

Table 2. Osmolarity, melting points, freezing points, and thermal hysteresis (antifreeze activity) of intestinal, stomach, and pancreatic fluids of Antarctic fishes

Taxa (antifreeze type)	Species	Intestinal Fluid				Th (°C) *	N
		Osmolarity (mOsm)	Melting point mp (°C)	Freezing point fp (°C)			
	Seawater	1025	-1.91	-1.91		—	—
Antarctic notothenioids (AFGP)	<i>Dissostichus mawsoni</i>	667 ± 156	-1.24 ± 0.29	-2.27 ± 0.48	1.02 ± 0.28	13	
	<i>Pagothenia borchgrevinki</i>	748 ± 27	-1.39 ± 0.05	-3.52 ± 0.56	2.12 ± 0.54	4	
	<i>Trematomus bernacchii</i>	603 ± 65	-1.12 ± 0.12	-2.76 ± 0.60	1.64 ± 0.50	8	
	<i>Trematomus hansonii</i>	646 ± 5	-1.20 ± 0.01	-2.91 ± 0.35	1.72 ± 0.34	2	
	<i>Trematomus nicolai</i>	684 ± 81	-1.27 ± 0.15	-2.54 ± 0.46	1.27 ± 0.37	7	
	<i>Gymnodraco acuticeps</i>	689 ± 43	-1.28 ± 0.08	-3.42 ± 0.21	2.15 ± 0.29	4	
Antarctic zoarcids (Type III AFP)	<i>Lycodichthys dearborni</i>	597 ± 86	-1.11 ± 0.16	-2.58 ± 0.52	1.47 ± 0.36	2	
Stomach fluid							
Antarctic notothenioids (AFGP)	<i>Dissostichus mawsoni</i>	772 ± 151	-1.43 ± 0.28	-2.05 ± 0.61	0.62 ± 0.39	3	
	<i>Pagothenia borchgrevinki</i>	1005 ± 133	-1.87 ± 0.25	-3.07 ± 0.81	1.20 ± 0.85	7	
	<i>Trematomus bernacchii</i>	963 ± 61	-1.80 ± 0.11	-2.01 ± 0.14	0.22 ± 0.04	5	
	<i>Trematomus nicolai</i>	1039 ± 21	-1.93 ± 0.04	-2.40 ± 0.12	0.47 ± 0.14	5	
Antarctic zoarcid (Type III AFP)	<i>Lycodichthys dearborni</i>	632 ± 47	-1.17 ± 0.09	-1.88 ± 0.12	0.70 ± 0.12	4	
Pancreatic fluid							
Antarctic notothenioid (AFGP)	<i>Dissostichus mawsoni</i>	662 ± 81	-1.23 ± 0.15	-2.17 ± 0.36	0.94 ± 0.38	10	

Data presented as values±standard deviation.

*Thermal hysteresis (antifreeze activity)=melting point–freezing point.