

**The National Marine Biological  
Analytical Quality Control Scheme**

**Macrobenthic Exercise Results – MB16 (2<sup>nd</sup> Version)**

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## **EXERCISE DETAILS**

### **Macrobenthos #16**

**Type/Contents – Day Grab; approx. 7 litres estuarine mud/muddy sand sediment (reduced to 200ml for dispatch) ; Oven Flats, Medway; 0.5mm sieve mesh processing.**

**Circulated – 16/10/2008**

**Completion Date – 19/12/2008**

**Number of Participating Laboratories – 13**

**Number of Results Received – 11**

**Report Version 2 Details: AQC *Ampharete* spp. identification reduced to genus due to current taxonomic uncertainty (Data altered for LB1503, LB1506, LB1513, LB1514, LB1516 & LB1536).**

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NMBAQC Scheme Interim Results

LabCode	LB1501	<b>Summary Data</b>	
SampleCode	MB16		
Sample Received	22/12/2008		
Notes	Biomass to 5 d.p. not 4 d.p.		
		Diff. In No. Taxa	-2
		Diff. In No. Individuals	-7
		Missed Taxa (in residue)	2
		Missed Individuals (in residue)	8
		Taxonomic Errors	0
		Count Variance	1
		Biomass %diff.	-3.17
		Bray-Curtis Similarity index	97.45

Participating Laboratory		Unicomarine Ltd.					
Taxon Number	Taxon Name	Number	Biomass	Taxon Name	Number	Biomass	Comments
1	Hediste diversicolor	2	0.08238	Hediste diversicolor	2	0.0723	
2	Hydrobia ulvae	114	0.10493	Hydrobia ulvae	114	0.1224	Incl. Hydrobia ulvae eggs, Chlorophyta
3	Abra tenuis	13	0.00539	Abra tenuis	12	0.0051	
4	Macoma balthica	2	0.12953	Macoma balthica	2	0.1286	
5	Nematoda	2	0.00001	Nematoda	2	0.0001	
6	Tubificoides benedii	59	0.00833	Tubificoides benedii	59	0.0126	
<u>Specimens from within taxon pots</u>							
	-			-		-	
<u>Specimens not picked from residue</u>							
				Tubificoides benedii	1	-	
				Nematoda	1		
				<b>Limapontia depressa</b>	1		New taxon
				Hydrobia ulvae	2		
				Macoma balthica	3		
				<b>Conopeum reticulum</b>	P		New taxon
		<u>192</u>	<u>0.33057</u>			<u>199</u>	<u>0.3411</u>

NMBAQC Scheme Interim Results

LabCode LB1503  
 SampleCode MB16  
 Sample Received 15/01/2009  
 Notes Biomass to 3 d.p. not 4 d.p.  
 Lab details not supplied  
 Residue stained

Summary Data	
Diff. In No. Taxa	0
Diff. In No. Individuals	-18
Missed Taxa (in residue)	0
Missed Individuals (in residue)	3
Taxonomic Errors	1
Count Variance	-15
Biomass %diff.	-14.24
Bray-Curtis Similarity index	89.39

Participating Laboratory		Unicomarine Ltd.					
Taxon Number	Taxon Name	Number	Biomass	Taxon Name	Number	Biomass	Comments
1	Hydrobia ulvae	204	0.482	Hydrobia ulvae	204	0.5488	inc Hydrobia ulvae eggs
2	Macoma balthica	2	0.037	Macoma balthica	2	0.0404	
3	Tharyx Species A	11	0.008	Tharyx Species A	12	0.0028	
4	Tubificoides benedii	95	0.017	Tubificoides benedii	112	0.0303	
5	Ampharete lindstroemi agg.	11	0.002	<b>Ampharete sp.</b>	11	0.0023	
6	Streblospio shrubsolii	6	0.001	Streblospio shrubsolii	6	0.0004	
7	Macoma juv.	39	0.002	<b>Macoma balthica</b>	8	0.0022	Taxonomic error; Mixture (see below)
<u>Specimens from within taxon pots</u>							
	7			<b>Abra tenuis</b>	28	-	Additional taxon
<u>Specimens not picked from residue</u>							
				Tharyx Species A	1	-	
				Tubificoides benedii	1	-	
				Abra tenuis	1	-	
		<u>368</u>	<u>0.549</u>		<u>386</u>	<u>0.6272</u>	

**NMBAQC Scheme Interim Results**

LabCode      LB1504  
 SampleCode   MB16  
 Sample Received   **18/12/2008**

Notes            **No biomass**  
                    **Not extracted: Nematoda, Bryozoans, Hydroids, Copepods**  
                    **Foraminifera, Algae, Aquatic Insects**

<b><u>Summary Data</u></b>	
Diff. In No. Taxa	<b>0</b>
Diff. In No. Individuals	<b>-1</b>
Missed Taxa (in residue)	<b>0</b>
Missed Individuals (in residue)	<b>0</b>
Taxonomic Errors	<b>0</b>
Count Variance	<b>-1</b>
Biomass %diff.	<b>-</b>
Bray-Curtis Similarity index	<b>99.87</b>

<b>Participating Laboratory</b>				<b>Unicomarine Ltd.</b>			
Taxon Number	Taxon Name	Number	Biomass	Taxon Name	Number	Biomass	Comments
1	Macoma balthica	5	-	Macoma balthica	5	-	
2	Abra tenuis	5	-	Abra tenuis	5	-	
3	Hydrobia ulvae	243	-	Hydrobia ulvae	243	-	Inc Hydrobia ulvae eggs, Chlorophyta
4	Streblospio shrubsolii	1	-	Streblospio shrubsolii	1	-	
5	Pygospio elegans	1	-	<b>Pygospio elegans</b>	1	-	Spelling error
6	Tharyx sp A	1	-	Tharyx Species A	2	-	
7	Tubificoides benedii	109	-	Tubificoides benedii	109	-	
8	Tubificoides pseudogaster agg	2	-	Tubificoides pseudogaster # agg	2	-	
9	Nephtys spp juv	2	-	Nephtys sp. juv	2	-	
10	Hediste diversicolor	9	-	Hediste diversicolor	9	-	
11	Bivalve indet	2	-	Pelecypoda	2	-	Abra tenuis
<u>Specimens from within taxon pots</u>							
	-			-	-	-	
<u>Specimens not picked from residue</u>							
				-	-	-	
		380	0		381	0	

NMBAQC Scheme Interim Results

LabCode LB1506  
 SampleCode MB16  
 Sample Received 16/12/2008

Notes No biomass  
 Not extracted : Foraminifera, Algae, Aquatic Insects

<u>Summary Data</u>	
Diff. In No. Taxa	1
Diff. In No. Individuals	2
Missed Taxa (in residue)	0
Missed Individuals (in residue)	2
Taxonomic Errors	2
Count Variance	4
Biomass %diff.	-
Bray-Curtis Similarity index	99.14

Taxon Number	Participating Laboratory		Unicomarine Ltd.		Comments		
	Taxon Name	Number	Biomass	Taxon Name		Number	Biomass
1	Limapontia depressa	11	-	Limapontia depressa	11	-	
2	Hydrobia ulvae	584	-	Hydrobia ulvae	580	-	Inc Hydrobia ulvae eggs, Chlorophyta
3	Macoma balthica	1	-	Macoma balthica	1	-	
4	Tellinacea sp. juv	26	-	Tellinacea sp. juv	26	-	20 x Abra tenuis, 6 x Macoma balthica
5	Nereis diversicolor	3	-	<b>Hediste diversicolor</b>	3	-	Name change
6	Tubificoides benedii	64	-	Tubificoides benedii	64	-	
7	Enchytraeus sp.	1	-	<b>Tubificoides benedii</b>	1	-	Taxonomic error; Repeat taxon
8	Heterochaeta costata	3	-	<b>Tubificoides pseudogaster # agg</b>	3	-	Taxonomic error
9	Fabriciinae sp. Indet	1	-	<b>Manayunkia aestuarina</b>	1	-	
10	Ampharetidae sp. Indet	1	-	<b>Ampharete sp.</b>	1	-	
(11)	Oligochaete bits	n/a	-	Oligochaete bits	n/a	-	Ignore for stats
<u>Specimens from within taxon pots</u>							
	-						
<u>Specimens not picked from residue</u>							
				(Oligochaeta eggs)	(P)	-	Ignore
				Hydrobia ulvae	1	-	
				Abra tenuis	1	-	
		<u>695</u>	<u>0</u>		<u>693</u>	<u>0</u>	

NMBAQC Scheme Interim Results

LabCode LB1507  
 SampleCode MB16  
 Sample Received 30/01/2009

Notes Not extracted: Nematoda, Copepods, Formanifera, Algae  
 Residue stained

Summary Data	
Diff. In No. Taxa	-2
Diff. In No. Individuals	0
Missed Taxa (in residue)	1
Missed Individuals (in residue)	6
Taxonomic Errors	1
Count Variance	6
Biomass %diff.	5.21
Bray-Curtis Similarity index	97.13

Taxon Number	Participating Laboratory		Unicomarine Ltd.		Comments		
	Taxon Name	Number	Biomass	Taxon Name		Number	Biomass
1	Scrobicularia plana	1	2.0706	Scrobicularia plana	1	2.0203	
2	Macoma balthica	19	0.0159	Macoma balthica	7	0.0131	Taxonomic error (see below)
3	Hediste diversicolor	12	0.7615	Hediste diversicolor	12	0.6514	
4	Hydrobia ulvae	321	0.6044	Hydrobia ulvae	315	0.5993	Incl. Hydrobia ulvae eggs, Chlorophyta
5	Streblospio shrubsolii	2	0.0001	Streblospio shrubsolii	2	0.0001	
6	Cirratulidae sp.	1	0.0001	<b>Tharyx Species A</b>	1	0.0001	
7	Tubificoides benedeni	79	0.0431	<b>Tubificoides benedii</b>	79	0.0292	Spelling error
<u>Specimens from within taxon pots</u>							
	2			<b>Abra tenuis</b>	12	-	Additional taxon
<u>Specimens not picked from residue</u>							
				Hydrobia ulvae	6	-	
				<b>Conopeum reticulum</b>	P		New taxon
		435	3.4957			435	3.3135

NMBAQC Scheme Interim Results

LabCode LB1513  
 SampleCode MB16  
 Sample Received 18/12/2008  
 Notes No biomass

<u>Summary Data</u>	
Diff. In No. Taxa	-2
Diff. In No. Individuals	9
Missed Taxa (in residue)	0
Missed Individuals (in residue)	3
Taxonomic Errors	0
Count Variance	12
Biomass %diff.	-
Bray-Curtis Similarity index	99.14

<u>Participating Laboratory</u>		<u>Unicomarine Ltd.</u>		Comments			
Taxon Number	Taxon Name	Number	Biomass		Taxon Name	Number	Biomass
1	Hediste diversicolor	5	-	Hediste diversicolor	5	-	
2	Ampharete damaged	3	-	<b>Ampharete sp.</b>	3	-	
3	Limapontia depressa	25	-	Limapontia depressa	25	-	
4	Tubificoides benedii	129	-	Tubificoides benedii	127	-	Mixture (see below)
5	Chironomidae larva	1	-	Chironomidae larva	1	-	
6	Chironomidae pupa	1	-	Chironomidae pupa	1	-	
7	Abra tenuis	7	-	Abra tenuis	7	-	
8	Macoma balthica	7	-	Macoma balthica	9	-	
9	Tellinacea juv	24	-	Tellinacea juv	23	-	18 x Abra tenuis, 5 x Macoma balthica
10	Hydrobia ulvae	784	-	Hydrobia ulvae	771	-	
(11)	Gastropoda eggs	P	-	Hydrobia ulvae eggs	P	-	Ignore for stats
12	Alga	P	-	Chlorophyta	P	-	
<u>Specimens from within taxon pots</u>							
	4			<b>Manayunkia aestuarina</b>	1	-	Additional taxon
	4			<b>Nematoda</b>	1	-	Additional taxon
<u>Specimens not picked from residue</u>							
				Hydrobia ulvae	2	-	
				Tubificoides benedii	1	-	
		<u>986</u>	<u>0</u>			<u>977</u>	<u>0</u>



NMBAQC Scheme Interim Results

LabCode	LB1514	<b>Summary Data</b>	
SampleCode	MB16	Diff. In No. Taxa	-2
Sample Received	11/12/2008	Diff. In No. Individuals	-8
Notes	No biomass Not extracted: Copepods, Ostracods, Foraminifera, Algae, Aquatic Insects	Missed Taxa (in residue)	1
		Missed Individuals (in residue)	4
		Taxonomic Errors	0
		Count Variance	-4
		Biomass %diff.	-
		Bray-Curtis Similarity index	<b>98.93</b>

Taxon Number	Participating Laboratory			Unicomarine Ltd.			Comments
	Taxon Name	Number	Biomass	Taxon Name	Number	Biomass	
1	Hydrobia ulvae	260	-	Hydrobia ulvae	260	-	inc Hydrobia ulvae eggs, Chlorophyta
2	Hediste diversicolor	6	-	Hediste diversicolor	6	-	
3	Tubificoides benedii	112	-	Tubificoides benedii	112	-	
4	Tubificoides pseudogaster (agg.)	2	-	Tubificoides pseudogaster # agg	2	-	
5	Ampharete lindstroemi	1	-	<b>Ampharete sp.</b>	1	-	
6	Streblospio shrubsolii	1	-	Streblospio shrubsolii	1	-	
7	Eteone longa	1	-	Eteone longa # agg	1	-	
8	Tharyx Species A	2	-	Tharyx Species A	2	-	
9	Macoma balthica	7	-	Macoma balthica	7	-	
10	Tellinacea (juv.)	21	-	Tellinacea juv.	20	-	Macoma balthica x 16, Abra tenuis x 4
11	Scrobicularia plana	1	-	Scrobicularia plana	1	-	
(12)	(Tomato skin)	P	-	(Tomato skin)	P	-	Ignore
(13)	Bits	P	-	Bits	P	-	Mixture (see below)
14	Nematoda	1	-	Nematoda	1	-	
<u>Specimens from within taxon pots</u>							
10				Abra tenuis	4	-	
13				Hydrobia ulvae	1	-	
13				<b>Conopeum reticulum</b>	P	-	Additional taxon
<u>Specimens not picked from residue</u>							
				Nematoda	1	-	
				Tubificoides pseudogaster # agg	1	-	
				<b>Limapontia depressa</b>	2	-	New taxon
		415	0			423	0

NMBAQC Scheme Interim Results

LabCode	LB1516	<b>Summary Data</b>	
SampleCode	MB16		
Sample Received	21/01/2009		
Notes	Lab details not supplied		
		Diff. In No. Taxa	0
		Diff. In No. Individuals	-3
		Missed Taxa (in residue)	1
		Missed Individuals (in residue)	6
		Taxonomic Errors	1
		Count Variance	3
		Biomass %diff.	-21.82
		Bray-Curtis Similarity index	92.55

Taxon Number	Participating Laboratory			Unicomarine Ltd.			Comments
	Taxon Name	Number	Biomass	Taxon Name	Number	Biomass	
1	Hydrobia ulvae	109	0.2410	Hydrobia ulvae	107	0.2712	Inc Hydrobia ulvae eggs
2	Tubificoides benedii	257	0.0739	Tubificoides benedii	255	0.1113	Mixture (see below)
3	Streblospio shrubsolii	20	0.0004	Streblospio shrubsolii	18	0.0013	
4	Manayunkia aestuarina	8	0.0003	Manayunkia aestuarina	8	0.0001	Mixture (see below)
5	Ampharete	12	0.0011	<b>Ampharete sp.</b>	12	0.0013	
6	Enchytraeidae	2	0.0001	Enchytraeidae	2	0.0001	
7	Chaetozone vivipara	31	0.0022	<b>Tharyx Species A</b>	31	0.0039	Taxonomic error; Repeat taxon
8	Tharyx Species A	1	0.0001	Tharyx Species A	1	0.0001	
9	Nematoda	4	0.0001	Nematoda	4	0.0001	
10	Macoma balthica	15	0.0010	Macoma balthica	15	0.001	
11	Abra tenuis	6	0.0008	Abra tenuis	6	0.0007	
12	Ampharete ?baltica	1	0.0001	<b>Ampharete sp.</b>	1	0.0001	
13	Tubificoides pseudogaster	2	0.0001	Tubificoides pseudogaster # agg	2	0.0001	
<u>Specimens from within taxon pots</u>							
	2			Tubificoides pseudogaster # agg	2		
	4			Streblospio shrubsolii	1		
<u>Specimens not picked from residue</u>							
				Tubificoides benedii	2		
				Abra tenuis	3		
				Hydrobia ulvae	1		
				<b>Conopeum reticulum</b>	P		New taxon
		<u>468</u>	<u>0.3212</u>			<u>471</u>	<u>0.3913</u>

NMBAQC Scheme Interim Results

LabCode	LB1521	<b>Summary Data</b>	
SampleCode	MB16		
Sample Received	19/12/2008		
Notes	Not extracted: Algae		
		Diff. In No. Taxa	0
		Diff. In No. Individuals	-4
		Missed Taxa (in residue)	1
		Missed Individuals (in residue)	4
		Taxonomic Errors	3
		Count Variance	0
		Biomass %diff.	-3.09
		Bray-Curtis Similarity index	96.35

Taxon Number	Participating Laboratory		Unicomarine Ltd.		Comments		
	Taxon Name	Number	Biomass	Taxon Name		Number	Biomass
1	Nephtys hombergii	1	0.1068	Nephtys hombergii	1	0.1153	
2	Hediste diversicolor	2	0.0065	Hediste diversicolor	2	0.0064	
3	Dolchopodidae larvae	1	0.0052	<b>Dolichopodidae larvae</b>	1	0.0058	Spelling error
4	Streblospio shrubsolii	3	0.0001	Streblospio shrubsolii	3	0.0002	
5	Tharyx killariensis	2	0.0001	<b>Tharyx Species A</b>	2	0.0001	Taxonomic error
6	Tubificoides benedii	24	0.0062	Tubificoides benedii	24	0.0038	
7	Macoma balthica	2	0.0336	Macoma balthica	2	0.0292	
8	Hydrobia ulvae	148	0.8051	Hydrobia ulvae	148	0.8324	Inc Hydrobia ulvae eggs, Chlorophyta
9	Pygospio elegans	2	0.0001	Pygospio elegans	2	0.0003	
10	Galathowenia oculata	1	0.0001	Galathowenia oculata	1	0.0001	
11	Limapontia depressa	1	0.0001	Limapontia depressa	1	0.0002	
12	Thracia juv ?	2	0.0024	<b>Abra tenuis</b>	2	0.0024	Taxonomic error
13	Mysella bidentata ?	1	0.0001	<b>Abra tenuis</b>	1	0.0001	Taxonomic error; Repeat taxon
<u>Specimens from within taxon pots</u>							
	-			-	-	-	
<u>Specimens not picked from residue</u>							
				<b>Manayunkia aestuarina</b>	1	-	New taxon
				Hydrobia ulvae	2	-	
				Limapontia depressa	1	-	
				(Enteromorpha)	P	-	Ignore
				(Oligochaeta eggs)	P	-	Ignore
		<u>190</u>	<u>0.9664</u>			<u>194</u>	<u>0.9963</u>

NMBAQC Scheme Interim Results

LabCode	LB1535	<b>Summary Data</b>
SampleCode	MB16	
Sample Received	22/12/2008	
Notes	Not extracted: Bryozoans, hydroids, Copepods, Ostracods Anthozoans, Tunicates, Foraminifera, Algae	Diff. In No. Taxa -1 Diff. In No. Individuals 20 Missed Taxa (in residue) 1 Missed Individuals (in residue) 4 Taxonomic Errors 0 Count Variance 24 Biomass %diff. 16.64 Bray-Curtis Similarity index 96.97

Taxon Number	Participating Laboratory		Unicomarine Ltd.		Comments		
	Taxon Name	Number	Biomass	Taxon Name		Number	Biomass
1	Macoma balthica	1	0.0180	Macoma balthica	1	0.0213	Abra tenuis  Inc Hydrobia ulvae eggs, Chlorophyta; vial broken
2	Pelecypoda indet	2	0.0008	Pelecypoda indet	2	0.0012	
3	Streblospio shrubsolii	5	0.0001	Streblospio shrubsolii	5	0.0005	
4	Tharyx Species A	7	0.0005	Tharyx Species A	7	0.0012	
5	Hydrobia ulvae	196	0.7158	Hydrobia ulvae	172	0.5683	
6	Hediste diversicolor	24	1.0157	Hediste diversicolor	24	0.8573	
7	Tubificoides benedii	138	0.0611	Tubificoides benedii	138	0.06	
8	Heterochaeta costata	28	0.0097	Heterochaeta costata	28	0.0077	
9	Tubificoides pseudogaster # agg	1	0.0001	Tubificoides pseudogaster # agg	1	0.0001	
10	Diptera larvae	2	0.0259	<b>Dolichopodidae larvae</b>	2	0.0226	
11	Nematoda	2	0.0001	Nematoda	2	0.0001	
<u>Specimens from within taxon pots</u>							
	-			-	-		
<u>Specimens not picked from residue</u>							
				<b>Limapontia depressa</b>	1	-	New taxon
				Abra tenuis	1	-	
				Hydrobia ulvae	2	-	
		<u>406</u>	<u>1.8478</u>			<u>386</u>	<u>1.5403</u>

NMBAQC Scheme Interim Results

LabCode LB1536  
 SampleCode MB16  
 Sample Received 10/12/2008

Notes

<u>Summary Data</u>	
Diff. In No. Taxa	-3
Diff. In No. Individuals	-36
Missed Taxa (in residue)	2
Missed Individuals (in residue)	8
Taxonomic Errors	3
Count Variance	-28
Biomass %diff.	-3.47
Bray-Curtis Similarity index	83.40

<u>Participating Laboratory</u>				<u>Unicomarine Ltd.</u>			<u>Comments</u>
<u>Taxon Number</u>	<u>Taxon Name</u>	<u>Number</u>	<u>Biomass</u>	<u>Taxon Name</u>	<u>Number</u>	<u>Biomass</u>	
1	Amphisbetia operculata	P	NA	(Amphisbetia operculata)	-	-	Dead - Ignore
2	Hydrobia ulvae	119	0.4616	Hydrobia ulvae	119	0.4817	Inc Hydrobia ulvae eggs, Chlorophyta; Mixture (see below)
3	Macoma balthica	23	0.0398	Macoma balthica	5	0.0371	Taxonomic error (see below)
4	Mytilus edulis (juv)	1	0.0002	Mytilus edulis (juv)	1	0.0001	
5	Nematoda	2	0.0001	Nematoda	2	0.0001	
6	Tubificoides benedii	56	0.0264	Tubificoides benedii	84	0.0275	
7	Ampharete acutifrons	11	0.0018	<b>Ampharete sp.</b>	10	0.0021	
8	Cirriformia tentaculata	5	0.0002	<b>Tharyx Species A</b>	5	0.0002	Taxonomic error
9	Owenia fusiformis	1	0.0001	<b>Manayunkia aestuarina</b>	1	0.0001	Taxonomic error
10	Streblospio shrubsolii	5	0.0008	Streblospio shrubsolii	5	0.0005	
<u>Specimens from within taxon pots</u>							
2				<b>Abra tenuis</b>	2	-	Additional taxon
2				<b>Limapontia depressa</b>	1	-	Additional taxon
3				Abra tenuis	16	-	
<u>Specimens not picked from residue</u>							
				<b>Tubificoides pseudogaster # agg</b>	1	-	New taxon
				Ampharete sp.	1	-	
				Limapontia depressa	1	-	
				Macoma balthica	2	-	
				Hydrobia ulvae	1	-	
				<b>Dalyellidae</b>	2	-	New taxon
		<u>223</u>	<u>0.531</u>			<u>259</u>	<u>0.5494</u>

**Table 1. Results from the analysis of Macrobenthic sample MB16 by the participating laboratories.**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LabCode	Number of Taxa				Number of Individuals				Not extracted			Individuals	Similarity	Taxonomic
	PL	UM	Diff (n)	%max	PL	UM	Diff (n)	%max	New Taxa	Ind	%ind	Count Error	index	errors
LB1501	6	8	-2	25.0	192	199	-7	3.5	2	8	4.0	1	97.45	0
LB1502	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LB1503	7	7	0	0.0	368	386	-18	4.7	0	3	0.8	-15	89.39	1
LB1504	11	11	0	0.0	380	381	-1	0.3	0	0	0.0	-1	99.87	0
LB1505	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LB1506	10	9	1	10.0	695	693	2	0.3	0	2	0.3	4	99.14	2
LB1507	7	9	-2	22.2	435	435	0	0.0	1	6	1.4	6	97.13	1
LB1513	11	13	-2	15.4	986	977	9	0.9	0	3	0.3	12	99.14	0
LB1514	12	14	-2	14.3	415	423	-8	1.9	1	4	0.9	-4	98.93	0
LB1516	13	13	0	0.0	468	471	-3	0.6	1	6	1.3	3	92.55	1
LB1521	13	13	0	0.0	190	194	-4	2.1	1	4	2.1	0	96.35	3
LB1535	11	12	-1	8.3	406	386	20	4.9	1	4	1.0	24	96.97	0
LB1536	10	13	-3	23.1	223	259	-36	13.9	2	8	3.1	-28	83.40	3

Key: PL - participating laboratory.  
 UM - Unicomarine Ltd.  
 "-" - No data. See Section 6 in the forthcoming Annual Report, for details.

**Table 2. Comparison of the efficiency of extraction of fauna by the participating laboratories for the major taxonomic groups present in sample MB16.**

LabCode		Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Overall
LB1501	UM count	-	2	60	-	-	-	134	3	199
	PL missed	-	0	1	-	-	-	6	1	8
	%missed	-	0.0	1.7	-	-	-	4.5	33.3	4.0
LB1503	UM count	-	30	113	-	-	-	243	-	386
	PL missed	-	1	1	-	-	-	1	-	3
	%missed	-	3.3	0.9	-	-	-	0.4	-	0.8
LB1504	UM count	-	15	111	-	-	-	255	-	381
	PL missed	-	0	0	-	-	-	0	-	0
	%missed	-	0.0	0.0	-	-	-	0.0	-	0.0
LB1506	UM count	-	5	68	-	-	-	620	-	693
	PL missed	-	0	0	-	-	-	2	-	2
	%missed	-	0.0	0.0	-	-	-	0.3	-	0.3
LB1507	UM count	-	15	79	-	-	-	341	-	435
	PL missed	-	0	0	-	-	-	6	-	6
	%missed	-	0.0	0.0	-	-	-	1.8	-	1.4
LB1513	UM count	-	9	128	-	-	-	837	3	977
	PL missed	-	0	1	-	-	-	2	0	3
	%missed	-	0.0	0.8	-	-	-	0.2	0.0	0.3
LB1514	UM count	-	11	115	-	-	-	295	2	423
	PL missed	-	0	1	-	-	-	2	1	4
	%missed	-	0.0	0.9	-	-	-	0.7	50.0	0.9
LB1516	UM count	-	72	263	-	-	-	132	4	471
	PL missed	-	0	2	-	-	-	4	0	6
	%missed	-	0.0	0.8	-	-	-	3.0	0.0	1.3
LB1521	UM count	-	12	24	-	-	-	157	1	194
	PL missed	-	1	0	-	-	-	3	0	4
	%missed	-	8.3	0.0	-	-	-	1.9	0.0	2.1
LB1535	UM count	-	36	167	-	-	-	179	4	386
	PL missed	-	0	0	-	-	-	4	0	4
	%missed	-	0.0	0.0	-	-	-	2.2	0.0	1.0
LB1536	UM count	-	22	85	-	-	-	148	4	259
	PL missed	-	1	1	-	-	-	4	2	8
	%missed	-	4.5	1.2	-	-	-	2.7	50.0	3.1

Key: PL - participating laboratory.  
 UM - Unicmarine Ltd.  
 "-" - No data. See Section 6 in the forthcoming Annual Report, for details.

Table 3. Comparison of the estimates of biomass made by the participating laboratories with those made by Unicmarine Ltd. for the major taxonomic groups present in sample MB16. Values are in grams (g).

LabCode		Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Overall	
LB1501	PL	-	0.08238	0.0083	-	-	-	0.23985	0.0001	0.33063	
	UM	-	0.0723	0.0126	-	-	-	0.2561	0.0001	0.3411	
	%diff.	-	12.2	-51.8	-	-	-	-6.8	0.0	-3.166682	
LB1503	PL	-	0.011	0.017	-	-	-	0.521	-	0.549	
	UM	-	0.0055	0.0303	-	-	-	0.5914	-	0.6272	
	%diff.	-	50.0	-78.2	-	-	-	-13.5	-	-14.24408	
LB1504	PL	-	-	-	-	-	-	-	-	0	
	UM	-	NO BIOMASS DATA						-	-	0
	%diff.	-	-	-	-	-	-	-	-	-	
LB1506	PL	-	-	-	-	-	-	-	-	0	
	UM	-	NO BIOMASS DATA						-	-	0
	%diff.	-	-	-	-	-	-	-	-	-	
LB1507	PL	-	0.7617	0.0431	-	-	-	2.6909	-	3.4957	
	UM	-	0.6516	0.0292	-	-	-	2.6327	-	3.3135	
	%diff.	-	14.5	32.3	-	-	-	2.2	-	5.2	
LB1513	PL	-	-	-	-	-	-	-	-	0	
	UM	-	NO BIOMASS DATA						-	-	0
	%diff.	-	-	-	-	-	-	-	-	-	
LB1514	PL	-	-	-	-	-	-	-	-	0	
	UM	-	NO BIOMASS DATA						-	-	0
	%diff.	-	-	-	-	-	-	-	-	-	
LB1516	PL	-	0.0042	0.0741	-	-	-	0.2428	0.0001	0.3212	
	UM	-	0.0068	0.1115	-	-	-	0.2729	0.0001	0.3913	
	%diff.	-	-61.9	-50.5	-	-	-	-12.4	0.0	-21.8	
LB1521	PL	-	0.1137	0.0062	-	-	-	0.8413	0.0052	0.9664	
	UM	-	0.1224	0.0038	-	-	-	0.8643	0.0058	0.9963	
	%diff.	-	-7.7	38.7	-	-	-	-2.7	-11.5	-3.1	
LB1535	PL	-	1.0163	0.0709	-	-	-	0.7346	0.026	1.8478	
	UM	-	0.859	0.0678	-	-	-	0.5908	0.0227	1.5403	
	%diff.	-	15.5	4.4	-	-	-	19.6	12.7	16.6	
LB1536	PL	-	0.0029	0.0264	-	-	-	0.5016	0.0001	0.531	
	UM	-	0.0029	0.0275	-	-	-	0.5189	0.0001	0.5494	
	%diff.	-	0.0	-4.2	-	-	-	-3.4	0.0	-3.5	

Key: PL - participating laboratory  
UM - Unicmarine Ltd.  
"- - No data. See Section 6 in the forthcoming Annual Report, for details.



**Table 4. Variation in faunal content of samples distributed as MB16.**

**Taxa\***

LabCode	Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Total taxa
LB1501	-	1	1	-	-	-	4	4	10
LB1502	-	-	-	-	-	-	-	-	-
LB1503	-	3	1	-	-	-	4	-	8
LB1504	-	5	2	-	-	-	4	1	12
LB1505	-	-	-	-	-	-	-	-	-
LB1506	-	3	3	-	-	-	5	1	12
LB1507	-	3	1	-	-	-	5	2	11
LB1513	-	3	1	-	-	-	5	4	13
LB1514	-	5	2	-	-	-	6	3	16
LB1516	-	5	3	-	-	-	4	2	14
LB1521	-	7	2	-	-	-	5	3	17
LB1535	-	3	3	-	-	-	4	4	14
LB1536	-	4	2	-	-	-	6	3	15
Mean	-	4	2	-	-	-	5	3	12
Max	-	7	3	-	-	-	6	4	16
Min	-	1	1	-	-	-	4	1	8

\*UM data used for all faunal groups (includes all faunal groups).

**Individuals\***

LabCode	Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Total Ind.
LB1501	-	2	60	-	-	-	134	3	199
LB1502	-	-	-	-	-	-	-	-	-
LB1503	-	30	113	-	-	-	243	-	386
LB1504	-	15	111	-	-	-	255	-	381
LB1505	-	-	-	-	-	-	-	-	-
LB1506	-	5	68	-	-	-	620	-	693
LB1507	-	15	79	-	-	-	341	-	435
LB1513	-	9	128	-	-	-	837	3	977
LB1514	-	11	115	-	-	-	295	2	423
LB1516	-	72	263	-	-	-	132	4	471
LB1521	-	12	24	-	-	-	157	1	194
LB1535	-	36	167	-	-	-	179	4	386
LB1536	-	22	85	-	-	-	148	4	259
Mean	-	21	110	-	-	-	304	3	496
Max	-	72	263	-	-	-	837	4	977
Min	-	2	24	-	-	-	132	1	199

\*UM data used for all faunal groups (includes all faunal groups).

**Table 5. Sample processing options selected for MB16 by participating laboratories.**

		LB1501	LB1503	LB1504	LB1506	LB1507	LB1513	LB1514	LB1516	LB1521	LB1535	LB1536	
<b>Faunal groups extracted*</b>	Nematodes	<input checked="" type="checkbox"/>	LAB DETAILS NOT SUPPLIED	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	LAB DETAILS NOT SUPPLIED	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Bryozoans	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Hydroids	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Copepods	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Ostracods	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Anthozoans	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Tunicates	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Foraminifera	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Algae	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Aquatic Insects	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

*\* Note that all faunal groups are assumed to be extracted when no sample processing details has been submitted*

Figure 1. MB16 data from participating laboratories (raw-untransformed)

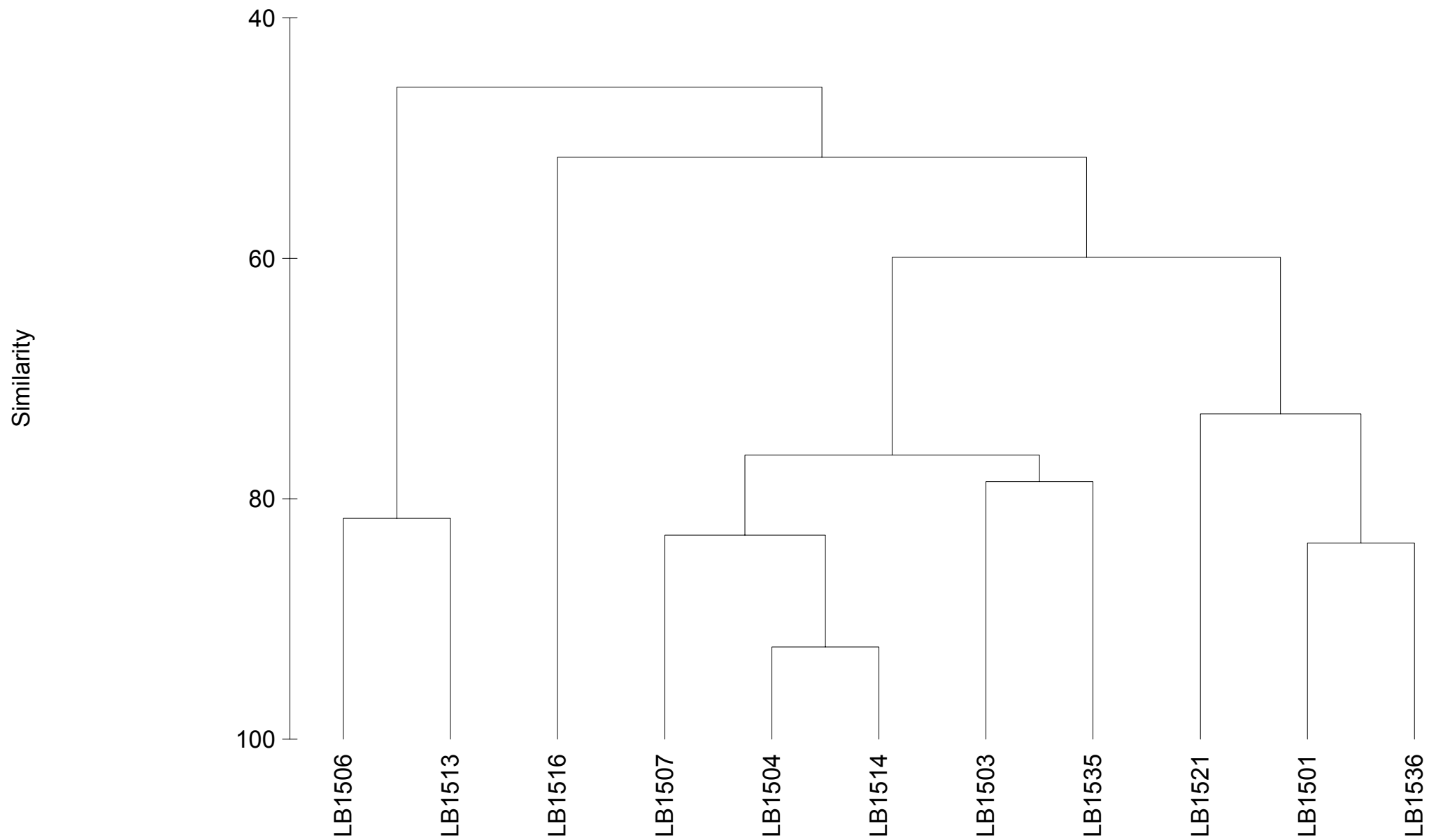


Figure 2. MB16 data reanalysed by Unicomarine Ltd. (untransformed)

