## **Mass Budget Template** Fill in the mass budget content as required for your experimental apparatus.

**Table 1:** Mass budget template

| **System** | **Component** | **QTY** | **Unit Mass CBE [kg]** | **Total Mass CBE [kg]** | **Mass Fraction of Total [%]** | **Verification Method** | **Note(s)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Structure and Mechanisms | Aluminium frame | 1 | 6.00 | 6.00 | 66.45 | M2 |  |
| Camera mount | 5 | 0.20 | 1.00 | 11.07 | M2 |  |
| Power Systems | Battery pack | 4 | 0.10 | 0.40 | 4.43 | M2 |  |
| 9V Power adapter | 3 | 0.05 | 0.15 | 1.66 | M2 |  |
| Command and Data Handling | Arduino UNO | 1 | 0.10 | 0.10 | 1.11 | M0 |  |
| High-speed camera | 1 | 1.00 | 1.00 | 11.07 | M2 |  |
| Misc. | Test sample | 1 | 0.20 | 0.20 | 2.21 | E |  |
| Fasteners | 18 | 0.50 | 0.18 | 2.00 | M0 |  |
|  |  |  | **Total Mass:** | **9.03** | **100.00%** |  |  |
|  |  |  | **Target Mass:** | **45.00** | **-** |  |  |
|  |  |  | **Mass Margin:** | **+35.97** | **+79.93%** |  |  |

| **Verification Method Legend**  E = Estimated Mass  M0 = Calculated based on density and volume properties, using a 3D solid model (SolidWorks, Fusion360, Pro-Engineer, etc.)  M1 = Taken from a manufacturer spec sheet  M2 = Measured using a scale |
| --- |