**S1 Table: The stiffness and hysteresis characteristics for Freedom Innovations Catapult FX6 prostheses at each testing condition.**

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| **Freedom Innovations Catapult FX6** |
| **Condition****(Angle)** | **Stiffness****Category** | **Force=ah2+bh** | **Stiffness****Variability (SD)** | **Percent****Hysteresis****Mean (SD)** |
| Neutral(0°) | 2 | 297h2+8h | (1.4) | 6.5 (0.6) |
| 3 | 346h2+11h | (2.2) | 6.2 (0.2) |
| 4 | 359h2+15h | (2.9) | 5.8 (0.2) |
| 5 | 411h2+17h | (1.6) | 5.9 (0.1) |
| 6 | 381h2+25h | (1.8) | 6.1 (0.2) |
| 7 | 504h2+25h | (2.0) | 6.1 (0.2) |
| 7 No Sole | 553h2+43h | - | 3.2 |
|  | 2 | 176h2+4h | (0.2) | 5.6 (0.1) |
|  | 3 | 195h2+6h | (0.4) | 5.8 (0.0) |
| 3 m/s(15°) | 4 | 200h2+8h | (2.2) | 5.7 (0.7) |
| 5 | 237h2+8h | (0.7) | 5.4 (0.2) |
|  | 6 | 247h2+12h | (0.2) | 5.5 (0.0) |
|  | 7 | 293h2+13h | (0.7) | 5.5 (0.1) |
| 6 m/s(10°) | 2 | 195h2+5h | (1.5) | 5.7 (0.2) |
| 3 | 234h2+5h | (1.7) | 5.3 (0.2) |
| 4 | 307h2+9h | (1.9) | 5.4 (0.0) |
| 5 | 309h2+11h | (1.1) | 5.3 (0.1) |
| 6 | 318h2+14h | (0.5) | 5.3 (0.0) |
| 7 | 395h2+18h | (4.3) | 5.3 (0.0) |

The equations indicate prosthetic displacement in meters (h) used to calculate the applied force in kN. Stiffness equals applied force divided by displacement. a and b are constants. All prostheses were tested with the manufacturer supplied sole, with the exception of stiffness category 7 No Sole.