S3 Table. Summary of Kruskall-Wallis[a] and one-way ANOVA[b] performed to analyze the effect of temperature elevation in studied biomarkers in healthy mussels (from Mundaka) and stressed mussels (from Arriluze) in fall, winter and summer. χ^2 : Chi square; *F*: Fisher's *F*; degrees of freedom are given between brackets; *p*: significance. Significant effects are indicated by bold characters (p<0.05).

	Healthy mussel population (Mundaka)						Stressed mussel population (Arriluze)					
	Fall		Winter		Summer		Fall		Winter		Summer	
LP[a]	$\chi^2_{(4)}=17.84$	***p*=0.001**	$\chi^2_{(3)}=2.82$	$p=0.419$	$\chi^2_{(4)}=15.05$	***p*<0.001**	$\chi^2_{(4)}=2.52$	$p=0.641$	$\chi^2_{(4)}=9.27$	$p=0.055$	$\chi^2_{(4)}=10.00$	***p*=0.040**
Vv_L[b]	$F_{(4,19)}=3.89$	***p*=0.018**	$F_{(3,9)}=2.63$	$p=0.114$	$F_{(3,10)}=14.45$	***p*=0.001**	$F_{(4,17)}=0.58$	$p=0.680$	$F_{(4,14)}=1.28$	$p=0.329$	$F_{(4,15)}=0.41$	$p=0.797$
S/V_L[a]	$\chi^2_{(4)}=4.24$	$p=0.374$	$\chi^2_{(3)}=3.28$	$p=0.351$	$\chi^2_{(3)}=10.88$	***p*=0.012**	$\chi^2_{(4)}=2.69$	$p=0.610$	$\chi^2_{(4)}=1.19$	$p=0.880$	$\chi^2_{(4)}=2.82$	$p=0.588$
Nv_L[a]	$\chi^2_{(4)}=11.13$	***p*=0.025**	$\chi^2_{(3)}=6.01$	$p=0.111$	$\chi^2_{(3)}=4.36$	$p=0.225$	$\chi^2_{(4)}=13.32$	***p*=0.010**	$\chi^2_{(4)}=8.76$	$p=0.067$	$\chi^2_{(4)}=8.92$	$p=0.063$
Vv_{NL}[a]	$\chi^2_{(4)}=12.71$	***p*=0.013**	$\chi^2_{(4)}=5.52$	$p=0.238$	$\chi^2_{(3)}=6.32$	$p=0.097$	$\chi^2_{(4)}=11.26$	***p*=0.024**	$\chi^2_{(4)}=2.49$	$p=0.646$	$\chi^2_{(4)}=10.71$	***p*=0.030**
Vv_{BAS}[b]	$F_{(4,18)}=3.86$	***p*=0.020**	$F_{(4,19)}=2.59$	$p=0.070$	$F_{(3,16)}=8.07$	***p*=0.002**	$F_{(4,18)}=2.74$	$p=0.061$	$F_{(4,19)}=2.22$	$p=0.105$	$F_{(4,19)}=0.84$	$p=0.516$
MET[b]	$F_{(4,18)}=0.80$	$p=0.543$	$F_{(4,19)}=6.53$	***p*=0.002**	$F_{(3,16)}=0.80$	$p=0.510$	$F_{(4,18)}=1.45$	$p=0.259$	$F_{(4,19)}=1.23$	$p=0.332$	$F_{(4,19)}=1.69$	$p=0.193$
MLR[b]	$F_{(4,18)}=0.76$	$p=0.562$	$F_{(4,19)}=2.45$	$p=0.082$	$F_{(3,16)}=0.12$	$p=0.949$	$F_{(4,18)}=11.15$	***p*<0.001**	$F_{(4,19)}=4.86$	***p*=0.007**	$F_{(4,19)}=0.29$	$p=0.882$
MLR/MET[b]	$F_{(4,18)}=0.96$	$p=0.453$	$F_{(4,19)}=5.91$	***p*=0.003**	$F_{(3,16)}=0.37$	$p=0.773$	$F_{(4,18)}=7.82$	***p*=0.001**	$F_{(4,19)}=2.79$	$p=0.560$	$F_{(4,19)}=0.65$	$p=0.636$
CTD ratio[b]	$F_{(4,18)}=0.41$	$p=0.798$	$F_{(4,19)}=7.71$	***p*=0.001**	$F_{(3,16)}=1.12$	$p=0.37$	$F_{(4,18)}=0.93$	$p=0.470$	$F_{(4,17)}=1.53$	$p=0.237$	$F_{(4,18)}=2.76$	$p=0.059$
TAOC[b]	$F_{(3,14)}=4.32$	***p*=0.024**	$F_{(3,15)}=4.05$	***p*=0.027**	$F_{(2,12)}=0.96$	$p=0.412$	$F_{(3,14)}=2.44$	***p*=0.180**	$F_{(3,15)}=0.94$	$p=0.448$	$F_{(3,15)}=1.24$	$p=0.329$
PK[b]	$F_{(3,15)}=0.75$	$p=0.542$	$F_{(3,15)}=0.85$	$p=0.489$	$F_{(2,11)}=2.45$	$p=0.131$	$F_{(3,15)}=1.17$	$p=0.354$	$F_{(3,14)}=3.07$	$p=0.063$	$F_{(3,16)}=1.09$	$p=0.381$
PEPCK[b]	$F_{(3,14)}=3.65$	***p*=0.039**	$F_{(3,14)}=5.22$	***p*=0.013**	$F_{(2,11)}=2.91$	$p=0.097$	$F_{(3,16)}=1.74$	$p=0.200$	$F_{(3,14)}=3.1$	$p=0.061$	$F_{(3,15)}=12.48$	***p*<0.001**
PK/PEPCK[b]	$F_{(3,15)}=4.14$	***p*=0.025**	$F_{(3,13)}=7.05$	***p*=0.005**	$F_{(2,10)}=22.71$	***p*<0.001**	$F_{(3,15)}=1.15$	$p=0.362$	$F_{(3,15)}=1.01$	$p=0.415$	$F_{(3,15)}=2.87$	$p=0.071$
COX[b]	$F_{(3,14)}=1.90$	$p=0.177$	$F_{(3,14)}=0.26$	$p=0.853$	$F_{(2,10)}=3.30$	$p=0.079$	$F_{(3,15)}=3.30$	$p=0.059$	$F_{(3,13)}=0.82$	$p=0.506$	$F_{(3,14)}=3.89$	***p*=0.032**
HK[b]	$F_{(3,14)}=1.84$	$p=0.186$	$F_{(3,15)}=2.06$	$p=0.149$	$F_{(2,11)}=0.12$	$p=0.891$	$F_{(3,15)}=0.89$	$p=0.467$	$F_{(3,13)}=5.23$	***p*=0.014**	$F_{(3,14)}=4.46$	***p*=0.021**
GP[b]	$F_{(3,12)}=0.45$	$p=0.720$	$F_{(3,14)}=1.30$	$p=0.313$	$F_{(2,10)}=3.47$	$p=0.072$	$F_{(3,14)}=3.62$	***p*=0.040**	$F_{(3,16)}=0.04$	$p=0.991$	$F_{(3,14)}=2.74$	$p=0.083$