

**Appendix 2.** Mean values (N = 8 fish) for each thermal physiological parameter for three populations of wild-collected lake chub (*Couesius plumbeus*). CT<sub>max5-25</sub> = critical maximum water temperature at 5, 10, 20, 25 °C acclimation temperature, CT<sub>min5-25</sub> = critical minimum water temperature at 5, 10, 20, 25 °C acclimation temperature, CS-5-25 = citrate synthase activity at 5, 10, 20, and 25 °C acclimation temperature, CS-5-25 = citrate synthase activity at 5, 10, 20, and 25°C acclimation temperature, CS-F = citrate synthase in field collected specimens, COX-5-25 = cytochrome oxidase activity at 5, 10, 20, and 25°C acclimation temperature, COX-F = cytochrome oxidase in field collected specimens, LDH-5-25 = lactate dehydrogenase activity at 5, 10, 20, and 25 °C acclimation temperature, LDH-F = lactate dehydrogenase in field collected specimens, PK-5-25 = pyruvate kinase activity at 5, 10, 20, and 25 °C acclimation temperature, PK-F = pyruvate kinase in field collected specimens, PC-5-25, axial muscle protein content at 5, 10, 20, and 25 °C acclimation temperature, PC-F = axial muscle protein content in field collected specimens. ND = not determined. Units for CTmax and CTmin are °C, those for enzyme activities are Units of activity per gram tissue, and protein content are milligrams protein per gram tissue. Values annotated by the same superscript letter are not significantly different ( $p < 0.05$ ) from one another. Values accompanied by no annotations indicate that there were no significant post-hoc differences following analyses of variance (see [14] for details).

| Parameter           | Population         |                     |                     |
|---------------------|--------------------|---------------------|---------------------|
|                     | Atlin Warmspring   | Liard Hotspring     | Green Lake          |
| CT <sub>max5</sub>  | 25.8               | 26.8                | 26.2                |
| CT <sub>max10</sub> | 26.3 <sup>a</sup>  | 27.5 <sup>b</sup>   | 26.2 <sup>a</sup>   |
| CT <sub>max20</sub> | ND                 | 32.3                | 32.1                |
| CT <sub>max25</sub> | 35.6               | 35.9                | 35.4                |
| CT <sub>min5</sub>  | 0.1                | 0.3                 | -0.1                |
| CT <sub>min10</sub> | 3.8                | 2.4                 | 2.3                 |
| CT <sub>min20</sub> | 4.1                | 3.5                 | 2.4                 |
| CT <sub>min25</sub> | 8.3 <sup>a</sup>   | 6.1 <sup>a,b</sup>  | 4.8 <sup>b</sup>    |
| CS-5                | 14.1 <sup>a</sup>  | 21.5 <sup>b</sup>   | 17.0 <sup>a</sup>   |
| CS-10               | 14.0 <sup>a</sup>  | 20.6 <sup>b</sup>   | 17.9 <sup>a,b</sup> |
| CS-20               | ND                 | 11.7                | 11.1                |
| CS-25               | 9.7                | 8.9                 | 9.9                 |
| CS-F                | 11.2               | 8.3                 | ND                  |
| COX-5               | 19.0 <sup>a</sup>  | 33.6 <sup>b</sup>   | 29.2 <sup>a</sup>   |
| COX-10              | 23.6 <sup>a</sup>  | 27.7 <sup>a,b</sup> | 31.1 <sup>b</sup>   |
| COX-20              | ND                 | 21.4                | 19.8                |
| COX-25              | 15.3               | 14.4                | 16.7                |
| COX-F               | 10.9               | 16.5                | ND                  |
| LDH-5               | 158.9              | 160.3               | 125.1               |
| LDH-10              | 190.2              | 169.6               | 137                 |
| LDH-20              | ND                 | 169.6               | 132.9               |
| LDH-25              | 203                | 168.9               | 131                 |
| LDH-F               | 215.2 <sup>a</sup> | 120.1 <sup>b</sup>  | ND                  |

## Appendix 2. Cont.

| Population |                    |                   |            |
|------------|--------------------|-------------------|------------|
| Parameter  | Atlin Warmspring   | Liard Hotspring   | Green Lake |
| PK-5       | 82.2               | 89.3              | 87         |
| PK-10      | 94.3               | 92.8              | 93.5       |
| PK-20      | ND                 | 86.3              | 105.4      |
| PK-25      | 97.8               | 104.9             | 88.9       |
| PK-F       | 120.0 <sup>a</sup> | 72.6 <sup>b</sup> | ND         |
| PC-5       | 36.2               | 43.4              | 37.9       |
| PC-10      | 40.1               | 45.6              | 42.1       |
| PC-20      | ND                 | 37.1              | 34.9       |
| PC-25      | 35.9               | 35.9              | 30.3       |
| PC-F       | 34.3               | 27                | ND         |