

S2 Table. O₂ sensitivity assays in the OMZs off Namibia and Peru. Adjusted O₂ concentrations (initial ¹⁸⁻¹⁸O₂ + ¹⁶⁻¹⁶O₂ background) were determined using either STOX sensors or Clark-type microsensors. Higher O₂ treatments often showed O₂ consumption rates tailing off between 12 - 24 h of incubation and only samples falling within the initial linear phase were considered for rate calculations, hence the larger uncertainties for these experiments. SE = standard error; b.d. = below detection; * STOX sensor measurements.

Cruise	Station	Lat (°S)	Lon (°E)	Water depth (m)	Sampled depth (m)	In-situ T (°C)	In-situ O ₂ (μM)	Adjusted O ₂ (μM)	Respiration rate (μM O ₂ /d)	± SE
M76-2 (Namibia)	225	19.02	12.24	123	90	13.9	4.1	2.6	0.27	0.05
								6.1	1.67	0.18
								8.8	4.71	0.91
								12.5	6.41	0.97
					110	13.5	0.3	2.5	0.29	0.07
								5.6	3.93	0.51
								10.4	6.06	1.35
								15.0	8.35	0.54
M77-3 (Peru)	13	12.03	-77.79	356	75	14.6	0.0*	0.5	b.d.	-
								1.2	0.09	0.01
								3.2	0.20	0.04
								8.3	0.48	0.09
								19.2	1.46	0.28
					353	11.7	0.0*	0.7	b.d.	-
								1.6	0.17	0.02
								3.6	0.30	0.03
								8.0	0.45	0.05
								18.4	0.90	0.09
	28	16.00	-77.00	2352	357	11.7	0.0*	1.0	b.d.	-
								1.5	0.09	0.01
								3.4	0.14	0.01
								7.4	0.56	0.09
								18.5	1.19	0.24