

# Linking biochemical and elemental composition in freshwater and marine crustacean zooplankton

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**Appendix 1.** Published data on freshwater (FW) and marine (MA) zooplankton species used to describe the composition of the main biochemical compounds and elemental content. Species belonging to the most common zooplankton groups were selected, such as cladocerans (CL), cyclopoid copepods (CO-CY), calanoid copepods (CO-CA), euphausiids (EU) and mysids (MY). Elemental and biochemical compound abbreviations: C, carbon; N, nitrogen; P, phosphorus; H, hydrogen; CH, carbohydrates; CT, chitin; FAA free amino acids; NA nucleic acids; NU, nucleotides; PR, protein; TAG, triacylglycerol; WE, wax ester; PL, phospholipid.

Habitat	Taxon	Species	Ash	C	N	P	H	CH	CT	FAA	NA	NU	PR	TLP	PL	TAG	WE	Bibliography
MA	CO-CA	<i>Acartia australis</i>									X	X	X					(Ikeda & Skjoldal 1980; Skjoldal 1981)
MA	CO-CA	<i>Acartia clausi</i>		X	X		X		X	X								(Kerambrun 1987; Gismervik 1997; Jeffries 1969; Gervasi et al. 1988)
MA	CO-CA	<i>Acartia sp.</i>		X	X	X												(Pertola et al. 2002; Walve & Larsson 1999)
MA	CO-CA	<i>Acartia tonsa</i>								X				X		X	X	(Jeffries 1969; Lee & Hirota 1973)
MA	CO-CA	<i>Amalothrix sp.</i>												X	X	X	X	(Lee & Hirota 1973; Lee et al. 1971b)
MA	CO-CA	<i>Bathycalanus affinis</i>											X					(Morris & Hopkins 1983)
MA	CO-CA	<i>Bathycalanus princeps</i>							X									(Childress and Nygaard 1974 in Båmstedt 1986)
MA	CO-CA	<i>Bathycalanus richardi</i>												X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Bathycalanus sp.1</i>												X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Calanoides acutus</i>												X	X	X	X	(Flint et al. 1991; Falk-Petersen et al. 1999; Reinhardt & Van Vleet 1986; Kattner et al. 1994)
MA	CO-CA	<i>Calanopia elliptica</i>										X	X					(Skjoldal 1981)
MA	CO-CA	<i>Calanus australis</i>		X	X	X							X	X				(Flint et al. 1991)
MA	CO-CA	<i>Calanus cristatus</i>	X	X	X		X	X	X					X		X	X	(Morris & Hopkins 1983; Ikeda 1971; Flint et al. 1991; Omori 1969; Ikeda 1972 in Båmstedt 1986; Lee & Hirota 1973)
MA	CO-CA	<i>Calanus finmarchicus</i>	X	X	X	X		X	X	X	X	X	X	X	X	X	X	(Ikeda & Skjoldal 1989; Raymont & Krishnaswamy 1960; Mayzaud & Martin 1975; Mayzaud 1976; Ohman & Runge 1994; Hirche & Kattner 1993; Stevens et al. 2004; Lee et al. 1971a; Balch 1972; Skjoldal & Båmstedt 1977; Båmstedt & Skjoldal 1980; Jeffries & Alzara 1970; Cowey & Corner 1963a; Sargent & Falk-Petersen 1988; Ikeda & Skjoldal 1989)
MA	CO-CA	<i>Calanus glacialis</i>	X	X	X			X	X					X	X	X	X	(Ikeda & Skjoldal 1989; Ikeda 1971; Hirche & Kattner 1993; Lee et al. 1971a; Stevens et al. 2004; Lee & Hirota 1973)
MA	CO-CA	<i>Calanus gracilis</i>												X	X	X	X	(Lee et al. 1971b; Lee & Hirota 1973)
MA	CO-CA	<i>Calanus helgolandicus</i>			X	X			X			X	X	X	X	X	X	(Butler et al. 1969; Stevens et al. 2004; Lee & Hirota 1973; Cowey & Corner 1963b; Lee et al. 1971b; Gervasi et al. 1988)
MA	CO-CA	<i>Calanus hyperboreus</i>		X	X			X			X	X		X	X	X	X	(Båmstedt & Skjoldal 1980; Båmstedt 1983; Raymont & Conover 1961; Skjoldal & Båmstedt 1977; Lee & Hirota 1973; Stevens et al. 2004)



MA	CO-CA	<i>Euchaeta hansenii</i>							X						(Morris & Hopkins 1983)
MA	CO-CA	<i>Euchaeta japonica</i>							X	X	X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Euchaeta marina</i>	X			X			X	X	X	X			(Morris & Hopkins 1983; Stephen et al. 1979; Lee & Hirota 1973)
MA	CO-CA	<i>Euchaeta media</i>	X						X	X					(Morris & Hopkins 1983)
MA	CO-CA	<i>Euchaeta norvegica</i>				X	X		X	X					(Båmstedt & Skjoldal 1980; Raymont & Conover 1961; Skjoldal & Båmstedt 1976; Skjoldal & Båmstedt 1977)
MA	CO-CA	<i>Euchaeta sp.1</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Euchirella brevis</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Euchirella galeata</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Euchirella messinensis</i>							X						(Morris & Hopkins 1983)
MA	CO-CA	<i>Euchirella pulchra</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Euchirella rostrata</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Euchirella rostromagna</i>							X	X	X	X			(Lee & Hirota 1973; Hagen et al. 1995)
MA	CO-CA	<i>Euchirella sp.3</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Eurytemora affinis</i>		X	X	X		X	X						(Pertola et al. 2002; Walve & Larsson 1999; Vijverberg & Frank 1976; Jeffries & Alzara 1970)
MA	CO-CA	<i>Gaetanus brevicornus</i>							X	X	X	X			(Lee et al. 1971a; Lee & Hirota 1973)
MA	CO-CA	<i>Gaetanus intermedius</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Gaetanus unicornis</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Gaussia princeps</i>				X			X	X	X	X			(Childres & Nygaard 1974; Lee et al. 1971a; Lee & Hirota 1973)
MA	CO-CA	<i>Hemirhabdus grimaldi</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Heterorhabdus sp.1</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Labidocera actifrons</i>	X	X	X		X								(Omori 1969; Morris & Hopkins 1983)
MA	CO-CA	<i>Labidocera acutifrons</i>							X	X					(Raymont et al. 1975; Morris & Hopkins 1983)
MA	CO-CA	<i>Labidocera spp.</i>						X							(Karl et al. 1978)
MA	CO-CA	<i>Labidocera trispinosa</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Limnocalanus macrurus</i>		X	X	X									(Pertola et al. 2002; Walve & Larsson 1999)
MA	CO-CA	<i>Lobidocera acuta</i>					X								(Stephen et al. 1979)
MA	CO-CA	<i>Lucicutia bicornuta</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Lucicutia grandis</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Megacalanus longicornis</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Megacalanus princeps</i>	X						X	X					(Morris & Hopkins 1983)
MA	CO-CA	<i>Mesorhabdus sp.1</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Metridia gerlachei</i>		X	X	X	X		X	X	X	X			(Ikeda 1988; Reinhardt & Van Vleet 1986; Stevens et al. 2004; Sargent & Falk-Petersen 1988; Ikeda & Skjoldal 1989; Båmstedt 1983; Båmstedt & Skjoldal 1980; Skjoldal & Båmstedt 1977; Lee & Hirota 1973; Stevens et al. 2004; Sargent & Falk-Petersen 1988)
MA	CO-CA	<i>Metridia longa</i>	X				X	X	X	X	X	X			(Lee & Hirota 1973; Stevens et al. 2004; Sargent & Falk-Petersen 1988)
MA	CO-CA	<i>Metridia okhotensis</i>		X	X		X								(Omori 1969)
MA	CO-CA	<i>Metridia princeps</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Metridia sp.</i>							X		X	X			(Lee & Hirota 1973)
MA	CO-CA	<i>Neocalanus flemingeri</i>		X	X		X		X						(Miller 1993)
MA	CO-CA	<i>Neocalanus gracilis</i>							X						(Morris & Hopkins 1983)
MA	CO-CA	<i>Neocalanus plumchrus</i>		X	X		X		X						(Miller 1993)

MA	CO-CA	<i>Neocalanus robustior</i>						X	X				(Morris & Hopkins 1983)
MA	CO-CA	<i>Neocalanus tonsus</i>		X	X				X	X		X	(Ohman 1987; Lee & Hirota 1973)
MA	CO-CA	<i>Oncaea spp.</i>										X	(Stephen et al. 1979)
MA	CO-CA	<i>Onchocalanus affinis</i>						X					(Morris & Hopkins 1983)
MA	CO-CA	<i>Paraeuchaeta birostrata</i>	X	X	X						X		(Omori 1969)
MA	CO-CA	<i>Paraeuchaeta sarsi</i>	X	X	X						X		(Omori 1969)
MA	CO-CA	<i>Paraeuchaeta sp.1</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Pleuromamma abdominalis</i>	X					X	X		X	X	(Morris & Hopkins 1983; Lee & Hirota 1973)
MA	CO-CA	<i>Pleuromamma quadrangulata</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Pleuromamma sp.</i>										X	(Raymont & Conover 1961)
MA	CO-CA	<i>Pleuromamma xiphias</i>	X	X	X			X	X		X	X	(Omori 1969; Morris & Hopkins 1983; Lee & Hirota 1973)
MA	CO-CA	<i>Pontella sp.1</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Pontellina plumata</i>	X	X	X								(Omori 1969)
MA	CO-CA	<i>Pontellopsis perspicax</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Pontellopsis regalis</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Pontellopsis sp.1</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Pseudocalanus minutus</i>											X (Jeffries & Alzara 1970)
MA	CO-CA	<i>Pseudocalanus minutus elongatus</i>		X	X	X							(Walve & Larsson 1999)
MA	CO-CA	<i>Rhincalanus cornutus</i>	X						X	X			(Morris & Hopkins 1983; Morris & Hopkins 1983; Goswami et al 1981 in Båmstedt 1986) (Lee et al. 1971a; Ward et al. 1996; Lee & Hirota 1973; Kattner et al. 1994; Reinhardt & Van Vleet 1986)
MA	CO-CA	<i>Rhincalanus gigas</i>							X	X	X	X	(Omori 1969; Lee et al. 1971a; Lee & Hirota 1973)
MA	CO-CA	<i>Rhincalanus nasutus</i>	X	X	X				X	X	X	X	(Omori 1969; Lee et al. 1971a; Lee & Hirota 1973)
MA	CO-CA	<i>Sapphirina sp.1</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Scolecithrix danae</i>	X					X	X				(Morris & Hopkins 1983)
MA	CO-CA	<i>Scottocalanus persekans</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Temora sp.1</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Temora stylifera</i>										X	(Raymont & Conover 1961)
MA	CO-CA	<i>Themisto gaudichaudii</i>							X	X	X	X	(Lee & Hirota 1973; Mayzaud et al. 1998)
MA	CO-CA	<i>Tigriopus californicus</i>						X					(Traganza and Graham 1977 in Båmstedt 1986)
MA	CO-CA	<i>Tortanus gracilis</i>						X	X				(Skjoldal 1981)
MA	CO-CA	<i>Undeuchaeta bispinosa</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Undeuchaeta plumosa</i>	X					X	X				(Morris & Hopkins 1983)
MA	CO-CA	<i>Undinula vulgaris</i>	X					X	X				(Morris & Hopkins 1983; Goswami et al. 1981 in Båmstedt 1986)
MA	CO-CA	<i>Valdiviella insignis</i>							X		X	X	(Lee & Hirota 1973)
MA	CO-CA	<i>Valdiviella sp.1</i>							X		X	X	(Lee & Hirota 1973)
MA	EU	<i>Euphausia americana</i>	X					X	X				(Morris & Hopkins 1983)
MA	EU	<i>Euphausia brevis</i>	X					X	X				(Morris & Hopkins 1983)
MA	EU	<i>Euphausia crystallorophias</i>							X	X	X	X	(Morris & Hopkins 1983; Falk-Petersen et al. 1999; Bottino 1975)
MA	EU	<i>Euphausia hemigibba</i>	X					X	X				(Morris & Hopkins 1983)
MA	EU	<i>Euphausia pacifica</i>	X	X	X								(Omori 1969)
MA	EU	<i>Euphausia recurva</i>							X		X	X	(Lee & Hirota 1973)

MA	EU	<i>Euphausia superba</i>		X	X	X	X	X	X	X	X	X	X	X	X	(Atkinson et al. 2002; Shin et al. 2003; Reinhardt & Van Vleet 1986; Nicol et al. 1992; Ikeda & Bruce 1986; Huntley et al. 1994; Ikeda & Mitchell 1982; Clarke 1980; Srinivasagam et al. 1977; Sidhu et al. 1970; Falk-Petersen et al. 1999; Bottino 1975; Mayzaud et al. 1998)
MA	EU	<i>Euphausia tenera</i>	X								X	X				(Morris & Hopkins 1983)
MA	EU	<i>Euphausia tricantha</i>	X	X	X	X	X									(Ikeda 1988)
MA	EU	<i>Euphausia valentini</i>									X	X	X	X		(Mayzaud et al. 2003)
MA	EU	<i>Meganicthiphanes norvegica</i>						X	X	X	X	X	X	X		(Srinivasagam et al. 1971; Skjoldal & Båmstedt 1977; Morris & Hopkins 1983; Mayzaud et al. 2003; Båmstedt & Skjoldal 1980; Skjoldal & Båmstedt 1976)
MA	EU	<i>Nematobrachion boopis</i>									X	X				(Morris & Hopkins 1983)
MA	EU	<i>Nematobrachion flexipes</i>	X								X	X				(Morris & Hopkins 1983)
MA	EU	<i>Nematobrachion sexspinosum</i>									X	X				(Raymont et al. 1975)
MA	EU	<i>Nematoscelis microps</i>	X								X	X				(Morris & Hopkins 1983)
MA	EU	<i>Stylocheiron carinatum</i>	X								X	X				(Morris & Hopkins 1983)
MA	EU	<i>Stylocheiron elongatum</i>									X	X				(Morris & Hopkins 1983)
MA	EU	<i>Stylocheiron maximum</i>	X								X	X				(Morris & Hopkins 1983)
MA	EU	<i>Tessarabrachion oculatus</i>	X	X	X		X									(Omori 1969)
MA	EU	<i>Thysanoessa macrura</i>	X									X	X	X	X	(Morris & Hopkins 1983; Mayzaud et al. 2003; Reinhardt & Van Vleet 1986; Mayzaud et al. 1998; Falk-Petersen et al. 1999)
MA	EU	<i>Thysanopoda monacantha</i>	X								X	X				(Morris & Hopkins 1983)
MA	EU	<i>Thysanopoda obtusifrons</i>									X		X	X		(Lee & Hirota 1973)
MA	EU	<i>Thysanopoda tricuspidata</i>	X								X	X	X	X		(Morris & Hopkins 1983; Lee & Hirota 1973)
MA	MY	<i>Antarctomysis ohlinii</i>									X	X	X	X		(Siefken & Armitage 1968; Reinhardt & Van Vleet 1986)
MA	MY	<i>Boreomysis arctica</i>								X						(Skjoldal & Båmstedt 1977)
MA	MY	<i>Gnathophausia gigas</i>	X	X	X	X	X									(Ikeda 1988)
MA	MY	<i>Gnathophausia sp.</i>									X	X	X	X		(Raymont et al. 1975; Lee & Hirota 1973)
MA	MY	<i>Hemimysis abyssicola</i>								X						(Skjoldal & Båmstedt 1977)
MA	MY	<i>Mysis mixta</i>			X											(Gorokhova & Hansson 1997)
MA	MY	<i>Neomysis integer</i>	X				X	X	X		X	X	X	X	X	(Raymont et al. 1964; Raymont et al. 1968; Srinivasagam et al. 1971; Morris & Hopkins 1983)
MA	MY	<i>Steriella thompsoni</i>	X								X	X				(Morris & Hopkins 1983)
MA	MY	<i>Siriella aequimeris</i>	X	X	X		X									(Omori 1969)
FW	CO-CA	<i>Acanthodiptomus denticornis</i>			X	X										(Andersen & Hessen 1991)
FW	CO-CA	<i>Diaptomus clavipes</i>					X					X				(Siefken & Armitage 1968)
FW	CO-CA	<i>Diaptomus cyaneus</i>	X	X	X	X	X	X	X		X	X				(Ventura & Catalan 2005)
FW	CO-CA	<i>Diaptomus leptopus</i>			X	X										(Elser et al. 2000a)
FW	CO-CA	<i>Diaptomus novamexicanus</i>			X	X										(Elser et al. 1995)
FW	CO-CA	<i>Diaptomus pallidus</i>					X					X				(Siefken & Armitage 1968)
FW	CO-CA	<i>Diaptomus sicilis</i>										X	X	X	X	(Siefken & Armitage 1968; Cavaletto et al. 1989)
FW	CO-CA	<i>Diaptomus siciloides</i>					X					X				(Siefken & Armitage 1968)
FW	CO-CA	<i>Diaptomus sp</i>								X						(Jeffries & Alzara 1970)
FW	CO-CA	<i>Epischura baikalensis</i>					X	X			X	X	X	X	X	(Morris 1984)
FW	CO-CA	<i>Epischura lacustris</i>			X	X										(Elser et al. 2000a)
FW	CO-CA	<i>Eudiptomus gracilis</i>	X	X	X	X			X							(Salonen et al. 1976; Vrede et al. 1999; Hessen & Lyche 1991)



FW	CL	<i>Diaphanasoma birgei</i>													(Elser et al. 2000a)
FW	CL	<i>Diaphanasoma brachyurum</i>	X	X	X										(Hessen & Lyche 1991; Andersen & Hessen 1991)
FW	CL	<i>Holopedium gibberum</i>			X	X									(Hessen & Lyche 1991; Elser et al. 2000a; Andersen & Hessen 1991)
FW	CL	<i>Leptodora kindtii</i>	X	X		X	X					X	X		(Vijverberg & Frank 1976; Berberovic 1990)
FW	CL	<i>Scapholebris mucronata</i>	X	X	X										(Hessen & Lyche 1991; Main et al. 1997)
FW	CL	<i>Sida crystallina</i>	X	X	X										(Hessen & Lyche 1991)
FW	CL	<i>Simocephalus vetulus</i>	X	X	X										(DeMott 1998)
FW	CO-CY	<i>Acanthocyclops vernalis</i>										X			(Berthon 1985)
FW	CO-CY	<i>Cyclopoida</i>											X	X	(Vijverberg & Frank 1976)
FW	CO-CY	<i>Cyclops</i>		X	X		X								(Berberovic 1990)
FW	CO-CY	<i>Cyclops abyssorum</i>	X	X	X	X	X	X	X				X	X	(Riccardi & Magnoni 1999; Ventura & Catalan 2005; Stich 1991)
FW	CO-CY	<i>Cyclops abyssorum prealpinus</i>												X	(Badouin & Scoppa 1975)
FW	CO-CY	<i>Cyclops strenuus</i>						X	X				X		(Cauchie 2002; Dabrowski & Rusiecki 1983)
FW	CO-CY	<i>Diacyclops thomasi</i>		X	X										(Elser et al. 1995; Elser et al. 2000a)
FW	CO-CY	<i>Eucyclops serrulatus</i>												X	(Desvillettes et al. 1997)
FW	CO-CY	<i>Macrocyclus albidus</i>	X	X	X										(Salonen et al. 1976)
FW	CO-CY	<i>Mesocyclops edax</i>			X	X									(Elser et al. 2000a)
FW	CO-CY	<i>Mesocyclops leuckartii</i>		X	X	X									(Hessen & Lyche 1991; Stich 1991)
FW	CO-CY	<i>Tropocyclops prasinus</i>										X			(Amyot et al. 1992)

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