



Figure S1. Sensitivity of metabolic rate to RQ reference value used in the calculation. For instar IV (left panel), the mean of all observations (thick line) and its 95% confidence interval (thin lines) are shown in relation to RQ value when RQ varies from 10 % lower to 10 % higher than the mean value (0.78) derived from the syringe-flow measurements. The vertical dotted line indicates the syringe-flow estimate of RQ, and the horizontal dotted line is the mean MR obtained with this RQ value. For instar V (right panel), RQ varied between 10 % lower and higher values than the mean of flow-through measurements (0.89). Mean MR was calculated in two ways: (i) calculating $\dot{V}O_2$ by dividing the observed $\dot{V}CO_2$ with the RQ value under investigation (black lines), and (ii) using the observed $\dot{V}O_2$ (red lines). Thick and thin lines are as for instar IV. The vertical dotted line indicates the mean RQ from flow-through measurements, and the horizontal dotted line indicates the observed mean MR. Note, however, that measurement-specific RQ values were used when calculating the analysed MR values in the instar V, and the horizontal dotted line indicates the mean of these values.