**Results**

Table 1: Average Amount of Water Absorbed (in mL/g)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 Hour | 2 Hours | 3 Hours | 4 Hours | 120 Hours |
| HD Pellets | 2.16 | 2.21 | 2.24 | 2.19 | 2.68 |
| PA Pellets | 1.44 | 1.48 | 1.62 | 1.51 | 1.85 |
| Switchgrass | 2.91 | 3.07 | 3.35 | 3.34 | 3.99 |

Table 2: Average Amount of Oil Absorbed (in mL/g)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 1 Hour | 2 Hours | 3 Hours | 4 Hours | 120 Hours |
| HD Pellets | 0.18 | 0.18 | 0.17 | 0.18 | 0.19 |
| PA Pellets | 0.19 | 0.19 | 0.19 | 0.18 | 0.20 |
| Switchgrass | 0.25 | 0.24 | 0.26 | 0.22 | 0.25 |

All absorbents tested absorbed more water than they did oil (Table 1, Table 2). Across all time periods, switchgrass absorbed the greatest average amount of both fluids (Table 1, Table 2). As seen in Fig. 1, the percent change in average water absorbed for all absorbents was between the 4-hour and 120-hour time periods, with a percent increase of 19.29% for switchgrass, 22.58% for Home Depot pellets, and 22.48% for the PA pellets. For switchgrass and PA pellets, the second greatest percent increase was between the 2-hour and 3-hour time periods, with a percent increase of 8.96% for switchgrass and 9.23% for PA pellets. Unlike the switchgrass and PA pellets, the Home Depot pellets had a lower percent increase between the 2-hour and 3-hour time intervals than between the 1-hour and 2-hour time intervals.

Figure 1: Percent Change in Average Amount of Water Absorbed vs. Time Period