

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

**Macrobenthic Exercise Results – MB14**

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## **EXERCISE DETAILS**

### **Macrobenthos #14**

**Type/Contents – Day Grab; approx. 2 litres compacting mixed sediment (reduced from 7 litres); Sheerness, Isle of Sheppey.**

**Circulated – 18/10/2006**

**Completion Date – 15/12/2007**

**Number of Participating Laboratories – 09**

**Number of Results Received – 06**

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**Table 1. Results from the analysis of Macrobenenthic sample MB14 by the participating laboratories.**

1	LabCode	2		3		4		5		6		7		8		9		10		11		12		13		14		15		
		PL	UM	UM	Diff (n)	%max	PL	UM	UM	Diff (n)	%max	PL	UM	UM	Diff (n)	%max	New Taxa	Ind	%ind	Individuals Count Error	Similarity index	Taxonomic errors								
	LBI301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	LBI302	48	56	-8	14.3	1696	1675	21	1.2	0	4	0.2	25	89.53	12	0	4	0.2	25	89.53	12	0	4	0.2	25	89.53	12	0	4	0.2
	LBI303	21	28	-7	25.0	184	252	-68	27.0	6	57	22.6	-11	79.82	3	6	57	22.6	-11	79.82	3	6	57	22.6	-11	79.82	3	6	57	22.6
	LBI305	38	37	1	2.6	1213	1219	-6	0.5	0	6	0.5	0	97.01	8	0	6	0.5	0	97.01	8	0	6	0.5	0	97.01	8	0	6	0.5
	LBI306	29	29	0	0.0	296	345	-49	14.2	1	52	15.1	3	91.41	1	1	52	15.1	3	91.41	1	1	52	15.1	3	91.41	1	1	52	15.1
	LBI307	24	29	-5	17.2	168	222	-54	24.3	4	55	24.8	1	85.13	3	4	55	24.8	1	85.13	3	4	55	24.8	1	85.13	3	4	55	24.8
	LBI309	37	39	-2	5.1	397	415	-18	4.3	2	16	3.9	-2	96.39	5	2	16	3.9	-2	96.39	5	2	16	3.9	-2	96.39	5	2	16	3.9

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 MB14.**

LabCode	Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Overall
LB1301	UM count PL missed %missed	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0 0 -
LB1302	UM count PL missed %missed	5 1 0.0	129 1 0.8	212 1 0.5	26 0 0.0	456 0 0.0	2 0 0.0	235 1 0.4	1675 4 0.2
LB1303	UM count PL missed %missed	4 3 75.0	81 12 14.8	21 14 66.7	0 0 -	1 0 0.0	0 0 -	94 16 23.5	252 57 22.6
LB1305	UM count PL missed %missed	0 0 -	45 1 2.2	51 0 0.0	1 0 0.0	350 0 0.0	1 0 0.0	97 1 0.6	1219 6 0.5
LB1306	UM count PL missed %missed	0 0 -	52 3 5.8	55 3 5.5	1 0 0.0	2 0 0.0	0 0 -	147 9 6.1	345 52 15.1
LB1307	UM count PL missed %missed	0 0 -	58 17 29.3	53 14 26.4	0 0 -	3 0 0.0	0 0 -	108 24 22.2	222 55 24.8
LB1309	UM count PL missed %missed	0 0 -	73 4 5.5	99 1 1.0	1 0 0.0	1 0 0.0	0 0 -	194 3 1.5	415 16 3.9

Key: PL - participating laboratory.

UM - Unicomarine 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 Unicomarine Ltd. for the major taxonomic groups present in sample MB14. Values are in grams (g).**

LabCode	Nemertea		Polychaeta		Oligochaeta		Chelicerata		Crustacea		Echinodermata		Mollusca		Other		Overall		
	PL	UM	%diff.	PL	UM	%diff.	PL	UM	%diff.	PL	UM	%diff.	PL	UM	%diff.	PL	UM	%diff.	
LB1301	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
																			0
																			-
LB1302	0.0007	0.3046	0.0015	0.0054	0.0107	7.0587	8.8881	0.1115	16.3812										16.3321
	0.0001	0.2197	0.0004	0.0072	0.0077	7.6622	8.3409	0.0939	16.3321										16.3321
	85.7	27.9	73.3	-33.3	28.0	-8.5	6.2	15.8	0.2997										0.2997
LB1303	0.0223	0.7564	0.0026	-	0.1494	-	10.7045	0.9392	12.5744										12.5744
	0.0122	0.4401	0.0013	-	0.1192	-	12.3501	0.7079	13.6308										13.6308
	45.3	41.8	50.0	-	20.2	-	-15.4	24.6	-8.401196										-8.401196
LB1305	-	0.12355	0.00326	0.00071	0.03571	0.00141	2.94574	0.09591	3.20629										3.20629
	-	0.1037	0.004	0.0004	0.0347	0.001	3.0228	0.0856	3.2522										3.2522
	-	16.1	-22.7	43.7	2.8	29.1	-2.6	10.7	-1.431873										-1.431873
LB1306	-	0.06670	0.00258	0.00001	0.00026	-	2.55654	0.33687	2.96296										2.96296
	-	0.0622	0.0024	0.0001	0.0001	-	2.6204	0.319	3.0042										3.0042
	-	6.7	7.0	-900.0	61.5	-	-2.5	5.3	-1.391851										-1.391851
LB1307	-	-	-	-	-	-	-	-	0										0
	-	-	-	-	-	-	-	-	0										0
	-	-	-	-	-	-	-	-	-										-
LB1309	-	-	-	-	-	-	-	-	0										0
	-	-	-	-	-	-	-	-	0										0
	-	-	-	-	-	-	-	-	-										-

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

**Table 4. Variation in faunal content of samples distributed as MB14.**

**Taxa\***

LabCode	Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Total taxa
LB1301	-	-	-	-	-	-	-	-	-
LB1302	1	24	3	3	8	2	11	1	53
LB1303	1	17	3	0	1	0	4	0	26
LB1305	0	15	1	1	4	1	5	0	27
LB1306	0	12	2	1	2	0	4	0	21
LB1307	0	16	2	0	3	0	8	0	29
LB1309	0	14	1	1	1	0	8	0	25
<b>Mean</b>	<b>0</b>	<b>16</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>30</b>
<b>Max</b>	<b>1</b>	<b>24</b>	<b>3</b>	<b>3</b>	<b>8</b>	<b>2</b>	<b>11</b>	<b>1</b>	<b>53</b>
<b>Min</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>21</b>

\*UM data used for all faunal groups (excludes sessile taxa & nematoda).

**Individuals\***

LabCode	Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Total Ind.
LB1301	-	-	-	-	-	-	-	-	-
LB1302	5	129	212	26	41	2	235	1	651
LB1303	4	81	21	0	1	0	94	0	201
LB1305	0	45	51	1	4	1	97	0	199
LB1306	0	52	55	1	2	0	147	0	257
LB1307	0	58	53	0	3	0	108	0	222
LB1309	0	73	99	1	1	0	194	0	368
<b>Mean</b>	<b>2</b>	<b>73</b>	<b>82</b>	<b>5</b>	<b>9</b>	<b>1</b>	<b>146</b>	<b>0</b>	<b>316</b>
<b>Max</b>	<b>5</b>	<b>129</b>	<b>212</b>	<b>26</b>	<b>41</b>	<b>2</b>	<b>235</b>	<b>1</b>	<b>651</b>
<b>Min</b>	<b>0</b>	<b>45</b>	<b>21</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>94</b>	<b>0</b>	<b>199</b>

\*UM data used for all faunal groups (excludes sessile taxa & nematoda).

**Table 5. Sample processing options selected for MB14 by participating laboratories.**

	LB1301	LB1302	LB1303	LB1305	LB1306	LB1307	LB1309	
Residue	Stained	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Subsampled	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Faunal groups extracted	Nematodes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<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"/>	
	Hydroids	<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"/>	
	Tunicates	<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"/>	
	Aquatic Insects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Pips/Seeds	-	-	-	-	-	-	-
	Barnacles	-	-	<input checked="" type="checkbox"/>	-	-	<input checked="" type="checkbox"/>	-
	Formanifera	-	-	-	-	-	-	<input checked="" type="checkbox"/>
Ostracods	-	-	-	-	-	-	<input checked="" type="checkbox"/>	

Figure 1. MB14 data from participating laboratories (raw - untransformed).

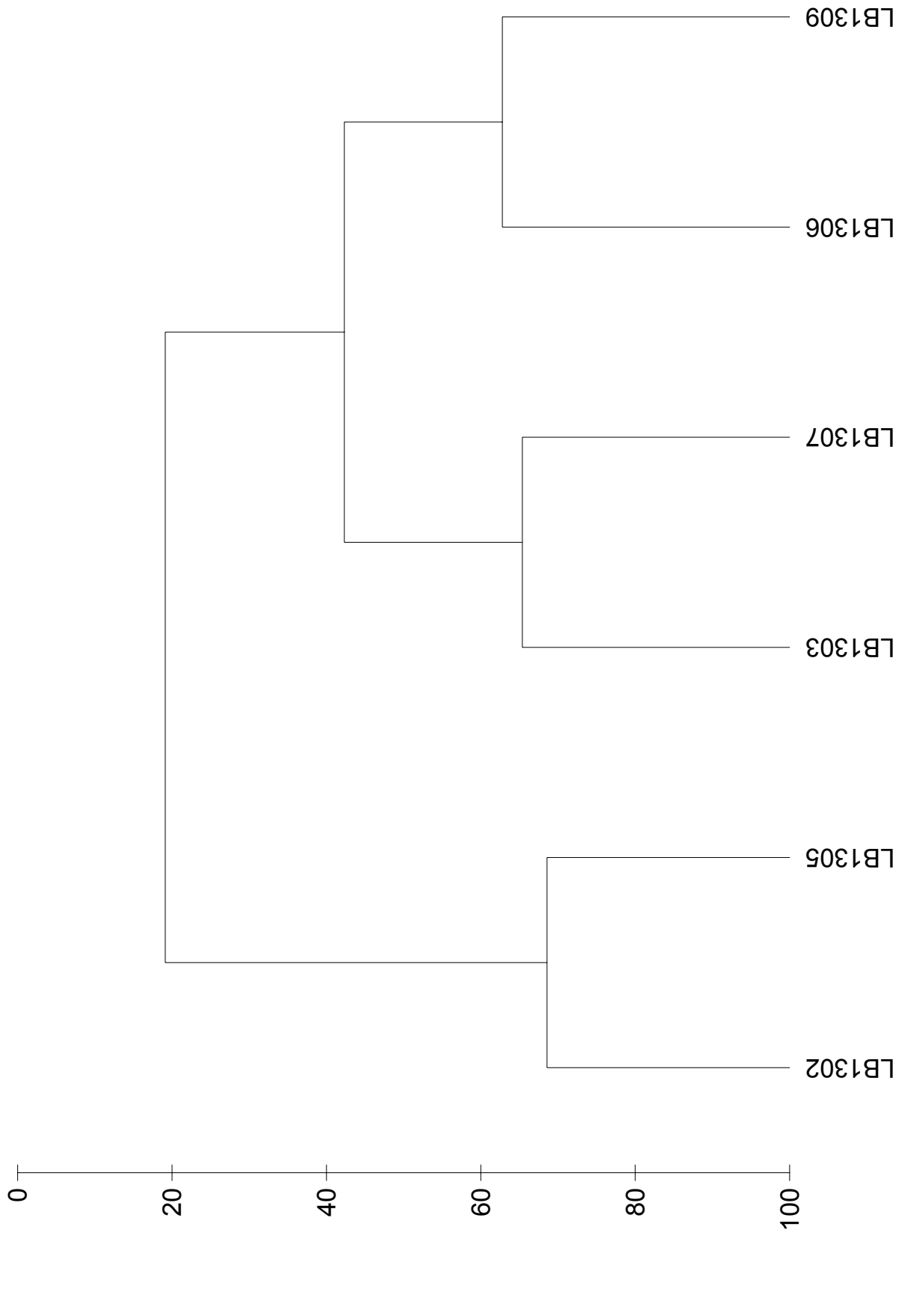




Figure 2. MB14 data reanalysed by Unicomarine Ltd. (untransformed).

