**Cheap Do-It-Yourself Small Volume UV Spectrometer for Nucleic Acid and Protein Quantitation**

**Team**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Joseph Jo Yin Wong  PhD Student, Department of Chemical Engineering and Biotechnology, University of Cambridge, jjyw2@cam.ac.uk. | C:\Users\Joseph\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Dushanth Seevaratnam Headshot.jpg | Dushanth Seevaratnam  PhD Student, Department of Chemical Engineering and Biotechnology, University of Cambridge, djs241@cam.ac.uk. |

**Summary**

Small volume UV spectrometry allows researchers to use minimal amounts of solution to check the purity and quantity of their DNA and protein samples. Unfortunately, currently available small volume UV spectrometers have a relatively high cost. This project aims at creating an open source small volume UV spectrometer as a cheap alternative. By using LEDs as the UV light source, and cheap UV sensors that can be processed and analyzed via an Arduino system, this once expensive system can now be affordable for not well-funded labs, or potentially labs in resource poor countries. We have achieved creating a proof of theory model. With simple and user-friendly touch screen control, the Arduino system, cased in a 3D printed PLA box, is able to measure visible light intensity and perform data logging.