

Table 1. Apparent energy activation (E_a) and temperature characteristic (Q_{10}) for different metabolic processes

Metabolic process	Sample origin	Temp. range (°C)	E_a (kJ mol ⁻¹)	Q_{10}	Source
Oxygen consumption	Microbial mat	15 to 30	55	2.35	Epping & Kühl (2000)
Oxygen consumption	Microbial mat	25 to 40	18	1.3	Wieland & Kühl (2000)
Oxygen consumption	Arctic sediment	0 to 40	39	1.8	Thamdrup & Fleischer (1998)
Oxygen consumption	Coastal sediment	0 to 50	44 to 71	1.9 to 3.1	Thamdrup et al. (1998)
Net photosynthesis	Microbial mat	25 to 40	77	2.8	Wieland & Kühl (2000)
Gross photosynthesis	Microbial mat	25 to 40	86	3.1	Wieland & Kühl (2000)
Oxygen consumption	Artificial mat	0 to 15	23	1.4	This study
Net photosynthesis	Artificial mat	0 to 15	72	3.1	This study
Gross photosynthesis	Artificial mat	0 to 15	60	2.6	This study