README for Raby et al MMR estimation manuscript data files   
archived on figshare

Files 1 and 2 (see below) represent one line of data per estimate of MMR, and include metadata for the fish (body mass, temperature, timestamps, etc.)

Files 3 and 4 include many lines of data for each MMR estimate – these files give the raw linear regression outputs for each MMR sealed cycle. File 3 = the linear regressions (slopes and *R*2 values) for all regressions run on static respirometery data, file 4 = swim tunnel data.

Variable definitions for data files

**File 1: MMR\_estimation\_data\_R2method**

fish\_id = unique identifier for each animal

method = how MMR was estimated (manual chase or swim tunnel respirometer)

slope = rate of decline of dissolved oxygen in the respirometry chamber in mg O2 L-1 s-1

chosen as the steepest slope with an *R*2 > 0.95 from the associated data in either File 3 or File 4

r2 = *R*2 associated with the slope

increment = the length (in s) for the linear regression represented by the corresponding slope and *R*2

mass\_kg = body mass in kg (used for calculating oxygen consumption rate)

mass\_g = body mass in g (used for modeling)

static\_bg\_slope = rate of change of dissolved oxygen during the measurement of background respiration in mg O2 L-1 s-1 associated with this MMR estimate

static\_vol = volume of the static respirometer

species = fish species tested

FL = fork length in cm

tunnel\_bg\_slope = rate of change of dissolved oxygen during the measurement of background respiration in mg O2 L-1 s-1 associated with this MMR estimate

temp = mean water temperature during the MMR estimate in degrees Celsius

timestamp = median date and time for the linear regression used for this MMR estimate (i.e., the mid-point of the regression)

chase\_end = for chase fish, the approximate time the manual chase ended

mmr = estimate for maximum metabolic rate based on the slope, fish mass, chamber volume, and background respiration

Note: the swim tunnel was 28.85 L in all cases.

**File 2: MMR\_estimation\_data\_fullslope**

Same variable definitions as File 1 except “increment” is not present (the full slope was used, up to first 8 min for chase method).

**File 3: MMR\_estimation\_allslopes\_static\_20191209**

Data from static respirometry using the chase method

fish\_id = unique identifier

slope = slope for this linear regression

r2 = *R*2 associated with the slope

s\_median = median timestamp for this slope

increment = length for this linear regression in s

best95 = marked as 1 if this slope is the steepest of any with *R*2 > 0.95 for this MMR estimate (i.e., this sealed measurement cycle)

**File 4: MMR\_estimation\_allslopes\_static\_20191209**

Data from swim tunnel respirometry

Same variable definitions as File 3.