**Benchmarking Table**

**Team 1**

**October 20, 2023**

Miguel Cruz

Brayden Chipman

Ashwin Halepet

Vance Padilla

| BENCHMARKING TABLE 10-20-23 | | | | | |
| --- | --- | --- | --- | --- | --- |
| TEAM 1: Brayden Chipman, Miguel Cruz, Ashwin Halepet, Vance Padilla | | | | | |
| Need | Metric | Units | BEOL Biological Refrigerator Smart Lock \* | Sifely Smart Lock | YEYA Refridgerator Lock |
|
| 1 | Cost | US Dollars |  | $129.99 | $13.99 |
| 2,4,6,7 | Remote Connectivity | Binary | Yes | Yes | No |
| 4,7 | Size | Centimeters | 15.9 cm x 8.8 cm x 3.6 cm | 17.78 cm x 7.62 cm x 2.84 cm | 25.4 cm x 6.60 cm x 2.54 cm |
| 3,7 | Material | Type | PC-ABS engineering plastics | Zinc | Polypropylene Plastic |
| 3,7 | Strength | Young's Modulus of Material(MPa) | 1670-11100 MPa | 96500 MPa | 800-8250 MPa |
| 3,4,6,7 | Method of Attachment | Type | Adhesive | Installation on Door | Adhesive |
| 4,5,7 | Power Delivery | Type | 2 AA Batteries | 4 AA Batteries | N/A |
| 2,6,7 | Method of Verification | Type | NFC Card, physical key, remote authorization | App, Fingerprint, Passcode | Key |
| 7 | Alarms/Notifications | Binary | Yes | Yes | No |
| 4,6 | Used Outside of Labs | Binary | No | Yes | Yes |
|  |  |  |  |  |  |
| 1 | Affordability |  | \*Translated using DeepL Translation |  |  |
| 2 | Records |  |  |  |  |
| 3 | Durability |  |  |  |  |
| 4 | User Friendly |  |  |  |  |
| 5 | Long Lasting(Power) |  |  |  |  |
| 6 | Accessibility |  |  |  |  |
| 7 | Security |  |  |  |  |
|  | Images |  |  |  |  |
|  | Descriptions of Products |  | This is a digital lock that was specifically designed for biological refrigerators. It includes a temperature monitor, and features that can close the lock based on changes in temperature. | This is a digital lock that has unlock and lock features connected to a mobile application used to replace the traditional lock and doorknob system. | This is a non-digital lock that is held by a thick wire. The black squares are held up by adhesives that stick to the refrigerator. |