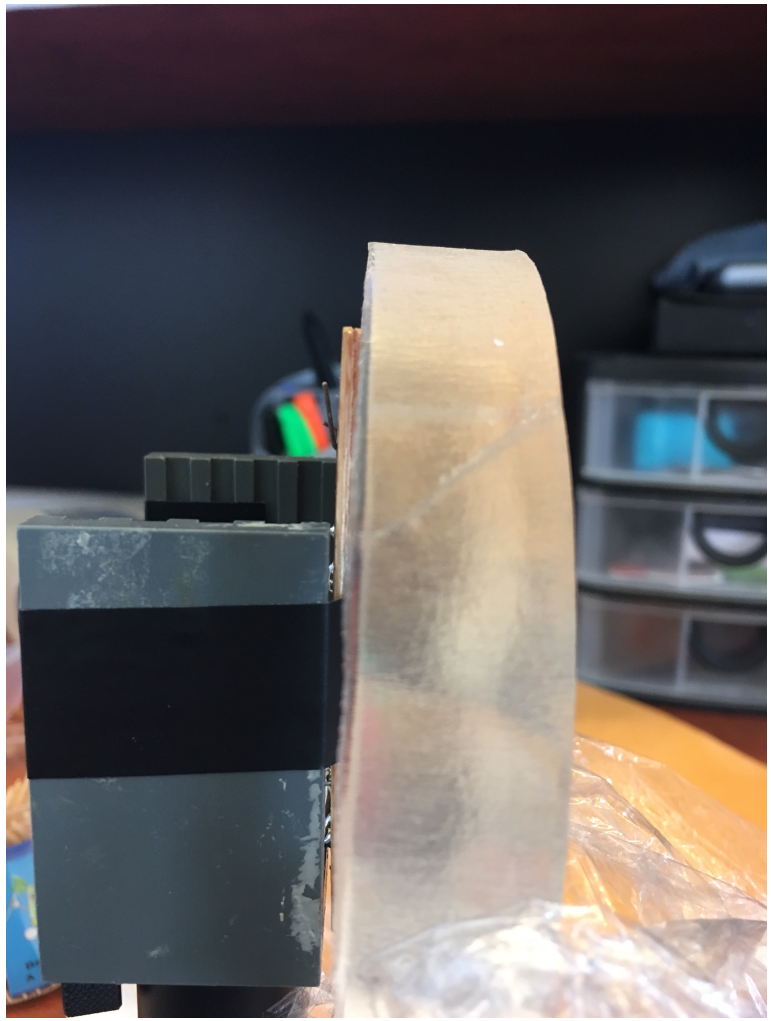
Step 3:



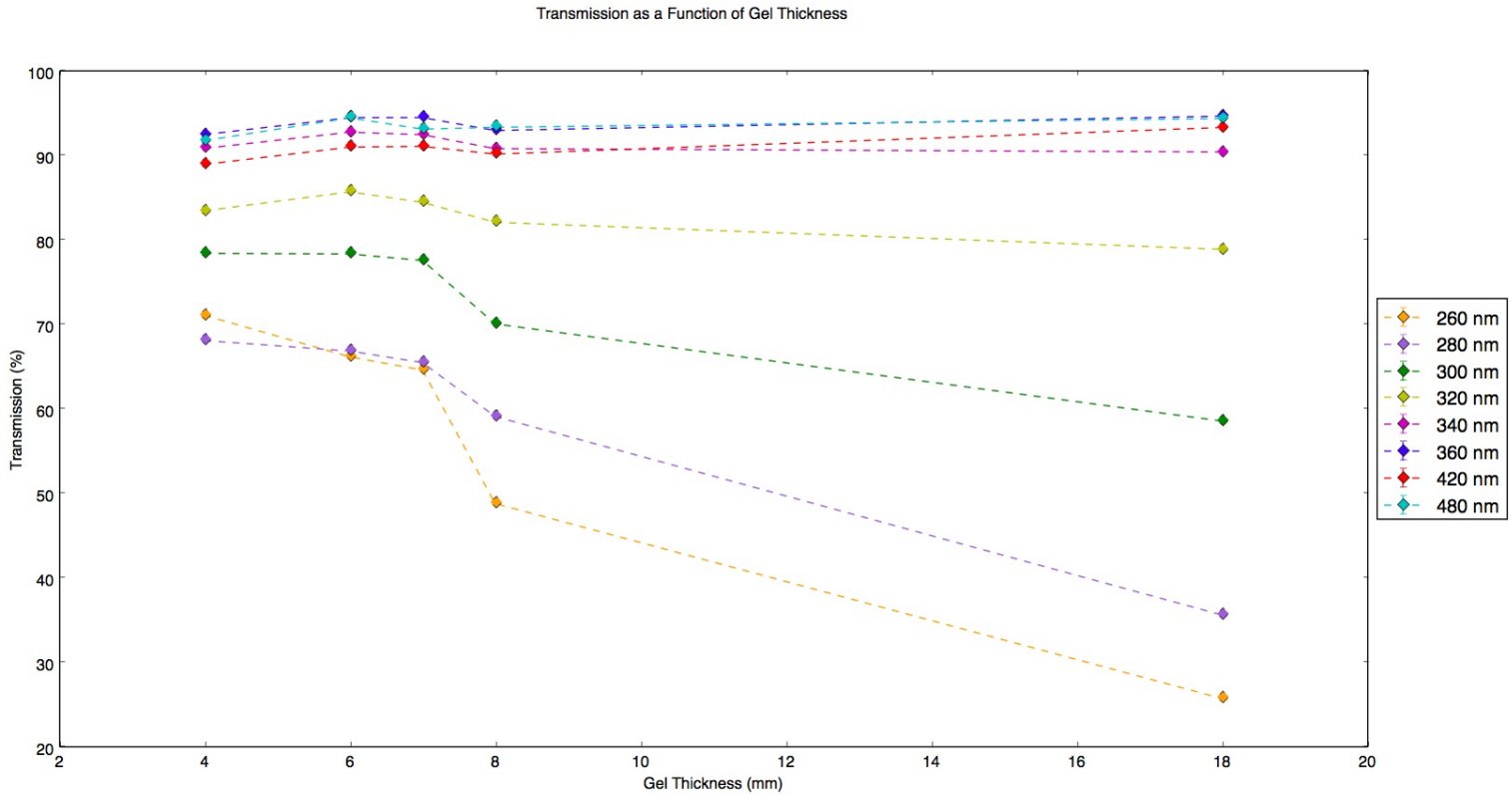


More Transmission Analysis - Silicon Gel

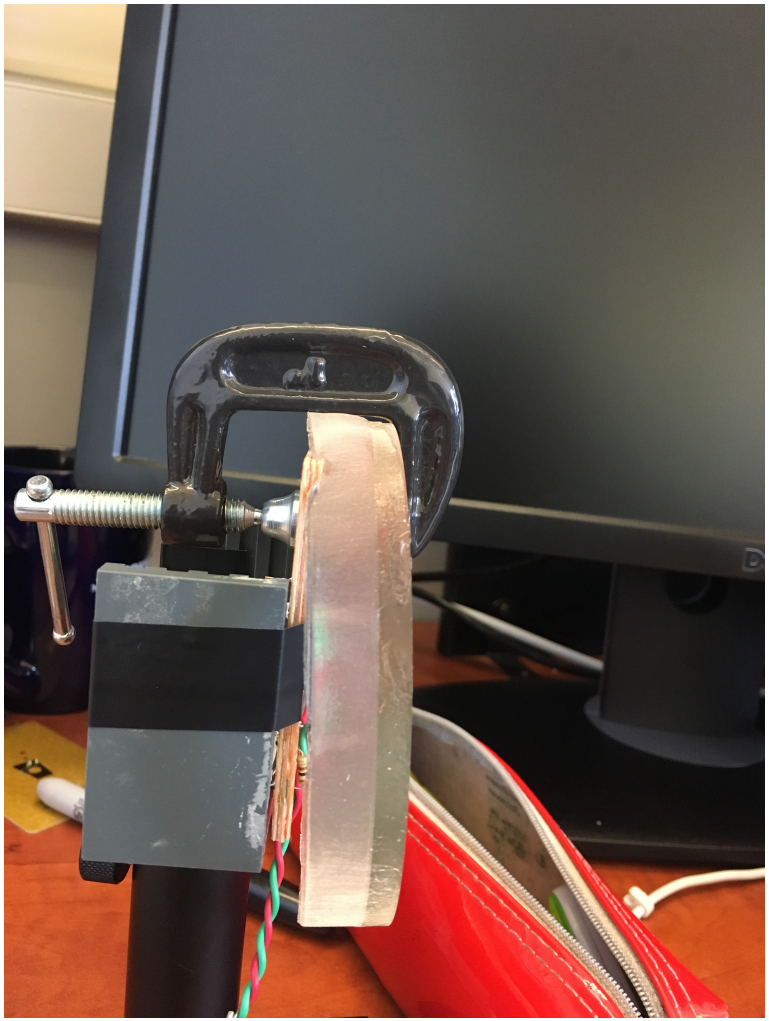
- For larger wavelengths (greater than 300 nm), transmission is less affected by thickness
- For smaller wavelengths, transmission decreases with increasing thickness



More Transmission Analysis - Silicon Gel

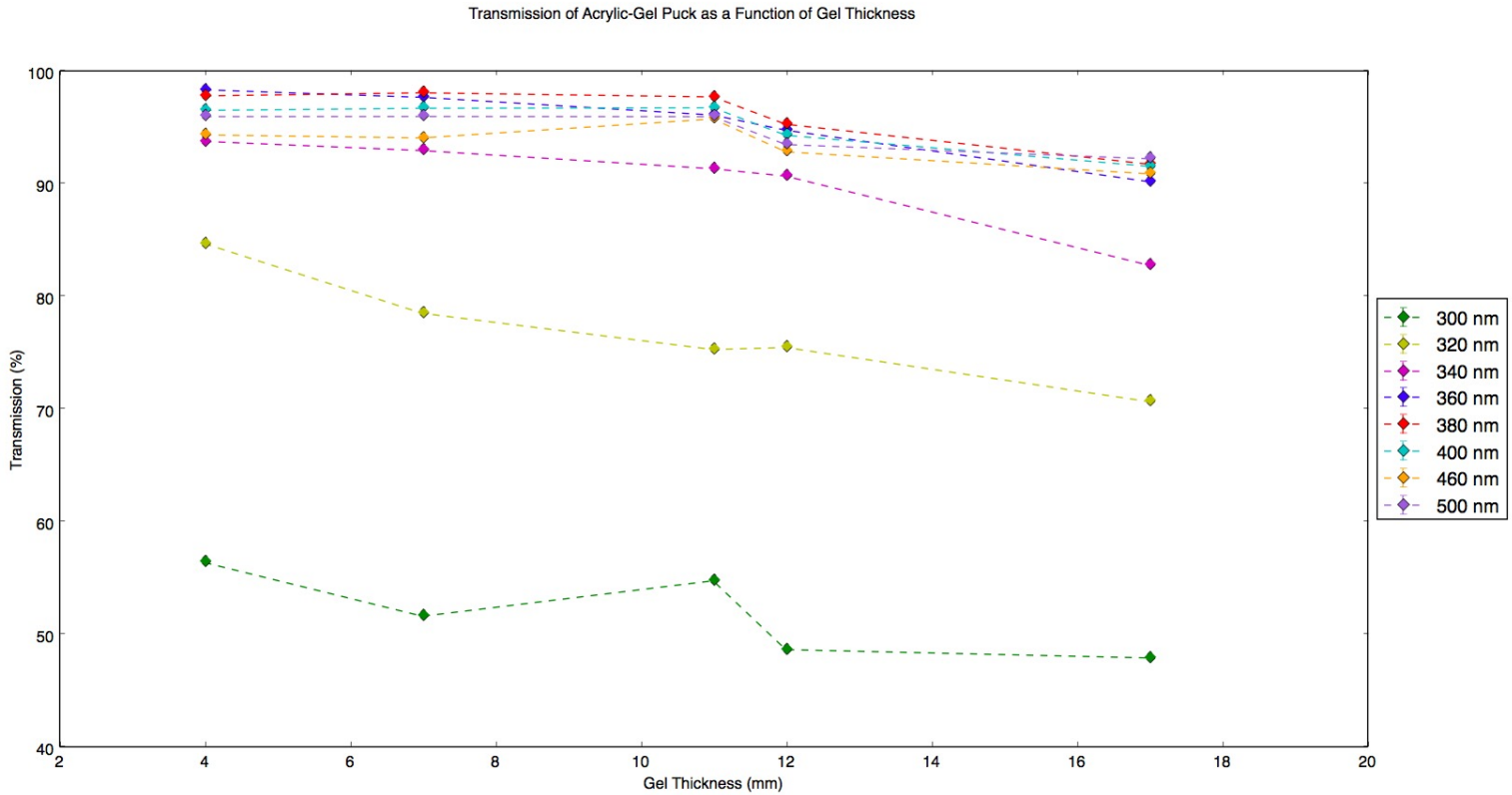


More Transmission Analysis - Acrylic-Gel



- Transmission decreases with increasing thickness

More Transmission Analysis - Acrylic-Gel



Next Steps

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- Acquire materials for gel-making
- Documentation of transparency measurements
- Reimbursement?