

## Supplementary material

**Table S1.** Average and standard deviation (std) of the difference between CTD oxygen sensor after calibration with Winkler measurements.

Cruise ID	mean difference	std	Observations
2	-0.15	0.15	197
3	-0.67	1.44	140
5	0.21	0.13	65
6	-0.01	0.04	70
8	0.11	0.81	40
9	0.38	0.14	90
10	0.14	0.19	215
11	0.48	0.50	129
12	-0.03	0.05	74
13	0.22	0.09	86
14	-0.03	0.08	163
15	-0.024	0.23	216
16	-0.04	0.27	76
17	-0.03	0.25	94
18	-0.04	0.12	101
20	-0.02	0.52	120
21	-0.004	0.39	119
211	0.20	0.20	215
22	-0.004	0.35	187
222	0.09	0.27	126
23	0.06	0.18	535
24	0.17	0.65	224
25	0.14	0.08	42
27	-0.14	0.11	15
28	0.06	-0.01	26

**Table S1.** Geographical limits of subregions adapted from Manca et al. (2004).

ID	COD	REGION	Lat (min)	Lat (max)	Lon (min)	Lon (max)
1	DF2	Gulf of Lion	41.9	43.36	1	6.18
2	DF3 <sup>1</sup>	Ligurian Sea	41	45	6.18	11
3	DS2	Balearic Sea	43.48	41.9	-1	4.3
4	DF1	Algero-Provençal	44.48	41.5	4.3	9.18
5	DS1	Alboran Sea	45.48	37.3	-6	-0.9
6	DS3 <sup>2</sup>	Algerian Basin	46.48	39.18	-1	8.24
7	DT1	Tyrrhenian North	48.48	42.48	9.18	13.48
8	DT3	Tyrrhenian South	49.48	39.18	10	16.16
9	DI1	Sardinia Channel	50.48	39.18	8.24	10
10	DI3	Sicily Channel	51.48	38	10	15

<sup>1</sup>merged liguro-provençal and Ligurian East into Ligurian Sea.

<sup>2</sup>merged Algerian West and Algerian South into Algerian Basin