**Zebrafish Behaviour Study**

**Vehicle Control Group after 15 days treatment (n = 40 fish)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Run1** | **Fish 1** | **Fish 2** | **Fish 3** | **Fish 4** | **Fish 5** | **Fish 6** | **Fish 7** | **Fish 8** | **Fish 9** | **Fish 10** |
| AV | 2.455926 | 3.289125 | 8.00522 | 6.122395 | 6.627004 | 3.637646 | 4.911149 | 9.99094 | 1.649312 | 3.651224 |
| MEANDER | 0.364477 | 0.478202 | 0.845427 | 0.70223 | 0.861834 | 0.466226 | 0.640129 | 1.0919 | 0.229345 | 0.495464 |
| Speed | 4.444781 | 4.733587 | 5.242515 | 6.104315 | 6.085054 | 4.87821 | 6.002617 | 6.910112 | 3.98938 | 4.521105 |
| F% | 5.255556 | 5.188889 | 11.4 | 4.344444 | 3.266667 | 7.833333 | 4.166667 | 2.7 | 15.98889 | 8.2 |
| Fp | 366 | 352 | 720 | 364 | 254 | 528 | 345 | 178 | 976 | 519 |
| DTSF | 10.19006 | 12.28902 | 35.3393 | 59.90148 | 14.64216 | 12.27641 | 35.11581 | 23.90403 | 15.03558 | 30.40196 |
| MS | 10.19006 | 12.28902 | 18.46315 | 12.36892 | 14.64216 | 12.27641 | 11.95393 | 23.90403 | 15.03558 | 10.34498 |
| Distance | 1333.434 | 1420.076 | 1572.125 | 1831.295 | 1825.516 | 1463.463 | 1800.785 | 2068.288 | 1196.814 | 1356.255 |
| LZ | 1.296667 | 3.022778 | 4.641111 | 4.225556 | 2.633889 | 3.752222 | 3.582222 | 2.970556 | 2.975 | 3.264444 |
| UZ | 3.006667 | 1.720556 | 0.352222 | 0.697222 | 2.338889 | 0.930556 | 1.208333 | 1.892222 | 1.796667 | 1.605 |
| ZT | 78 | 76 | 45 | 29 | 80 | 77 | 48 | 87 | 37 | 74 |
| Avg Height (cm)  |  |  |  |  |  |  |  |  |  |
| Time (min) |  |  |  |  |  |  |  |  |  |
|  0.5 | 8.517542 | 8.569992 | 2.863106 | 2.879673 | 8.983896 | 6.655794 | 3.051619 | 2.941502 | 11.18698 | 4.796432 |
| 1 | 7.939715 | 5.352875 | 4.604282 | 3.354337 | 8.761479 | 7.380994 | 2.324788 | 5.624934 | 6.53637 | 6.570297 |
| 1.5 | 9.80927 | 5.607877 | 5.121538 | 3.124185 | 7.899145 | 6.962945 | 2.804501 | 7.01187 | 7.471441 | 7.820335 |
| 2 | 10.13206 | 7.495762 | 5.027836 | 2.965762 | 8.429514 | 5.155513 | 6.425763 | 6.036313 | 6.19591 | 6.029384 |
| 2.5 | 10.24223 | 7.218335 | 5.502855 | 3.744027 | 7.009759 | 4.989093 | 5.852862 | 7.318469 | 6.682662 | 6.466621 |
| 3 | 7.829734 | 6.581669 | 4.194854 | 3.899406 | 8.012146 | 4.217068 | 7.542498 | 8.739638 | 6.796367 | 6.450535 |
| 3.5 | 8.342805 | 5.15406 | 6.106431 | 6.081022 | 4.666635 | 4.47739 | 4.640189 | 8.372773 | 3.550156 | 6.63473 |
| 4 | 8.158925 | 5.674064 | 2.760957 | 7.509895 | 3.510061 | 4.829007 | 5.415377 | 9.587298 | 6.161539 | 5.981038 |
| 4.5 | 8.948633 | 5.921573 | 2.417796 | 8.157053 | 4.715277 | 4.643972 | 6.851969 | 7.087507 | 5.675799 | 7.629829 |
| 5 | 8.84382 | 7.248798 | 2.613916 | 3.671858 | 7.157864 | 3.977057 | 6.435946 | 7.393339 | 4.814485 | 10.1557 |

AV = angular velocity, F%= % time freeze, FP= freeze point, MS =Maximum Speed, LZ = time spent in lower zone, UZ= time spent in upper zone, ZT= upper-lower zone transition

**Run 2**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |
|  | **Fish 1** | **Fish 2** | **Fish 3** | **Fish 4** | **Fish 5** | **Fish 6** | **Fish 7** | **Fish 8** | **Fish 9** | **Fish 10** |
| AV | 21.43345 | 7.588787 | 3.145882 | 13.53387 | 9.677259 | 9.805311 | 0.680342 | 12.0113 | 7.359019 | 5.101088 |
| MEANDER | 1.085014 | 0.767643 | 0.409665 | 0.91874 | 0.806161 | 1.202361 | 0.114183 | 0.615436 | 0.898835 | 0.079686 |
| Speed | 7.178069 | 4.496318 | 4.564629 | 5.751199 | 5.280124 | 6.524553 | 3.669817 | 5.238356 | 5.803293 | 2.812458 |
| F% | 3.644444 | 31.67778 | 6.333333 | 7.577778 | 5.433333 | 2.911111 | 6.6 | 4.4 | 7.1 | 20.8 |
| Fp | 299 | 616 | 428 | 463 | 379 | 251 | 426 | 318 | 305 | 875 |
| DTSF | 27.89648 | 26.54551 | 24.2675 | 13.41868 | 51.42359 | 12.17049 | 29.91075 | 35.82774 | 39.42509 | 8.965502 |
| MS | 27.89648 | 26.54551 | 12.64841 | 13.41868 | 8.891935 | 12.17049 | 6.20541 | 12.20086 | 13.56048 | 8.965502 |
| Distance | 1826.313 | 1347.754 | 1369.389 | 1641.349 | 1501.383 | 1950.087 | 1100.945 | 1355.835 | 1739.988 | 754.0959 |
| LZ | 4.364444 | 2.458333 | 4.79 | 3.639444 | 2.865556 | 2.246667 | 3.702778 | 2.717222 | 3.656667 | 3.89 |
| UZ | 0.163889 | 2.093889 | 0.003889 | 1.087778 | 1.974444 | 2.416667 | 1.109444 | 1.212222 | 1.134444 | 0.489444 |
| ZT | 39 | 224 | 3 | 97 | 72 | 113 | 47 | 90 | 95 | 57 |
|  |  |  |  |  |  |  |  |  |  |  |
| Avg Height (cm) |  |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 3.475696 | 0.864632 | 1.818716 | 8.465639 | 7.858574 | 5.135946 | 5.253976 | 7.49526 | 5.774154 | 6.481013 |
| 1 | 4.389616 | 3.65557 | 2.355124 | 4.955001 | 6.226028 | 4.99823 | 5.791366 | 4.157104 | 6.360167 | 5.91608 |
| 1.5 | 4.227055 | 6.051219 | 2.64533 | 4.255638 | 3.299215 | 6.843682 | 4.079063 | 4.323012 | 6.963787 | 3.951949 |
| 2 | 5.165461 | 8.533599 | 2.59055 | 2.450887 | 2.766444 | 8.697099 | 6.717184 | 5.96065 | 5.753687 | 4.258988 |
| 2.5 | 3.695318 | 7.997483 | 2.333923 | 3.342732 | 5.440342 | 6.374062 | 4.911884 | 5.620777 | 6.762001 | 1.401413 |
| 3 | 3.844161 | 7.324454 | 2.513049 | 3.22622 | 8.024828 | 7.689265 | 5.052759 | 5.142336 | 3.597069 | 2.183537 |
| 3.5 | 4.501186 | 9.856208 | 2.831592 | 3.051302 | 6.349579 | 8.383491 | 3.642282 | 5.323709 | 1.628914 | 2.855931 |
| 4 | 4.958117 | 7.39101 | 3.363461 | 2.835298 | 4.295365 | 6.809371 | 2.561242 | 4.868972 | 2.990254 | 4.04728 |
| 4.5 | 4.263023 | 2.212383 | 1.636827 | 5.076971 | 6.859145 | 6.48718 | 4.688825 | 5.218001 | 3.265243 | 3.518226 |
| 5 | 2.974207 | 6.391127 | 1.998063 | 6.21648 | 4.848977 | 4.808485 | 4.047091 | 5.869155 | 2.08698 | 1.506102 |

**Run 3**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Fish 1** | **Fish 2** | **Fish 3** | **Fish 4** | **Fish 5** | **Fish 6** | **Fish 7** | **Fish 8** | **Fish 9** | **Fish 10** |
| AV | 4.053686 | 12.35305 | 12.89154 | 5.666446 | 7.473855 | 14.95143 | 13.66444 | 13.9222 | 7.013665 | 17.86561 |
| MEANDER | 0.443793 | 1.25239 | 1.230318 | 0.627923 | 0.701904 | 1.612139 | 1.41086 | 0.736583 | 0.721878 | 1.71986 |
| Speed | 4.870027 | 5.781157 | 6.95644 | 5.773251 | 5.104266 | 6.700325 | 7.90725 | 5.413187 | 6.435737 | 8.068811 |
| F% | 9.088889 | 11.9 | 10.55556 | 5.755556 | 16.17778 | 5.088889 | 2.188889 | 3.788889 | 3.988889 | 4.522222 |
| Fp | 488 | 538 | 698 | 452 | 652 | 414 | 162 | 292 | 318 | 358 |
| DTSF | 25.33122 | 19.73749 | 18.4689 | 35.69259 | 35.72353 | 31.13713 | 24.05643 | 47.07116 | 23.93348 | 66.47033 |
| MS | 25.33122 | 19.73749 | 18.4689 | 12.25835 | 18.08383 | 16.05206 | 24.05643 | 9.824598 | 23.93348 | 22.68503 |
| Distance | 1461.008 | 1730.455 | 2086.932 | 1722.3 | 1521.783 | 2007.121 | 2371.947 | 1438.933 | 1930.936 | 2420.912 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 1.136111 | 4.135556 | 4.953333 | 4.321111 | 4.288889 | 4.146111 | 4.371111 | 2.648333 | 3.941667 | 4.657222 |
| UZ | 3.545 | 0.804444 | 0 | 0.512222 | 0.605 | 0.747222 | 0.424444 | 1.664444 | 0.905 | 0.292778 |
| ZT | 72 | 38 | 1 | 21 | 26 | 93 | 12 | 45 | 33 | 27 |
|  |  |  |  |  |  |  |  |  |  |  |
| Avg Height (cm) |  |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 7.003059 | 1.179637 | 1.379838 | 1.749006 | 2.580715 | 3.422 | 1.331013 | 4.671753 | 3.049133 | 1.778337 |
| 1 | 6.263838 | 1.561689 | 1.34958 | 1.675479 | 2.688415 | 4.241917 | 1.546817 | 4.213206 | 2.774431 | 2.706809 |
| 1.5 | 7.304644 | 1.63227 | 1.474499 | 3.721964 | 1.117972 | 3.466166 | 1.948546 | 4.138499 | 2.215969 | 1.932354 |
| 2 | 8.959986 | 4.074699 | 1.836317 | 3.692187 | 1.119808 | 4.288584 | 2.003775 | 5.439734 | 1.901218 | 2.816607 |
| 2.5 | 8.62517 | 6.1962 | 2.147493 | 3.687837 | 2.3001 | 3.28751 | 1.950593 | 7.304715 | 2.480746 | 3.378082 |
| 3 | 6.401516 | 2.51082 | 1.791604 | 2.064341 | 2.65548 | 4.361471 | 2.649418 | 7.476605 | 2.874747 | 3.013941 |
| 3.5 | 8.511276 | 4.437491 | 1.703928 | 3.825754 | 3.439392 | 6.271906 | 2.534132 | 7.623751 | 4.284001 | 3.653668 |
| 4 | 9.498175 | 2.27928 | 1.791665 | 2.998451 | 6.019523 | 3.829626 | 5.507834 | 8.346042 | 5.831722 | 2.530555 |
| 4.5 | 8.807781 | 2.954124 | 1.546265 | 1.405257 | 5.88812 | 5.251935 | 6.980024 | 7.853495 | 7.43815 | 2.217867 |
| 5 | 8.057026 | 4.33348 | 1.140409 | 3.790866 | 4.540125 | 3.3137 | 3.085612 | 6.305985 | 6.456229 | 3.334036 |
|  |  |  |  |  |  |  |  |  |  |  |

**Run 4**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Fish 1** | **Fish 2** | **Fish 3** | **Fish 4** | **Fish 5** | **Fish 6** | **Fish 7** | **Fish 8** | **Fish 9** | **Fish 10** |
| AV | 18.57115 | 5.324141 | 10.05669 | 3.772403 | 3.370997 | 6.039548 | 15.4721 | 15.16264 | 11.21235 | 7.388673 |
| MEANDER | 2.124304 | 0.751922 | 1.376444 | 0.571667 | 0.481066 | 0.809242 | 1.832295 | 1.69744 | 1.340059 | 0.952498 |
| Speed | 7.779892 | 5.28526 | 5.697728 | 4.813164 | 5.032487 | 5.170783 | 6.779959 | 6.77908 | 6.059822 | 5.559408 |
| F% | 1.366667 | 4.211111 | 4.366667 | 4.7 | 4.277778 | 4.711111 | 3.111111 | 3.711111 | 4.722222 | 5.2 |
| Fp | 105 | 296 | 300 | 302 | 317 | 343 | 224 | 232 | 277 | 346 |
| DTSF | 29.12032 | 24.05024 | 13.03851 | 10.64168 | 22.66184 | 38.27725 | 24.66315 | 35.37423 | 15.59981 | 16.00544 |
| MS | 15.27651 | 12.18896 | 13.03851 | 10.64168 | 11.61001 | 9.951622 | 12.68098 | 12.47365 | 15.59981 | 16.00544 |
| Distance | 2333.968 | 1585.578 | 1709.318 | 1443.949 | 1509.746 | 1551.235 | 2031.652 | 2022.327 | 1800.602 | 1666.619 |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 1.446111 | 1.499444 | 1.891111 | 0.671667 | 1.967222 | 2.626667 | 1.997778 | 1.278889 | 1.568889 | 1.247778 |
| UZ | 2.81 | 2.786111 | 2.990556 | 3.003889 | 2.202222 | 2.264444 | 2.803889 | 3.691667 | 3.06 | 3.054444 |
| ZT | 58 | 39 | 99 | 36 | 56 | 78 | 74 | 44 | 88 | 48 |
|  |  |  |  |  |  |  |  |  |  |  |
| Avg Height (cm) |  |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 6.970079 | 10.92166 | 7.38406 | 9.404653 | 8.079849 | 6.615934 | 8.335912 | 11.37942 | 8.298092 | 6.482914 |
| 1 | 9.523638 | 9.237653 | 6.82326 | 10.27987 | 7.039545 | 7.694488 | 7.145999 | 10.1711 | 8.439037 | 5.97793 |
| 1.5 | 7.119667 | 8.794849 | 4.161757 | 10.55576 | 8.182365 | 5.433377 | 7.53476 | 8.903995 | 8.434142 | 7.86881 |
| 2 | 8.419929 | 8.929958 | 7.758375 | 9.376513 | 7.399124 | 6.416337 | 9.066334 | 10.73298 | 7.369546 | 8.68736 |
| 2.5 | 10.5235 | 7.684623 | 8.500346 | 10.28496 | 7.443816 | 7.104178 | 6.689401 | 10.24883 | 6.88953 | 10.39177 |
| 3 | 8.060599 | 8.28652 | 7.826218 | 10.1432 | 6.084694 | 5.080896 | 8.530192 | 7.428204 | 8.515339 | 10.63951 |
| 3.5 | 6.841051 | 9.031758 | 8.250852 | 9.450986 | 6.277951 | 6.33097 | 9.192238 | 9.144131 | 8.36103 | 10.42571 |
| 4 | 8.603439 | 5.951414 | 8.908619 | 8.944302 | 7.214723 | 6.631101 | 8.750425 | 8.084024 | 7.994362 | 11.91284 |
| 4.5 | 8.863912 | 7.389315 | 8.785966 | 8.25034 | 6.11046 | 6.855211 | 5.784357 | 7.586099 | 8.664691 | 8.991918 |
| 5 | 9.43156 | 8.209121 | 10.38147 | 10.29907 | 6.787174 | 7.953564 | 7.958892 | 10.60499 | 8.27563 | 9.148955 |

**Swarna Bhasma group after 15 days treatment (n=40)**

**Run 1**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 7.632893 | 3.53141 | 4.768627 | 6.814024 | 10.23064 | 1.924414 | 5.42688 | 7.134339 | 10.60225 | 2.825696 |
| MEANDER | 1.010991 | 0.514244 | 0.629634 | 0.761789 | 1.302094 | 0.237405 | 0.757077 | 0.78068 | 1.259506 | 0.389779 |
| Speed | 5.869695 | 4.990178 | 5.692435 | 5.084365 | 6.407085 | 3.77201 | 5.237999 | 5.443524 | 6.565662 | 4.205289 |
| F% | 3 | 6.788889 | 2.077778 | 9.488889 | 3.4 | 17.05556 | 4.288889 | 14.12222 | 4.088889 | 18.05556 |
| Fp | 213 | 294 | 157 | 693 | 254 | 1000 | 254 | 773 | 301 | 407 |
| DTSF | 35.42326 | 40.28849 | 40.8642 | 12.61848 | 16.23936 | 13.50475 | 16.82339 | 19.83496 | 15.38408 | 18.57695 |
| MS | 12.43759 | 10.737 | 40.8642 | 12.61848 | 16.23936 | 13.50475 | 16.82339 | 19.83496 | 15.38408 | 9.497486 |
| Distance | 1759.883 | 1497.053 | 1707.731 | 1524.97 | 1922.125 | 1131.671 | 1571.4 | 1633.148 | 1966.914 | 1261.587 |
| LZ | 2.822778 | 2.362778 | 1.158889 | 3.372778 | 1.432778 | 3.494444 | 1.203333 | 1.924444 | 2.22 | 1.895 |
| UZ | 1.946111 | 2.457222 | 3.558889 | 0.771111 | 3.212778 | 0.644444 | 3.601111 | 2.580556 | 1.923889 | 1.622222 |
| ZT | 84 | 139 | 198 | 72 | 114 | 31 | 50 | 48 | 121 | 44 |
|  |  |  |  |  |  |  |  |  |  |  |
| Avg Height (cm) |  |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 5.322623 | 10.44761 | 10.10011 | 8.815853 | 9.516135 | 3.853504 | 9.797309 | 3.599989 | 7.406923 | 1.266202 |
| 1 | 8.715187 | 11.14411 | 10.49601 | 8.535854 | 8.760339 | 7.936387 | 11.23616 | 9.073367 | 8.51464 | 2.204175 |
| 1.5 | 10.39139 | 9.424593 | 10.15217 | 9.45542 | 9.59365 | 6.695346 | 9.733839 | 9.560644 | 6.240578 | 8.810955 |
| 2 | 7.447211 | 9.940827 | 10.89629 | 7.040268 | 10.32455 | 6.455305 | 10.30648 | 6.329712 | 9.001211 | 9.734236 |
| 2.5 | 8.962675 | 8.580012 | 10.19926 | 5.56797 | 9.463099 | 6.539701 | 8.32987 | 11.57986 | 6.108104 | 10.83585 |
| 3 | 8.096964 | 5.412734 | 10.29778 | 4.738219 | 9.837456 | 4.996138 | 9.919957 | 9.574762 | 7.692193 | 12.03725 |
| 3.5 | 5.537342 | 4.388252 | 9.654988 | 4.795666 | 10.98478 | 5.406242 | 10.93321 | 8.486237 | 7.931553 | 9.048727 |
| 4 | 8.338957 | 5.51909 | 9.156918 | 4.002926 | 8.474885 | 4.996396 | 10.67132 | 10.75628 | 7.045588 | 9.252802 |
| 4.5 | 7.075535 | 8.511475 | 9.768072 | 4.280753 | 8.35775 | 3.462805 | 11.28052 | 8.150525 | 9.677963 | 8.375541 |
| 5 | 8.49517 | 4.718929 | 9.806702 | 5.829333 | 9.833233 | 4.242049 | 10.65742 | 10.21004 | 8.56475 | 7.037543 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Run 2**  |  |  |  |  |  |  |  |  |  |  |
|  | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 7.25157 | 8.925531 | 8.919459 | 13.76725 | 6.429012 | 5.243328 | 10.10496 | 5.255112 | 6.89796 | 1.98529 |
| MEANDER | 0.942053 | 1.006877 | 1.117828 | 0.595708 | 0.872998 | 0.571579 | 1.274195 | 0.61665 | 0.802815 | 0.221562 |
| Speed | 6.235644 | 6.747483 | 5.961415 | 5.623684 | 5.135827 | 5.221027 | 6.448749 | 5.456039 | 6.223158 | 3.668362 |
| F% | 2.055556 | 3.933333 | 4.955556 | 3.133333 | 5.844444 | 11.62222 | 2.944444 | 6.511111 | 4.077778 | 24.64444 |
| Fp | 152 | 336 | 353 | 253 | 387 | 522 | 219 | 517 | 305 | 842 |
| DTSF | 28.63729 | 75.55366 | 19.95001 | 15.96553 | 10.2026 | 31.36624 | 15.7014 | 25.50146 | 15.31359 | 28.339 |
| MS | 14.90275 | 13.20645 | 19.95001 | 15.96553 | 10.2026 | 15.80256 | 15.7014 | 13.20116 | 15.31359 | 14.72353 |
| Distance | 1870.335 | 2021.153 | 1788.424 | 1482.651 | 1537.931 | 1566.005 | 1933.547 | 1636.812 | 1866.578 | 1100.509 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 1.088333 | 2.426111 | 1.936667 | 4.360556 | 3.495 | 3.977222 | 2.073889 | 3.976111 | 2.215 | 0.936667 |
| UZ | 3.436667 | 2.436111 | 2.708889 | 0.163333 | 1.142778 | 0.756111 | 2.819444 | 0.815556 | 2.641667 | 3.421111 |
| ZT | 38 | 81 | 119 | 41 | 79 | 45 | 96 | 53 | 131 | 36 |
|  |  |  |  |  |  |  |  |  |  |  |
| Avg Height (cm) |  |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 9.535367 | 8.370489 | 6.605197 | 3.183923 | 6.022059 | 2.169957 | 7.662507 | 3.240714 | 6.212634 | 9.293987 |
| 1 | 8.846364 | 7.293222 | 6.783369 | 3.433079 | 4.679602 | 3.058714 | 7.212088 | 4.347229 | 6.707119 | 6.631021 |
| 1.5 | 7.486554 | 7.71878 | 7.688539 | 3.787442 | 6.438848 | 3.562355 | 6.642933 | 5.692106 | 7.590398 | 7.785437 |
| 2 | 10.35415 | 6.877831 | 6.235726 | 3.116209 | 5.084423 | 4.630688 | 7.779435 | 5.42679 | 7.242903 | 8.431663 |
| 2.5 | 10.91576 | 6.375799 | 5.622756 | 3.473617 | 3.234996 | 4.702639 | 5.013262 | 5.494179 | 7.723224 | 8.053172 |
| 3 | 9.607498 | 4.484726 | 8.332211 | 3.910316 | 3.28935 | 5.568373 | 3.29805 | 5.463637 | 6.748423 | 7.776345 |
| 3.5 | 8.482052 | 6.475087 | 7.165832 | 3.239448 | 6.248034 | 5.284723 | 6.442127 | 5.791837 | 5.986436 | 8.77318 |
| 4 | 4.920759 | 5.0073 | 8.180503 | 3.791341 | 3.279571 | 3.809225 | 8.066271 | 4.546059 | 6.691269 | 8.30895 |
| 4.5 | 6.560815 | 5.479054 | 5.272294 | 3.171896 | 5.782026 | 6.141965 | 6.396411 | 3.612057 | 6.311975 | 8.362839 |
| 5 | 6.170963 | 4.825461 | 6.298885 | 3.649077 | 5.740585 | 5.848998 | 8.084117 | 3.625139 | 6.654839 | 8.532228 |

**Run 3**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 6.78454 | 8.746241 | 11.78541 | 12.32786 | 16.87038 | 4.653135 | 6.572402 | 4.285183 | 5.796215 | 1.284342 |
| MEANDER | 0.668069 | 1.033044 | 1.061528 | 1.381324 | 1.79707 | 0.643521 | 0.711575 | 0.428811 | 0.77906 | 0.185681 |
| Speed | 3.55216 | 5.949572 | 6.048086 | 7.357845 | 7.445228 | 4.997034 | 6.369996 | 4.899379 | 4.980009 | 3.704028 |
| F% | 47.41111 | 2.344444 | 4.022222 | 2.811111 | 3.966667 | 4.433333 | 3.922222 | 9.688889 | 7.166667 | 10.23333 |
| Fp | 552 | 155 | 331 | 225 | 269 | 278 | 311 | 586 | 514 | 719 |
| DTSF | 61.55474 | 29.38005 | 21.94339 | 73.94208 | 31.8307 | 56.12207 | 31.1906 | 29.20676 | 12.81829 | 17.15824 |
| MS | 16.09633 | 29.38005 | 11.25599 | 12.85958 | 16.72517 | 9.97568 | 15.86667 | 14.71508 | 12.81829 | 8.765217 |
| Distance | 1065.827 | 1784.872 | 1766.685 | 2203.817 | 2232.946 | 1499.11 | 1911.306 | 1468.935 | 1490.853 | 1111.208 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 4.99 | 2.535 | 2.102778 | 4.318333 | 2.322222 | 0.601667 | 2.333333 | 2.906111 | 4.000556 | 2.135556 |
| UZ | 0 | 2.398333 | 2.643889 | 0.318889 | 2.607778 | 4.311667 | 2.637778 | 1.86 | 0.802222 | 2.731111 |
| ZT | 1 | 73 | 88 | 39 | 102 | 20 | 121 | 65 | 53 | 32 |
|  |  |  |  |  |  |  |  |  |  |  |
| Avg Height |  |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 2.44006 | 10.14065 | 7.321152 | 5.175557 | 10.03493 | 14.2599 | 9.202572 | 11.27473 | 6.708633 | 10.36677 |
| 1 | 2.331487 | 10.18101 | 8.512074 | 3.21988 | 8.493902 | 14.34775 | 10.5505 | 10.28473 | 6.70548 | 8.71709 |
| 1.5 | 2.324686 | 10.60375 | 10.37057 | 4.014112 | 9.539347 | 14.2797 | 10.11498 | 9.206367 | 2.950007 | 9.390186 |
| 2 | 2.335818 | 10.7484 | 12.41015 | 5.853969 | 9.547136 | 15.30383 | 9.41489 | 8.848269 | 4.958211 | 8.629139 |
| 2.5 | 2.338141 | 11.07231 | 10.03933 | 5.060571 | 8.455615 | 15.00745 | 10.41774 | 7.126106 | 6.605493 | 7.371985 |
| 3 | 2.421172 | 7.220901 | 10.72165 | 2.596992 | 11.11425 | 15.73381 | 8.415907 | 7.851404 | 6.587434 | 6.795411 |
| 3.5 | 2.700287 | 13.00522 | 8.740917 | 4.46579 | 11.1582 | 14.53566 | 9.329589 | 7.894803 | 7.478942 | 8.65307 |
| 4 | 3.488459 | 8.499917 | 7.407671 | 4.486645 | 8.482838 | 13.45786 | 10.15709 | 7.041545 | 2.744565 | 6.57832 |
| 4.5 | 4.35918 | 4.319222 | 8.496288 | 6.53571 | 10.83012 | 11.48955 | 9.000212 | 7.833121 | 4.981248 | 2.817008 |
| 5 | 5.723794 | 4.372902 | 10.77538 | 3.460645 | 9.736457 | 12.98092 | 11.95382 | 7.337137 | 6.162954 | 5.1303 |

**Run 4**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 4.872374 | 0.924392 | 5.449017 | 3.354344 | 31.41726 | 19.31439 | 24.05198 | 11.49515 | 7.885388 | 15.38694 |
| MEANDER | 0.652504 | 0.12163 | 0.750298 | 0.416429 | 3.309249 | 1.777843 | 0.584923 | 1.366518 | 0.86731 | 1.732249 |
| Speed | 4.374095 | 3.982361 | 4.556718 | 4.501517 | 9.223374 | 7.451488 | 5.235194 | 8.048318 | 5.635584 | 7.318165 |
| F% | 16.71111 | 9.455556 | 14.45556 | 12.98889 | 1.122222 | 1.733333 | 2.288889 | 1.755556 | 6 | 1.677778 |
| Fp | 501 | 685 | 473 | 571 | 85 | 143 | 182 | 121 | 436 | 134 |
| DTSF | 30.60242 | 23.50061 | 19.96629 | 29.64906 | 30.57861 | 53.40273 | 24.71399 | 14.81694 | 24.56458 | 46.16448 |
| MS | 10.47385 | 12.1941 | 10.096 | 15.17806 | 16.02712 | 13.83614 | 8.813773 | 14.81694 | 12.60644 | 12.18478 |
| Distance | 1312.229 | 1194.708 | 1367.015 | 1350.455 | 2765.63 | 2192.401 | 1019.989 | 2414.495 | 1676.998 | 2181.074 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 0.388889 | 1.37 | 1.889444 | 2.280556 | 1.353333 | 2.072778 | 0.36 | 2.726111 | 2.611111 | 1.474444 |
| UZ | 4.452222 | 2.940556 | 2.945 | 2.434444 | 3.517222 | 2.921667 | 4.63 | 2.262778 | 2.343333 | 3.485556 |
| ZT | 28 | 31 | 50 | 42 | 56 | 102 | 30 | 26 | 87 | 142 |
|  |  |  |  |  |  |  |  |  |  |  |
| Avg Height |  |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 11.72032 | 8.002653 | 6.874154 | 8.386433 | 9.493992 | 7.208398 | 11.39513 | 4.148176 | 5.211325 | 8.652167 |
| 1 | 10.12882 | 9.312553 | 9.703676 | 8.315761 | 8.180623 | 8.382486 | 10.55863 | 3.730704 | 7.939078 | 7.014763 |
| 1.5 | 10.02756 | 11.03008 | 7.964401 | 4.491628 | 9.153434 | 5.467874 | 11.45869 | 3.953953 | 7.918298 | 8.332956 |
| 2 | 11.67937 | 9.557293 | 7.016149 | 5.87067 | 9.873927 | 6.281444 | 11.38521 | 4.007958 | 7.742171 | 9.43742 |
| 2.5 | 10.67244 | 6.249257 | 8.29195 | 6.255492 | 9.31746 | 8.869565 | 11.36344 | 8.396601 | 3.092864 | 7.590629 |
| 3 | 11.19476 | 9.67395 | 7.286856 | 8.999612 | 8.762265 | 7.699581 | 10.32044 | 10.93507 | 4.718636 | 8.109041 |
| 3.5 | 10.82868 | 7.308761 | 6.191727 | 5.743585 | 10.33633 | 8.705159 | 9.60823 | 10.11141 | 7.783641 | 9.116724 |
| 4 | 10.86878 | 8.557983 | 7.552851 | 8.849979 | 9.092024 | 8.240797 | 10.8801 | 10.65074 | 7.634836 | 7.557723 |
| 4.5 | 11.7065 | 6.646081 | 8.642095 | 7.098747 | 10.15753 | 7.711242 | 12.11655 | 6.250517 | 7.389366 | 8.708243 |
| 5 | 10.89767 | 7.867427 | 8.964561 | 7.446266 | 9.184895 | 10.15597 | 10.93226 | 8.629135 | 6.857272 | 8.314684 |

**CC group (1.5 % alcohol treated for 30 min) (n=20)**

**Run 1**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 11.49845 | 10.35344 | 18.7539 | 13.63036 | 1.910378 | 9.764603 | 5.709425 | 21.3068 | 13.42745 | 1.382745 |
| MEANDER | 1.271175 | 1.249061 | 1.770869 | 1.453008 | 0.156677 | 1.22313 | 0.670191 | 1.846815 | 1.577007 | 0.100792 |
| Speed | 8.163609 | 7.304209 | 10.61932 | 8.935251 | 1.722639 | 6.879565 | 4.37941 | 11.68549 | 7.804429 | 2.422344 |
| F% | 2.388889 | 2.388889 | 1.244444 | 2.011111 | 74.87778 | 2.611111 | 25.18889 | 0.388889 | 1.644444 | 47.4 |
| Fp | 169 | 168 | 77 | 128 | 759 | 144 | 695 | 30 | 102 | 1646 |
| DTSF | 32.70694 | 12.0443 | 53.14982 | 120.9392 | 29.00847 | 42.74953 | 15.7097 | 56.41373 | 28.91623 | 96.08163 |
| MS | 32.70694 | 12.0443 | 18.50957 | 14.04102 | 29.00847 | 10.98678 | 15.7097 | 19.85121 | 14.6885 | 19.61566 |
| Distance | 2449.083 | 2191.263 | 3185.797 | 2679.384 | 516.7916 | 2063.869 | 1313.823 | 3505.646 | 2341.329 | 726.7031 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 2.329444 | 1.397222 | 0.59 | 1.979444 | 2.848889 | 0.066111 | 0.040556 | 3.148889 | 0.286111 | 0.332222 |
| UZ | 2.394444 | 2.980556 | 3.207778 | 2.679444 | 1.964444 | 4.898333 | 4.796667 | 1.837778 | 4.678889 | 4.624444 |
| Zt | 35 | 20 | 12 | 8 | 2 | 4 | 4 | 23 | 8 | 16 |
| Avg Height (cm) |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 6.601848 | 2.293811 | 2.890182 | 2.3586 | 1.831141 | 12.26574 | 13.18148 | 2.03363 | 13.63596 | 12.78263 |
| 1 | 6.935587 | 2.237928 | 5.048607 | 2.42594 | 1.980162 | 12.07446 | 13.33324 | 1.997199 | 13.44932 | 13.00847 |
| 1.5 | 5.028207 | 5.853458 | 11.87767 | 2.460901 | 1.986878 | 12.27768 | 13.1772 | 2.358077 | 11.16341 | 11.45879 |
| 2 | 8.199099 | 10.22924 | 12.68555 | 3.73303 | 2.307697 | 12.14446 | 12.69937 | 3.241342 | 11.60414 | 12.3682 |
| 2.5 | 11.60769 | 10.81534 | 11.64976 | 10.04816 | 2.479323 | 12.10856 | 12.50402 | 5.828715 | 12.3852 | 12.43116 |
| 3 | 7.82408 | 11.46113 | 12.46519 | 12.05596 | 4.373539 | 12.36616 | 12.65104 | 6.649716 | 11.36965 | 10.93247 |
| 3.5 | 9.59993 | 11.50716 | 12.57541 | 12.45219 | 12.28956 | 12.53311 | 13.09441 | 10.30172 | 10.76362 | 12.273 |
| 4 | 10.45785 | 11.40023 | 11.7551 | 11.52308 | 13.1148 | 12.60016 | 13.48858 | 10.13235 | 10.3031 | 13.17111 |
| 4.5 | 6.693969 | 11.06192 | 11.68688 | 12.30027 | 13.4159 | 12.18413 | 12.55718 | 10.29965 | 9.849906 | 13.36851 |
| 5 | 5.434458 | 10.6066 | 11.10604 | 10.88209 | 13.50604 | 12.39255 | 13.82819 | 10.3441 | 10.59966 | 13.34903 |

**Run 2**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 21.05922 | 9.789772 | 13.70401 | 11.69011 | 19.2624 | 7.972997 | 11.47305 | 11.19316 | 3.346433 | 5.997361 |
| MEANDER | 1.668228 | 0.827628 | 1.631039 | 1.265462 | 1.89144 | 1.07129 | 1.270606 | 1.280078 | 0.446911 | 0.768171 |
| Speed | 12.61072 | 10.79253 | 8.43559 | 7.661171 | 10.40465 | 6.317502 | 6.834932 | 8.17638 | 4.766703 | 5.679496 |
| F% | 0.766667 | 2.733333 | 0.333333 | 4.3 | 0.833333 | 1.4 | 9.677778 | 1.811111 | 7.1 | 4.622222 |
| Fp | 55 | 194 | 21 | 246 | 39 | 76 | 254 | 98 | 436 | 321 |
| DTSF | 64.46894 | 157.6663 | 98.13983 | 59.47572 | 16.65753 | 32.93173 | 79.23122 | 53.45163 | 53.37219 | 14.55675 |
| MS | 22.2101 | 24.13675 | 13.09769 | 15.56583 | 16.65753 | 16.97717 | 13.89569 | 14.32851 | 9.426093 | 14.55675 |
| Distance | 3783.216 | 3237.758 | 2530.677 | 2298.351 | 3121.395 | 1895.251 | 2050.479 | 2452.914 | 1430.011 | 1703.849 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 1.062222 | 0 | 0.147222 | 4.280556 | 0.083889 | 3.285556 | 0 | 0.165556 | 0.76 | 0.901111 |
| UZ | 3.932778 | 4.995556 | 4.785556 | 0.706111 | 4.886111 | 1.375 | 4.981667 | 4.778333 | 3.714444 | 3.76 |
| Zt | 10 | 0 | 2 | 8 | 2 | 15 | 0 | 4 | 15 | 24 |
| Avg Height |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 2.544734 | 12.9362 | 13.15127 | 1.378827 | 10.38814 | 1.629805 | 13.84305 | 12.9215 | 12.30143 | 11.76864 |
| 1 | 5.921936 | 13.62451 | 13.37813 | 1.588468 | 11.17693 | 1.897212 | 14.15737 | 13.23878 | 12.27889 | 11.96539 |
| 1.5 | 11.26882 | 12.42149 | 13.52764 | 1.723893 | 12.74286 | 2.093148 | 14.13074 | 13.09819 | 12.37162 | 12.95229 |
| 2 | 12.50551 | 12.41735 | 13.09047 | 1.580405 | 12.35358 | 2.216597 | 13.98294 | 13.0376 | 13.1705 | 11.4185 |
| 2.5 | 12.51146 | 12.50542 | 13.2211 | 1.784964 | 12.65541 | 3.065746 | 14.08711 | 13.33354 | 13.03534 | 11.94396 |
| 3 | 12.20255 | 13.00855 | 13.0177 | 1.80196 | 12.74792 | 6.396363 | 13.9778 | 13.26473 | 12.68856 | 13.14889 |
| 3.5 | 11.82862 | 12.41549 | 12.92142 | 1.889614 | 12.80193 | 6.515095 | 13.21676 | 13.71766 | 12.58705 | 10.64845 |
| 4 | 10.68311 | 12.65265 | 12.81511 | 3.778894 | 12.7489 | 11.12593 | 12.69466 | 13.63908 | 6.614152 | 8.726204 |
| 4.5 | 12.26688 | 12.46474 | 13.08342 | 8.032404 | 11.24351 | 11.91421 | 13.55058 | 13.76243 | 7.722002 | 9.856023 |
| 5 | 12.15959 | 12.40356 | 10.22077 | 11.60415 | 12.73908 | 10.93812 | 13.49613 | 9.681118 | 6.658266 | 6.266518 |

**PC group (caffeine treated for 30 min) n =20**

**Run 1**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 3.92515 | 0 | 1.351824 | 3.504648 | 6.501794 | 0.245353 | 0 | 0.615352 | 0 | 4.935731 |
| MEANDER | 0.504947 | 0 | 0.118709 | 0.366353 | 0.77443 | 0.02259 | 0 | 0.07492 | 0 | 0.634025 |
| Speed | 3.452473 | 0.107577 | 0.867268 | 3.86767 | 5.586317 | 1.867182 | 1.287635 | 1.236339 | 3.544479 | 4.893656 |
| F% | 25.06667 | 94.13333 | 78.83333 | 25.57778 | 6.833333 | 45.44444 | 52.98889 | 64.78889 | 15.31111 | 11.7 |
| Fp | 1310 | 388 | 939 | 1204 | 542 | 1872 | 1735 | 1313 | 1301 | 679 |
| DTSF | 18.34514 | 2.744693 | 16.33481 | 58.12724 | 54.31611 | 9.505782 | 13.66181 | 11.1945 | 157.8376 | 15.02508 |
| MS | 9.52749 | 0.716591 | 16.33481 | 20.39706 | 14.17151 | 9.505782 | 3.619731 | 11.1945 | 4.439385 | 15.02508 |
| Distance | 1034.551 | 32.27314 | 260.1803 | 1160.301 | 1675.558 | 560.1545 | 386.2904 | 370.9018 | 1063.344 | 1468.097 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 0.067778 | 5.000556 | 4.865 | 4.361111 | 4.328333 | 4.752222 | 4.961111 | 4.837778 | 5.000556 | 4.742778 |
| UZ | 4.903889 | 0 | 0 | 0.597222 | 0.656111 | 0 | 0 | 0.016667 | 0 | 0.073889 |
| ZT | 6 | 1 | 1 | 5 | 31 | 1 | 1 | 3 | 1 | 3 |
|  |  |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 12.92695 | 1.626225 | 1.743674 | 1.64338 | 2.623557 | 2.12049 | 2.381359 | 2.505938 | 1.105208 | 1.702099 |
| 1 | 12.47888 | 1.629725 | 1.664572 | 1.77198 | 3.276324 | 2.070374 | 2.161047 | 2.508835 | 1.105718 | 1.741176 |
| 1.5 | 13.09113 | 1.623754 | 1.65 | 2.006959 | 3.35707 | 2.054711 | 1.687709 | 2.505589 | 1.100976 | 1.901105 |
| 2 | 12.00068 | 1.623073 | 1.524125 | 2.275195 | 2.332991 | 1.87179 | 1.613314 | 2.515431 | 1.095321 | 1.748082 |
| 2.5 | 13.07248 | 1.626615 | 1.434955 | 2.184447 | 3.539571 | 2.08363 | 2.209588 | 4.020726 | 1.091919 | 1.867111 |
| 3 | 13.1743 | 1.630077 | 1.386355 | 1.903952 | 3.519031 | 1.796454 | 2.7153 | 2.99907 | 1.094521 | 1.847779 |
| 3.5 | 10.90331 | 1.623143 | 1.548316 | 1.757144 | 5.339311 | 1.825946 | 1.875327 | 1.48302 | 1.096083 | 2.008538 |
| 4 | 12.9113 | 1.619808 | 2.253153 | 8.616644 | 6.873849 | 2.052406 | 1.87439 | 1.489166 | 1.094958 | 1.831047 |
| 4.5 | 12.17054 | 1.620612 | 2.199091 | 8.790666 | 7.279338 | 2.091088 | 1.921742 | 1.490754 | 1.095702 | 3.18348 |
| 5 | 11.52579 | 1.621791 | 2.078235 | 4.672697 | 4.613088 | 2.128292 | 1.955001 | 1.503603 | 1.092703 | 4.576846 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 3.075897 | 8.297803 | 2.950476 | 1.239935 | 11.08027 | 0.949671 | 0.283111 | 6.087677 | 0.55032 | 1.073965 |
| MEANDER | 0.39852 | 0.869995 | 0.401252 | 0.139522 | 1.421109 | 0.11643 | 0.033564 | 0.748124 | 0.07171 | 0.142424 |
| Speed | 5.185602 | 5.773246 | 5.121105 | 2.509287 | 6.340188 | 3.516081 | 3.304485 | 5.713259 | 2.994139 | 3.118561 |
| F% | 7.488889 | 4.966667 | 5.544444 | 34.84444 | 3.644444 | 16.3 | 18.43333 | 5.522222 | 30.71111 | 22.13333 |
| Fp | 611 | 413 | 423 | 1896 | 257 | 1185 | 1384 | 452 | 1522 | 1056 |
| DTSF | 9.41305 | 13.74579 | 10.17848 | 24.57284 | 12.6187 | 13.72803 | 38.0003 | 13.91675 | 9.447459 | 11.18058 |
| MS | 9.41305 | 13.74579 | 10.17848 | 12.49985 | 12.6187 | 13.72803 | 7.985883 | 13.91675 | 9.447459 | 11.18058 |
| Distance | 1553.094 | 1712.136 | 1535.855 | 752.7861 | 1901.698 | 1054.824 | 991.3456 | 1713.978 | 898.2416 | 935.5682 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 1.508333 | 2.52 | 1.810556 | 4.970556 | 1.973333 | 3.322222 | 2.743889 | 3.419444 | 4.403889 | 4.417778 |
| UZ | 3.262778 | 2.398333 | 3.103889 | 0 | 2.547222 | 1.107778 | 2.202778 | 1.33 | 0.519444 | 0.149444 |
| ZT | 49 | 70 | 44 | 1 | 144 | 20 | 24 | 19 | 17 | 10 |
|  |  |  |  |  |  |  |  |  |  |  |
|  Time (min) 0.5 | 11.85855 | 4.772339 | 8.854639 | 2.08373 | 8.717691 | 5.822689 | 7.588167 | 9.245686 | 2.904243 | 1.940783 |
| 1 | 9.238314 | 5.440823 | 11.38869 | 2.157067 | 8.051311 | 7.102094 | 8.291363 | 10.09565 | 5.614457 | 1.877294 |
| 1.5 | 7.977604 | 8.792942 | 11.56453 | 2.236154 | 8.782953 | 4.156275 | 5.620838 | 10.46039 | 5.549206 | 2.035656 |
| 2 | 6.307239 | 10.71557 | 9.544252 | 2.220457 | 8.722826 | 7.275104 | 9.314357 | 5.811347 | 4.262262 | 2.245781 |
| 2.5 | 10.60407 | 7.127283 | 8.508732 | 2.528745 | 8.795963 | 4.199634 | 7.9223 | 3.809482 | 4.698917 | 2.100665 |
| 3 | 10.09906 | 8.738947 | 9.968097 | 2.668496 | 9.12857 | 3.148098 | 7.082413 | 4.626688 | 2.88417 | 3.419342 |
| 3.5 | 10.48208 | 7.64953 | 6.863224 | 3.499899 | 6.869739 | 2.673978 | 8.838128 | 3.377426 | 4.72009 | 3.051389 |
| 4 | 9.596578 | 7.19978 | 5.591499 | 2.680834 | 10.31278 | 3.538717 | 6.663232 | 3.66762 | 5.254637 | 4.164042 |
| 4.5 | 8.740402 | 7.875884 | 9.625404 | 2.628474 | 7.252023 | 11.43144 | 8.050814 | 3.385491 | 5.507108 | 4.874445 |
| 5 | 7.813679 | 9.454171 | 4.94232 | 2.769044 | 9.212934 | 9.28477 | 9.038628 | 3.711188 | 3.918287 | 7.403052 |

**Run 2**

**Behaviour tracked on 46th day (30 days after completion of SB treatment)**

**Vehicle Control Group (n = 30)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Run 1** | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 7.06639 | 6.992626 | 11.03735 | 11.58628 | 7.353713 | 7.875838 | 5.189046 | 7.866054 | 12.92332 | 2.799157 |
| Meander | 0.707192 | 0.700637 | 0.808371 | 1.385984 | 1.028723 | 0.785999 | 0.730427 | 0.89126 | 1.237085 | 0.354073 |
| Speed | 6.05895 | 6.062188 | 5.289915 | 6.414696 | 5.254979 | 6.286071 | 4.95859 | 5.939547 | 6.445611 | 4.139179 |
| F% | 9.255556 | 9.033333 | 5.4 | 3.888889 | 5.422222 | 3.422222 | 6.511111 | 5.366667 | 6.755556 | 16.82222 |
| FP | 577 | 571 | 349 | 227 | 346 | 287 | 362 | 416 | 445 | 972 |
| DTSF | 34.67849 | 34.67955 | 33.22728 | 93.50445 | 37.39632 | 54.98126 | 55.21921 | 18.88029 | 37.93483 | 10.42897 |
| MS | 17.64149 | 17.64286 | 8.747601 | 9.956469 | 9.940301 | 13.94826 | 8.276867 | 18.88029 | 19.51573 | 10.42897 |
| Distance | 1817.685 | 1818.656 | 1505.813 | 1920.918 | 1576.494 | 1873.529 | 1487.168 | 1782.2 | 1932.815 | 1241.754 |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 4.890556 | 1.911667 | 2.148889 | 3.615 | 4.140556 | 2.391667 | 4.176667 | 4.152778 | 2.467222 | 3.578333 |
| UZ | 0 | 3.005 | 2.698333 | 0.795556 | 0.7 | 2.149444 | 0.647222 | 0.694444 | 1.945 | 1.322778 |
| ZT | 1 | 70 | 112 | 55 | 33 | 75 | 77 | 39 | 48 | 107 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Avg height |  |  |  |  |  |  |  |  |  |
| Time (min) |  |  |  |  |  |  |  |  |  |
| 0.5 | 1.789208 | 5.677806 | 7.754518 | 2.382808 | 2.547392 | 5.644161 | 3.336252 | 2.252364 | 7.795414 | 6.634696 |
| 1 | 1.86871 | 8.116494 | 7.485475 | 2.927664 | 2.882592 | 6.007831 | 3.711617 | 2.586471 | 8.599604 | 5.359434 |
| 1.5 | 2.096209 | 9.418715 | 6.601293 | 3.783597 | 5.474169 | 6.665722 | 4.191469 | 2.883486 | 7.486423 | 5.073793 |
| 2 | 1.892809 | 9.197118 | 7.023209 | 5.314379 | 4.542875 | 6.512365 | 3.573991 | 2.832153 | 8.799343 | 5.820798 |
| 2.5 | 2.448838 | 3.568066 | 6.762573 | 4.12374 | 3.760634 | 4.468681 | 5.255016 | 4.480702 | 7.110826 | 5.636266 |
| 3 | 2.320372 | 7.236047 | 6.029494 | 4.065842 | 4.5646 | 8.302469 | 4.162524 | 2.794423 | 5.653285 | 6.057688 |
| 3.5 | 2.377266 | 8.880287 | 4.970341 | 3.450867 | 6.101517 | 6.685896 | 4.499043 | 3.689216 | 4.110434 | 3.954116 |
| 4 | 2.615448 | 6.542281 | 7.569109 | 4.080707 | 1.479185 | 2.609763 | 4.395727 | 5.063492 | 4.453335 | 2.866721 |
| 4.5 | 2.338134 | 5.845342 | 4.852791 | 4.572298 | 2.685434 | 5.372202 | 2.126597 | 4.429648 | 3.594892 | 1.867016 |
| 5 | 3.2194 | 6.594899 | 6.368934 | 5.193269 | 1.679422 | 6.800486 | 2.934009 | 7.009887 | 4.404646 | 1.296052 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Run 2** | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 8.009064 | 7.749384 | 5.15556 | 7.184095 | 11.81816 | 13.01728 | 10.66557 | 0.517687 | 2.271481 | 11.11808 |
| Meander | 0.894862 | 1.090062 | 0.745446 | 0.845062 | 1.396762 | 1.368867 | 1.384289 | 0.075667 | 0.354313 | 1.513366 |
| Speed | 5.384487 | 5.668173 | 5.240942 | 6.084017 | 6.746266 | 7.549948 | 6.587815 | 3.617412 | 4.23058 | 6.649966 |
| F% | 8.544444 | 3.966667 | 2.733333 | 6.044444 | 3.811111 | 3.444444 | 2.022222 | 6.422222 | 4.8 | 1.644444 |
| FP | 577 | 229 | 175 | 406 | 208 | 282 | 164 | 512 | 332 | 106 |
| DTSF | 18.58914 | 38.91977 | 21.75647 | 17.07421 | 79.73275 | 16.4456 | 16.44288 | 14.55201 | 17.52037 | 50.02238 |
| MS | 18.58914 | 15.29201 | 11.27609 | 17.07421 | 13.51376 | 16.4456 | 16.44288 | 7.499159 | 9.064418 | 10.53438 |
| Distance | 1615.103 | 1583.427 | 1572.283 | 1825.075 | 2023.232 | 2264.71 | 1976.345 | 1085.5 | 1269.174 | 1994.99 |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 4.282778 | 4.562222 | 2.106111 | 3.765 | 4.417222 | 3.925556 | 2.746111 | 4.201111 | 4.473889 | 1.718889 |
| UZ | 0.703889 | 0.408333 | 2.806667 | 1.122778 | 0.572778 | 0.811667 | 2.236667 | 0.775556 | 0.494444 | 3.130556 |
| ZT | 46 | 41 | 89 | 73 | 48 | 80 | 108 | 37 | 37 | 71 |
|  |  |  |  |  |  |  |  |  |  |  |
| Avg height |  |  |  |  |  |  |  |  |  |
| Time (min) |  |  |  |  |  |  |  |  |  |
| 0.5 | 5.95269 | 3.463419 | 6.358831 | 3.531809 | 2.382469 | 2.715539 | 7.230473 | 4.177095 | 3.348569 | 7.187369 |
| 1 | 2.104044 | 3.131286 | 6.512476 | 4.190135 | 4.105917 | 3.152491 | 4.777031 | 4.369949 | 3.058126 | 8.527426 |
| 1.5 | 1.470168 | 3.9089 | 6.291882 | 5.159824 | 4.468114 | 3.796056 | 4.342235 | 2.937982 | 4.598571 | 8.743224 |
| 2 | 4.660842 | 4.457621 | 5.363014 | 4.23058 | 4.388278 | 3.918365 | 4.274636 | 2.441973 | 2.8438 | 9.088756 |
| 2.5 | 5.002401 | 4.785308 | 7.145845 | 2.872252 | 1.78332 | 3.5183 | 4.203316 | 2.739567 | 4.382462 | 9.337368 |
| 3 | 1.195271 | 2.979768 | 7.595061 | 2.340479 | 3.37056 | 5.168698 | 6.803004 | 2.568368 | 1.636741 | 8.844028 |
| 3.5 | 1.232936 | 2.579318 | 6.378263 | 3.865976 | 2.951608 | 5.848984 | 6.170589 | 2.277011 | 3.601839 | 8.921482 |
| 4 | 1.428229 | 1.552163 | 5.674575 | 5.256596 | 2.389601 | 4.836465 | 8.602616 | 3.74075 | 2.738932 | 4.016706 |
| 4.5 | 2.002902 | 3.357845 | 5.444478 | 4.73661 | 2.718647 | 3.484131 | 6.049896 | 2.489849 | 3.455553 | 4.135636 |
| 5 | 2.863449 | 2.565638 | 7.527169 | 5.260757 | 3.615053 | 6.948521 | 5.582824 | 4.862065 | 2.232535 | 4.268924 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Run 3** | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 12.42715 | 7.317954 | 17.22948 | 18.94861 | 13.47266 | 19.97733 | 7.409097 | 9.556093 | 12.19878 | 2.218346 |
| Meander | 1.545682 | 0.912958 | 1.869152 | 2.060232 | 1.619234 | 2.073231 | 0.919982 | 1.105788 | 1.318771 | 0.099157 |
| Speed | 6.555866 | 5.858708 | 7.320533 | 7.712372 | 7.01218 | 9.009291 | 6.458604 | 7.094916 | 7.200416 | 1.492633 |
| F% | 3.522222 | 1.811111 | 4.633333 | 1.933333 | 2.844444 | 1.477778 | 1.777778 | 2.833333 | 3.7 | 62.76667 |
| FP | 219 | 123 | 264 | 160 | 246 | 131 | 153 | 235 | 315 | 1226 |
| DTSF | 46.15326 | 59.97584 | 21.55306 | 12.48915 | 16.74987 | 107.5993 | 29.04784 | 40.41066 | 27.62847 | 39.4082 |
| MS | 12.06558 | 9.144437 | 21.55306 | 12.48915 | 16.74987 | 18.73413 | 14.60556 | 13.69072 | 14.41052 | 20.70064 |
| Distance | 1966.76 | 1752.523 | 2195.318 | 2299.979 | 2103.654 | 2702.787 | 1937.581 | 2128.475 | 2159.788 | 448.3099 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 2.192778 | 0.969444 | 2.432222 | 1.865 | 3.649444 | 3.587778 | 4.537778 | 2.762778 | 3.440556 | 3.683333 |
| UZ | 2.701667 | 3.161667 | 2.396111 | 2.927778 | 1.343889 | 0.907778 | 0.427778 | 1.7 | 1.207222 | 0.921111 |
| ZT | 151 | 62 | 132 | 77 | 100 | 55 | 59 | 36 | 53 | 57 |
|  |  |  |  |  |  |  |  |  |  |  |
| Avg height |  |  |  |  |  |  |  |  |  |
| Time (min) |  |  |  |  |  |  |  |  |  |
| 0.5 | 4.037543 | 8.618074 | 6.306693 | 6.306736 | 5.064645 | 3.670286 | 3.120178 | 4.712077 | 4.801279 | 4.775478 |
| 1 | 4.543507 | 7.341247 | 6.497588 | 6.334895 | 5.792036 | 6.546104 | 4.351086 | 2.778177 | 4.242651 | 6.105265 |
| 1.5 | 6.206662 | 9.033621 | 5.755193 | 7.729504 | 6.405242 | 6.088458 | 3.083379 | 2.247676 | 3.89959 | 5.168808 |
| 2 | 8.181281 | 9.325656 | 6.975203 | 7.364197 | 6.473887 | 5.544943 | 4.176372 | 9.116481 | 5.444496 | 4.694074 |
| 2.5 | 8.918011 | 10.12783 | 6.852238 | 8.761749 | 6.468628 | 5.84734 | 3.561241 | 2.050945 | 4.397062 | 2.859437 |
| 3 | 8.157345 | 7.412549 | 6.59141 | 8.225673 | 2.489593 | 3.168204 | 3.244731 | 3.258996 | 5.857599 | 3.660365 |
| 3.5 | 6.935171 | 8.958348 | 6.038193 | 6.744186 | 3.185873 | 2.619363 | 3.159126 | 5.202736 | 5.599175 | 3.775626 |
| 4 | 5.510595 | 7.500484 | 5.866307 | 8.716528 | 3.038114 | 3.122062 | 3.682343 | 10.55758 | 7.706316 | 3.91744 |
| 4.5 | 6.668271 | 6.97691 | 6.153776 | 7.273381 | 2.807617 | 3.927043 | 3.230356 | 5.931995 | 4.907264 | 4.267186 |
| 5 | 7.865691 | 7.009729 | 6.48562 | 3.944876 | 4.775109 | 2.585804 | 4.366361 | 9.988412 | 6.076591 | 3.384891 |

**Behaviour tracked on 46th day (30 days after completion of SB treatment)**

**SB Group (n=30)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Run 1** | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 13.25952 | 6.396591 | 8.93594 | 5.530729 | 4.925923 | 7.568981 | 5.550083 | 8.134572 | 7.51234 | 6.661614 |
| Meander | 1.585609 | 0.647476 | 1.046649 | 0.718493 | 0.626353 | 1.042637 | 0.768146 | 1.001949 | 0.978555 | 0.682619 |
| Speed | 7.060878 | 5.660117 | 6.562199 | 5.799666 | 5.393253 | 5.816871 | 5.14736 | 5.257629 | 5.779828 | 5.730905 |
| F% | 2.433333 | 5.7 | 2.411111 | 3.133333 | 1.977778 | 1.111111 | 5.244444 | 12.28889 | 4.7 | 12.55556 |
| FP | 209 | 461 | 169 | 230 | 153 | 87 | 310 | 601 | 256 | 499 |
| DTSF | 126.8088 | 58.96918 | 17.67683 | 38.39226 | 38.44052 | 18.1162 | 42.27212 | 18.17167 | 37.66217 | 22.47671 |
| MS | 10.42718 | 10.34102 | 17.67683 | 13.11992 | 10.06933 | 9.363899 | 11.23662 | 18.17167 | 18.96394 | 22.47671 |
| Distance | 2118.263 | 1683.446 | 1968.288 | 1739.573 | 1614.216 | 1744.919 | 1542.501 | 1575.827 | 1733.948 | 1719.805 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 1.496111 | 1.236667 | 3.283889 | 3.558333 | 2.68 | 2.250556 | 1.506111 | 2.506667 | 2.892222 | 4.430556 |
| UZ | 3.438333 | 3.253333 | 1.17 | 1.268333 | 2.108333 | 2.592222 | 3.445 | 2.202778 | 1.985 | 0.428889 |
| ZT | 55 | 87 | 47 | 151 | 284 | 80 | 55 | 85 | 103 | 50 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| avg height | 8.759109 | 9.11062 | 2.472557 | 3.146054 | 5.26884 | 7.346989 | 8.425612 | 1.542 | 5.055915 | 3.104816 |
|  | 8.815916 | 7.815022 | 3.000287 | 5.802128 | 5.67249 | 7.624321 | 9.567302 | 2.911617 | 5.993693 | 4.500145 |
|  | 8.355539 | 6.624636 | 5.151099 | 3.901587 | 6.236567 | 7.569785 | 8.485543 | 5.628463 | 5.994571 | 4.811121 |
|  | 8.277927 | 8.639041 | 6.688022 | 5.625813 | 6.015855 | 6.839313 | 9.453317 | 6.645185 | 7.794489 | 4.857228 |
|  | 7.65958 | 9.165762 | 6.074323 | 5.953339 | 4.534354 | 7.330633 | 5.643977 | 7.864141 | 6.279321 | 4.861178 |
|  | 6.44687 | 8.476742 | 5.540182 | 5.750199 | 6.925152 | 5.692566 | 8.741197 | 7.689532 | 6.301305 | 3.782632 |
|  | 8.307661 | 7.461114 | 3.786983 | 4.328378 | 6.789516 | 7.123058 | 9.380554 | 5.792635 | 6.936064 | 3.788185 |
|  | 7.187183 | 7.04353 | 5.007505 | 1.507722 | 5.767388 | 5.492494 | 5.923993 | 7.396622 | 5.067318 | 3.369409 |
|  | 6.604419 | 7.664526 | 6.159438 | 4.081584 | 8.023819 | 5.696851 | 6.042455 | 6.532822 | 4.53279 | 4.801075 |
|  | 6.217355 | 5.935804 | 2.727401 | 4.30217 | 6.827164 | 5.003867 | 7.431921 | 6.457069 | 4.485487 | 4.927041 |
| **Run 2** | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 4.733344 | 5.477701 | 7.062485 | 5.799868 | 6.100095 | 2.767459 | 4.909071 | 5.217135 | 9.207316 | 20.77136 |
| Meander | 0.622629 | 0.59066 | 0.800472 | 0.70948 | 0.818153 | 0.348446 | 0.552736 | 0.742044 | 1.1779 | 2.331832 |
| Speed | 4.955123 | 4.957969 | 5.596041 | 5.011788 | 5.657853 | 4.520818 | 5.449428 | 3.145928 | 5.879349 | 8.06431 |
| F% | 3.555556 | 3.733333 | 5.411111 | 14.73333 | 3.988889 | 11.07778 | 6.355556 | 41.44444 | 8.055556 | 2.955556 |
| FP | 251 | 244 | 420 | 364 | 309 | 672 | 521 | 349 | 297 | 177 |
| DTSF | 27.57565 | 14.83166 | 15.79463 | 17.07687 | 13.61566 | 16.28037 | 15.77495 | 14.66966 | 13.15915 | 21.67991 |
| MS | 14.12698 | 14.83166 | 15.79463 | 17.07687 | 13.61566 | 16.28037 | 15.77495 | 14.66966 | 13.15915 | 21.67991 |
| Distance | 1485.973 | 1478.174 | 1678.775 | 1502.795 | 1697.356 | 1356.245 | 1635.137 | 943.4891 | 1763.805 | 2419.4 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 3.697778 | 3.543889 | 2.967222 | 3.535556 | 2.405556 | 2.44 | 3.456111 | 2.991667 | 1.893889 | 0.72 |
| UZ | 1.125556 | 1.449444 | 1.861667 | 1.44 | 2.253333 | 2.292222 | 1.262778 | 1.662778 | 2.877222 | 4.011667 |
| ZT | 65 | 91 | 77 | 70 | 75 | 90 | 63 | 97 | 67 | 57 |
|  |  |  |  |  |  |  |  |  |  |  |
| avg height | 5.043196 | 7.674086 | 5.215776 | 5.386551 | 7.65665 | 6.310738 | 5.426457 | 5.90694 | 8.041795 | 7.865911 |
|  | 5.82522 | 6.903723 | 5.970773 | 5.605027 | 6.928966 | 5.368221 | 5.558824 | 4.777034 | 7.835412 | 7.93639 |
|  | 5.418429 | 6.789735 | 6.596115 | 2.983766 | 7.346494 | 6.706893 | 5.213988 | 4.526197 | 7.64302 | 7.836371 |
|  | 3.558547 | 5.661597 | 8.074358 | 4.718307 | 7.355639 | 6.878937 | 5.105944 | 5.265792 | 6.978654 | 8.689633 |
|  | 2.39161 | 3.137717 | 6.10265 | 4.390382 | 5.956763 | 7.05442 | 5.244408 | 3.829594 | 9.074832 | 7.223228 |
|  | 1.799905 | 4.057946 | 2.963028 | 3.147691 | 4.914049 | 6.138852 | 3.977971 | 4.884852 | 7.374971 | 8.832241 |
|  | 4.000353 | 0.692318 | 4.544181 | 3.531114 | 5.816958 | 6.657578 | 4.384198 | 6.279209 | 6.992482 | 8.400225 |
|  | 4.638055 | 0.663318 | 4.616949 | 3.429626 | 7.643906 | 6.301081 | 4.191425 | 6.877989 | 6.546427 | 9.179217 |
|  | 6.446974 | 0.651226 | 3.970144 | 7.080344 | 5.568531 | 3.182978 | 3.869977 | 5.911983 | 1.751387 | 9.70935 |
|  | 3.178847 | 0.552006 | 4.995821 | 6.296299 | 1.292316 | 4.800875 | 2.994691 | 6.187362 | 5.853351 | 5.303274 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Run 3** | Fish 1 | Fish 2 | Fish 3 | Fish 4 | Fish 5 | Fish 6 | Fish 7 | Fish 8 | Fish 9 | Fish 10 |
| AV | 9.087664 | 12.53435 | 6.130725 | 13.226 | 7.904543 | 16.00849 | 10.70601 | 15.0837 | 14.05199 | 11.39325 |
| Meander | 1.057965 | 1.365614 | 0.779193 | 1.475831 | 1.103493 | 1.71127 | 1.242522 | 1.717054 | 1.604543 | 1.517439 |
| Speed | 6.044539 | 7.092703 | 5.061114 | 7.610871 | 5.774175 | 7.790797 | 6.727654 | 7.972738 | 7.349855 | 6.117406 |
| F% | 9.066667 | 1.5 | 7.411111 | 2.955556 | 2.588889 | 2.833333 | 4.2 | 2.088889 | 3.8 | 3.844444 |
| FP | 419 | 110 | 458 | 231 | 177 | 206 | 325 | 150 | 272 | 212 |
| DTSF | 13.43178 | 28.12306 | 13.27365 | 16.65624 | 12.44368 | 89.11032 | 31.97719 | 69.48023 | 48.76392 | 15.61853 |
| MS | 13.43178 | 14.36018 | 13.27365 | 16.65624 | 12.44368 | 18.52658 | 16.8244 | 12.40456 | 12.70256 | 15.61853 |
| Distance | 1810.683 | 2116.073 | 1518.334 | 2281.318 | 1732.252 | 2337.239 | 2018.296 | 2391.822 | 2204.63 | 1835.222 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 60.7 | 173.2 | 90.1 | 140.0333 | 14.46667 | 190.2667 | 211.5 | 67.36667 | 23.06667 | 135.7 |
| UZ | 230.8 | 102.9 | 179.3333 | 152.2 | 265.6333 | 108.5667 | 55.43333 | 217.8667 | 267.6667 | 162.1667 |
| ZT | 66 | 145 | 101 | 110 | 12 | 119 | 63 | 86 | 30 | 138 |
|  |  |  |  |  |  |  |  |  |  |  |
| LZ | 1.011667 | 2.886667 | 1.501667 | 2.333889 | 0.241111 | 3.171111 | 3.525 | 1.122778 | 0.384444 | 2.261667 |
| UZ | 3.846667 | 1.715 | 2.988889 | 2.536667 | 4.427222 | 1.809444 | 0.923889 | 3.631111 | 4.461111 | 2.702778 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| avg height | 8.105721 | 5.186821 | 6.978437 | 4.581857 | 9.829803 | 6.813518 | 3.343511 | 8.133379 | 10.09246 | 6.787864 |
|  | 8.019525 | 4.972504 | 6.954081 | 6.135229 | 9.939218 | 6.745154 | 4.333435 | 7.627086 | 10.29135 | 6.454313 |
|  | 8.163535 | 4.202269 | 8.012127 | 6.913079 | 9.048656 | 7.201021 | 5.311993 | 7.364801 | 10.02058 | 6.09737 |
|  | 7.508716 | 5.547422 | 8.991364 | 7.359955 | 10.47555 | 4.845966 | 5.300145 | 5.960434 | 7.809425 | 6.330176 |
|  | 9.391254 | 6.735643 | 5.936928 | 6.083824 | 9.742258 | 7.313893 | 6.068608 | 8.540389 | 9.204953 | 6.417039 |
|  | 6.918179 | 4.487168 | 7.44749 | 5.518886 | 8.926874 | 5.042794 | 5.102667 | 8.916268 | 9.055042 | 5.11176 |
|  | 8.072421 | 5.134807 | 6.819267 | 6.510142 | 9.95187 | 5.301266 | 4.466777 | 9.148193 | 9.274808 | 6.72082 |
|  | 9.017031 | 6.682199 | 6.484697 | 6.475485 | 10.21469 | 4.390768 | 5.344628 | 9.389453 | 9.57042 | 6.972647 |
|  | 8.240361 | 5.748161 | 7.226343 | 5.869735 | 9.855889 | 4.790782 | 1.741467 | 6.8109 | 9.980027 | 6.044468 |
|  | 6.958855 | 6.212122 | 9.35115 | 7.202076 | 8.689641 | 3.718075 | 3.896175 | 7.414323 | 8.456455 | 7.575688 |