

Table 3

Evidence of degradative alteration of alkenones in previous alkenone-based temperature estimations

Zones where overestimation of SST was previously observed	Involvement of selective bacterial degradation (detection of epoxyalkenones)	Involvement of stereomutation (detection of <i>cis/trans</i> alkenones)	Involvement of autoxidative degradation (detection of specific lipid oxidation products)	Additional sources of biases
Black Sea (Freeman and Wakeham, 1992; Rontani and Wakeham, 2008)	++ ^c	+ ^d		Presence of different types of haptophytes in Black Sea
Southeast Alaska (Prahl et al., 2010)	++		++ ^a	Summer biases resulting from high latitude
Ligurian Sea (Rontani et al. 2006a)			++ ^b	
Peru upwelling (Prahl and Rontani, unpublished results)	+			

^a Additional detection of hydroperoxyalkenones (Fig. 3)^b Additional detection of cleavage products of hydroperoxyalkenones (Rontani et al., 2007b)^c Very intensive^d Intensive