**ANNEX 5 C: ADULT FISH BIOMETRIC DATA – MEANS & ANALYSIS RESULTS**

**Mean and median values of adult female fish in the different groups**

| Exposure Groups | | Total Length (mm) | Standard Length (mm) | Body Mass (g) | Condition Factor | GSI (%) | Gonad index |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Control | n | 3 | 3 | 3 | 3 | 3 | 3 |
| Mean | 143.667 | 115.333 | 38.5633 | 1.2907 | 2.7712 | 11.33 |
| Std. Deviation | 11.8462 | 10.7858 | 7.87985 | 0.05600 | 0.98214 | 5.774 |
| Median | 150.000 | 120.000 | 41.6900 | 1.2900 | 3.1655 | 8.00 |
| Minimum | 130.0 | 103.0 | 29.60 | 1.24 | 1.65 | 8 |
| Maximum | 151.0 | 123.0 | 44.40 | 1.35 | 3.49 | 18 |
| Solvent control | n | 4 | 4 | 4 | 4 | 4 | 4 |
| Mean | 140.500 | 115.000 | 40.3168 | 1.4383 | 3.4382 | 5.50 |
| Std. Deviation | 17.7482 | 15.2971 | 11.64266 | 0.13493 | 0.39951 | 3.786 |
| Median | 139.000 | 118.000 | 39.2155 | 1.4310 | 3.6218 | 7.00 |
| Minimum | 124.0 | 94.0 | 30.16 | 1.29 | 2.84 | 0 |
| Maximum | 160.0 | 130.0 | 52.67 | 1.61 | 3.67 | 8 |
| NVP L | n | 5 | 5 | 5 | 5 | 5 | 5 |
| Mean | 147.000 | 119.600 | 45.0980 | 1.4428 | 3.6110 | 13.20 |
| Std. Deviation | 11.2250 | 10.5024 | 3.45773 | 0.24692 | 0.84903 | 3.033 |
| Median | 154.000 | 122.000 | 45.2300 | 1.2870 | 3.8594 | 14.00 |
| Minimum | 132.0 | 105.0 | 40.35 | 1.24 | 2.30 | 8 |
| Maximum | 157.0 | 130.0 | 49.80 | 1.75 | 4.49 | 16 |
| NVP H | n | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean | 140.429 | 114.143 | 40.6470 | 1.4731 | 3.6713 | 19.43 |
| Std. Deviation | 15.2081 | 15.6677 | 8.59926 | 0.22258 | 0.54613 | 8.384 |
| Median | 141.000 | 114.000 | 44.0000 | 1.3550 | 3.7253 | 16.00 |
| Minimum | 115.0 | 90.0 | 25.60 | 1.22 | 2.83 | 14 |
| Maximum | 155.0 | 135.0 | 49.93 | 1.76 | 4.19 | 38 |
| Mixture 1 | n | 8 | 8 | 8 | 8 | 8 | 8 |
| Mean | 147.125 | 118.875 | 49.9271 | 1.4101 | 3.3760 | 17.25 |
| Std. Deviation | 29.1667 | 25.7040 | 32.35311 | 0.16943 | 1.56651 | 9.004 |
| Median | 134.000 | 104.500 | 34.6385 | 1.3520 | 3.7535 | 16.00 |
| Minimum | 122.0 | 98.0 | 24.70 | 1.22 | 0.61 | 8 |
| Maximum | 201.0 | 167.0 | 109.14 | 1.74 | 5.25 | 28 |
| Total | N | 27 | 27 | 27 | 27 | 27 | 27 |
| Mean | 144.000 | 116.815 | 43.9405 | 1.4234 | 3.4381 | 14.67 |
| Std. Deviation | 18.9473 | 17.1151 | 18.45788 | 0.18369 | 1.00296 | 8.152 |
| Median | 141.000 | 115.000 | 43.8000 | 1.3470 | 3.6167 | 14.00 |
| Minimum | 115.0 | 90.0 | 24.70 | 1.22 | 0.61 | 0 |
| Maximum | 201.0 | 167.0 | 109.14 | 1.76 | 5.25 | 38 |

**Mean and median values of adult male fish in the different groups**

| Exposure Groups | | Total Length (mm) | Standard Length (mm) | Body Mass (g) | Condition Factor | GSI (%) | Gonad index |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Control | n | 5 | 5 | 5 | 5 | 5 | 5 |
| Mean | 146.500 | 118.400 | 42.8370 | 1.3492 | 0.3396 | 9.20 |
| Std. Deviation | 13.2476 | 10.8536 | 10.02026 | 0.08056 | 0.11470 | 3.899 |
| Median | 146.000 | 117.000 | 42.2300 | 1.3570 | 0.3457 | 8.00 |
| Minimum | 130.0 | 105.0 | 31.82 | 1.26 | 0.18 | 6 |
| Maximum | 167.0 | 135.0 | 58.74 | 1.45 | 0.50 | 16 |
| Solvent control | n | 3 | 3 | 3 | 3 | 3 | 3 |
| Mean | 168.667 | 137.333 | 73.1600 | 1.4630 | 0.3386 | 6.00 |
| Std. Deviation | 17.2434 | 14.6401 | 28.05735 | 0.21095 | 0.12074 | 5.292 |
| Median | 172.000 | 135.000 | 83.5000 | 1.5180 | 0.3605 | 4.00 |
| Minimum | 150.0 | 124.0 | 41.40 | 1.23 | 0.21 | 2 |
| Maximum | 184.0 | 153.0 | 94.58 | 1.64 | 0.45 | 12 |
| NVP L | n | 7 | 7 | 7 | 7 | 7 | 7 |
| Mean | 152.000 | 125.286 | 49.8743 | 1.3800 | 0.4766 | 9.43 |
| Std. Deviation | 14.9666 | 13.6102 | 16.07182 | 0.06190 | 0.10716 | 3.207 |
| Median | 149.000 | 122.000 | 47.8000 | 1.3610 | 0.5021 | 8.00 |
| Minimum | 137.0 | 112.0 | 35.80 | 1.32 | 0.29 | 6 |
| Maximum | 174.0 | 145.0 | 73.96 | 1.48 | 0.58 | 14 |
| NVP H | n | 5 | 5 | 5 | 5 | 5 | 5 |
| Mean | 166.700 | 135.400 | 64.1822 | 1.3498 | 0.4999 | 11.60 |
| Std. Deviation | 18.7136 | 16.6072 | 20.27852 | 0.03577 | 0.05733 | 4.561 |
| Median | 172.500 | 137.000 | 67.0000 | 1.3550 | 0.4895 | 12.00 |
| Minimum | 147.0 | 120.0 | 43.93 | 1.31 | 0.43 | 6 |
| Maximum | 190.0 | 160.0 | 90.68 | 1.39 | 0.57 | 16 |
| Mixture 1 | n | 4 | 4 | 4 | 4 | 4 | 4 |
| Mean | 140.500 | 111.500 | 37.9543 | 1.3598 | 0.4425 | 11.00 |
| Std. Deviation | 6.4550 | 3.8730 | 6.20436 | 0.05081 | 0.18131 | 7.394 |
| Median | 138.000 | 110.500 | 35.7795 | 1.3730 | 0.4400 | 12.00 |
| Minimum | 136.0 | 108.0 | 33.20 | 1.29 | 0.22 | 2 |
| Maximum | 150.0 | 117.0 | 47.06 | 1.40 | 0.67 | 18 |
| Total | N | 24 | 24 | 24 | 24 | 24 | 24 |
| Mean | 154.083 | 125.167 | 52.3130 | 1.3743 | 0.4300 | 9.67 |
| Std. Deviation | 17.0119 | 14.8958 | 19.34774 | 0.08887 | 0.12659 | 4.631 |
| Median | 148.500 | 120.000 | 44.0155 | 1.3590 | 0.4454 | 8.00 |
| Minimum | 130.0 | 105.0 | 31.82 | 1.23 | 0.18 | 2 |
| Maximum | 190.0 | 160.0 | 94.58 | 1.64 | 0.67 | 18 |

**Kruskal -Wallis test for all the fish together (N = 51)**

**Mean ranks for all the biometric indices per group**

| Exposure Groups | | n | Mean Rank |
| --- | --- | --- | --- |
| Total Length (mm) | Control | 8 | 23.56 |
| Solvent control | 7 | 29.21 |
| NVP L | 12 | 28.42 |
| NVP H | 12 | 28.75 |
| Mixture 1 | 12 | 20.58 |
| Total | 51 |  |
| Standard Length (mm) | Control | 8 | 23.56 |
| Solvent control | 7 | 30.79 |
| NVP L | 12 | 29.00 |
| NVP H | 12 | 28.46 |
| Mixture 1 | 12 | 19.38 |
| Total | 51 |  |
| Body Mass (g) | Control | 8 | 21.50 |
| Solvent control | 7 | 29.57 |
| NVP L | 12 | 29.33 |
| NVP H | 12 | 29.75 |
| Mixture 1 | 12 | 19.83 |
| Total | 51 |  |
| Condition Factor | Control | 8 | 19.50 |
| Solvent control | 7 | 31.00 |
| NVP L | 12 | 26.17 |
| NVP H | 12 | 26.71 |
| Mixture 1 | 12 | 26.54 |
| Total | 51 |  |
|  |  |  |  |
| GSI (%) | Control | 8 | 16.38 |
| Solvent control | 7 | 24.14 |
| NVP L | 12 | 25.67 |
| NVP H | 12 | 29.92 |
| Mixture 1 | 12 | 29.92 |
| Total | 51 |  |
| Gonad index | Control | 8 | 22.06 |
| Solvent control | 7 | 10.71 |
| NVP L | 12 | 23.42 |
| NVP H | 12 | 34.46 |
| Mixture 1 | 12 | 31.67 |
| Total | 51 |  |

**Kruskal-Wallis test:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Total Length (mm) | Standard Length (mm) | Body Mass (g) | Condition Factor | GSI (%) | Gonad index |
| Kruskal-Wallis H | 2.866 | 4.147 | 4.569 | 2.366 | 5.135 | 14.499 |
| df | 4 | 4 | 4 | 4 | 4 | 4 |
| Asymp. Sig. | 0.581 | 0.386 | 0.334 | 0.669 | 0.274 | 0.006 |