



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

Macrobenthic Exercise Results – MB13

David Hall
davidhall@unicomarine.com

June 2006

**Unicomarine Ltd.
Head Office
7 Diamond Centre
Works Road
Letchworth
Hertfordshire
SG6 1LW
www.unicomarine.com**

EXERCISE DETAILS

Macrobenthos #13

Type/Contents – Day Grab; approx. 2.5 litres coastal fine sand & grit; Stone Pier, Harwich.

Circulated – 16/09/2005

Completion Date – 17/02/2006

Number of Participating Laboratories – 12

Number of Results Received – 08

Contents

Results

- Sheet 1. NMBAQCS Macrobenthic Sample Details (only included if returned by participating laboratory).
- Sheet 2. NMBAQC Scheme Interim Results – Macrobenthic Exercise (MB13).

Tables

- Table 1. Results from the analysis of Macrobenthic sample MB13 by the participating laboratories.
- Table 2. Comparison of the efficiency of extraction of fauna by the participating laboratories for the major taxonomic groups present in sample MB13.
- 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 MB13.
- Table 4. Variation in faunal content of samples distributed as MB13.
- Table 5. Sample processing options selected for MB13 by participating laboratories.

Figures

- Figure 1. MB13 data from participating laboratories (raw - untransformed). Cluster dendrogram showing plotted data from participating laboratories as supplied.
- Figure 2. MB13 data reanalysed by Unicomarine Ltd. Cluster dendrogram showing plotted data from participating laboratories following reanalysis by Unicomarine Ltd (untransformed). All residues and fauna have been reanalysed.

Table 1. Results from the analysis of Macrobenthic sample MB13 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
LB1201	13	13	0	0.0	33	33	0	0.0	0	0	0.0	0	93.94	2
LB1202	11	12	-1	8.3	24	25	-1	4.0	1	1	4.0	0	97.96	0
LB1204	9	9	0	0.0	16	16	0	0.0	0	0	0.0	0	100.00	0
LB1206	11	12	-1	8.3	24	25	-1	4.0	1	1	4.0	0	93.88	1
LB1207	13	14	-1	7.1	26	27	-1	3.7	1	1	3.7	0	94.34	1
LB1208	11	10	1	9.1	18	17	1	5.6	0	0	0.0	1	97.30	0
LB1209	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LB1221	9	9	0	0.0	20	20	0	0.0	0	0	0.0	0	100.00	0
LB1224	14	14	0	0.0	31	31	0	0.0	0	0	0.0	0	100.00	0

Key: PL - participating laboratory.

UM - Unicomarine Ltd.

"-" - No data. See forthcoming Annual Report, Section 6, for details.

Table 2. Comparison of the efficiency of extraction of fauna by the participating laboratories for the major taxonomic groups present in sample MB13.

LabCode		Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Overall
LB1201	UM count	-	24	4	-	2	-	2	1	33
	PL missed	-	0	0	-	0	-	0	0	0
	%missed	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0
LB1202	UM count	-	18	-	-	4	-	2	1	25
	PL missed	-	0	-	-	1	-	0	0	1
	%missed	-	0.0	-	-	25.0	-	0.0	0.0	4.0
LB1204	UM count	-	11	-	-	2	-	2	1	16
	PL missed	-	0	-	-	0	-	0	0	0
	%missed	-	0.0	-	-	0.0	-	0.0	0.0	0.0
LB1206	UM count	-	19	-	-	3	-	2	1	25
	PL missed	-	0	-	-	0	-	1	0	1
	%missed	-	0.0	-	-	0.0	-	50.0	0.0	4.0
LB1207	UM count	-	21	-	-	3	-	2	1	27
	PL missed	-	0	-	-	0	-	1	0	1
	%missed	-	0.0	-	-	0.0	-	50.0	0.0	3.7
LB1208	UM count	-	11	-	-	3	-	2	1	17
	PL missed	-	0	-	-	0	-	0	0	0
	%missed	-	0.0	-	-	0.0	-	0.0	0.0	0.0
LB1209	UM count	-	-	-	-	-	-	-	-	0
	PL missed	-	-	-	-	-	-	-	-	0
	%missed	-	-	-	-	-	-	-	-	-
LB1221	UM count	-	14	-	-	3	-	2	1	20
	PL missed	-	0	-	-	0	-	0	0	0
	%missed	-	0.0	-	-	0.0	-	0.0	0.0	0.0
LB1224	UM count	-	26	-	-	2	-	2	1	31
	PL missed	-	0	-	-	0	-	0	0	0
	%missed	-	0.0	-	-	0.0	-	0.0	0.0	0.0

Key: PL - participating laboratory.
 UM - Unicomarine Ltd.
 "-" - No data. See forthcoming Annual Report, Section 6, 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 MB13. Values are in grams (g).

LabCode		Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Overall
LB1201	PL	-	-	-	-	-	-	-	-	0
	UM	-	-	-	-	-	-	-	-	0
	%diff.	-	-	-	-	-	-	-	-	-
LB1202	PL	-	0.04045	-	-	0.01241	-	0.13616	0.03185	0.22087
	UM	-	0.0377	-	-	0.0119	-	0.1357	0.0406	0.2259
	%diff.	-	6.8	-	-	4.1	-	0.3	-27.5	-2.277358
LB1204	PL	-	0.049	-	-	0.0099	-	0.1781	0.0116	0.2486
	UM	-	0.0366	-	-	0.0095	-	0.1806	0.0106	0.2373
	%diff.	-	25.3	-	-	4.0	-	-1.4	8.6	4.5454545
LB1206	PL	-	0.04993	-	-	0.13958	-	0.14810	0.04884	0.38645
	UM	-	0.0506	-	-	0.1379	-	0.1441	0.0439	0.3765
	%diff.	-	-1.3	-	-	1.2	-	2.7	10.1	2.5747186
LB1207	PL	-	0.6607	-	-	0.017	-	0.1485	0.1189	0.9451
	UM	-	0.0864	-	-	0.0117	-	0.148	0.1052	0.3513
	%diff.	-	86.9	-	-	31.2	-	0.3	11.5	62.8
LB1208	PL	-	-	-	-	-	-	-	-	0
	UM	-	-	-	-	-	-	-	-	0
	%diff.	-	-	-	-	-	-	-	-	-
LB1209	PL	-	-	-	-	-	-	-	-	0
	UM	-	-	-	-	-	-	-	-	0
	%diff.	-	-	-	-	-	-	-	-	-
LB1221	PL	-	0.0346	-	-	0.0067	-	0.1544	0.0046	0.2003
	UM	-	0.0302	-	-	0.0055	-	0.1865	0.0035	0.2257
	%diff.	-	12.7	-	-	17.9	-	-20.8	23.9	-12.7
LB1224	PL	-	0.0973	-	-	0.0065	-	0.1091	0.174	0.3869
	UM	-	0.0881	-	-	0.0066	-	0.1094	0.165	0.3691
	%diff.	-	9.5	-	-	-1.5	-	-0.3	5.2	4.6

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

Table 4. Variation in faunal content of samples distributed as MB13.

Taxa*

LabCode	Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Total taxa
LB1201	0	8	1	0	1	0	2	1	13
LB1202	0	6	0	0	3	0	2	1	12
LB1204	0	5	0	0	1	0	2	1	9
LB1206	0	7	0	0	2	0	2	1	12
LB1207	0	9	0	0	2	0	2	1	14
LB1208	0	4	0	0	2	0	2	1	9
LB1209	-	-	-	-	-	-	-	-	-
LB1221	0	4	0	0	2	0	2	1	9
LB1224	0	10	0	0	1	0	2	1	14
Mean	0	7	0	0	2	0	2	1	12
Max	0	10	1	0	3	0	2	1	14
Min	0	4	0	0	1	0	2	1	9

*UM data used for all faunal groups (excludes colonial taxa).

Individuals*

LabCode	Nemertea	Polychaeta	Oligochaeta	Chelicerata	Crustacea	Echinodermata	Mollusca	Other	Total Ind.
LB1201	0	24	4	0	2	0	2	1	33
LB1202	0	18	0	0	4	0	2	1	25
LB1204	0	11	0	0	2	0	2	1	16
LB1206	0	19	0	0	3	0	2	1	25
LB1207	0	21	0	0	3	0	2	1	27
LB1208	0	11	0	0	3	0	2	1	17
LB1209	-	-	-	-	-	-	-	-	-
LB1221	0	14	0	0	3	0	2	1	20
LB1224	0	26	0	0	2	0	2	1	31
Mean	0	18	1	0	3	0	2	1	24
Max	0	26	4	0	4	0	2	1	33
Min	0	11	0	0	2	0	2	1	16

*UM data used for all faunal groups (excludes colonial taxa).

Figure 1. MB13 data (Untransformed - Raw).

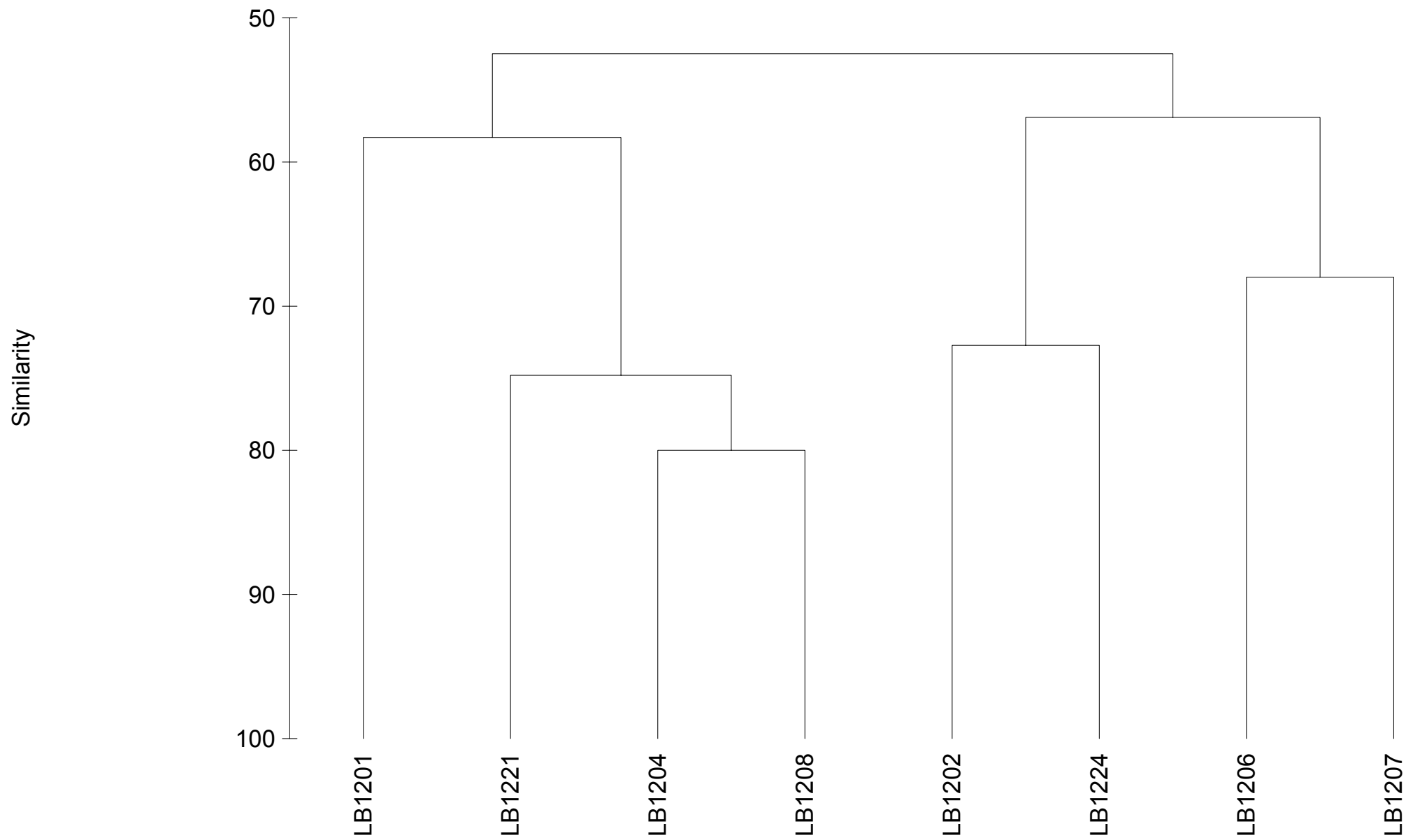


Figure 2. MB13 data reanalysed by Unicomarine Ltd. (Untransformed).

