UK NATIONAL MARINE CHEMICAL ANALYTICAL QUALITY CONTROL SCHEME (NMCAQC)

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Introduction

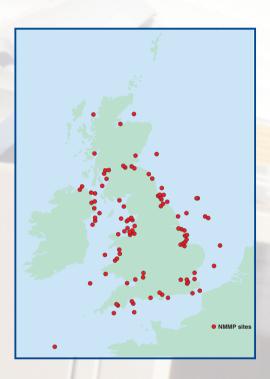
The NMCAQC scheme was initiated in 1991 by the Marine Pollution Monitoring Management Group (MPMMG) to support the analytical work associated with the National Marine Monitoring Programme (NMMP). The scheme was established and administered by a National Co-ordinating Committee (NCC) comprising representatives of the laboratories submitting data to the NMMP. The NCC organised a contract to provided proficiency test samples for determinands in the NMMP and collected subscriptions from participating laboratories to fund the scheme. The first distribution was sent out in September 1992. The NCC also issued a policy document on in-house AQC to all participating laboratories in 1992. The document provided guidance on performance testing of methods, and encouraged the participation of laboratories in formal accreditation schemes.

The NCC introduced special exercises and workshops in subsequent years to improve laboratories performance for problem determinands and collate information on internal QC.

Year	Workshops	Special Exercises	Distributions	Internal AQC
1 (92/3)			1 - 4	Policy issued
2 (93/4)	Hg in water Aqueous organics	TOxN/NH ₃ Aqueous metals Aqueous organics	5 - 6	Information collection Data review
3 (94/5)	Aqueous metals	Aqueous Hg TOxN/NH ₃ Chlorophyll-a Sediment metals digest Aqueous organics Aqueous metals	7 - 10	Review Report
4 (95/6)	AQC	Metal filtration OCs in sediment and biota Sediment metals	11 - 14	Information collation Report
5 (96/7)		Metals & organics in sediment Organics in biota Triazines & OPs	R6 - R9	Information collation Report
6 (97/8)	NMMP	Aqueous metals	R10 - R13	
7 (98/9)		Chlorophyll-a	R14 – R17	
8 (99/00)	Total N & P OCs in biota Chlorophyll-a	Organotins Chlorophyll-a Brominated flame retardants Chlorobornanes	R18 – R21	Datafilter pilot
9 (00/1)	PAH	Organotins Chlorophyll-a Brominated flame retardants Chlorobornanes	R22 - R25	Datafilter repor
10 (01/2)	Organotins Chlorophyll-a	Organotins Chlorophyll-a Brominated flame retardants Chlorobornanes	R26 – R29	New datafilter

Links with QUASIMEME

Several of the laboratories participating in the NMCAQC were also invited to participate in QUASIMEME I. The NCC invited the QUASIMEME I project manager, Dr D Wells, to attend meetings to strengthen the links between the schemes and QUASIMEME sediment and biota materials were used in NMCAOC distributions. It was agreed that all laboratories should join the OUASIMEME proficiency testing scheme when it became subscription based in 1996. QUASIMEME now supplies individual laboratories with their test results and these are forwarded to the central NMCAQC database (see Figure 1).



NMMP

The NMMP is a network of coastal and estuarine monitoring sites around the UK where competent monitoring authorities collect samples for a range of chemical and biological analyses specified by the monitoring plan. Monitoring data is submitted to ICES and forms the bulk of the UKs mandatory monitoring requirements under OSPAR.

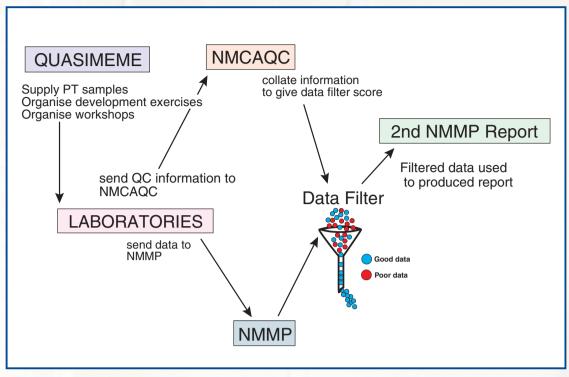


Figure 1

The data filter has been further refined to accommodate the QC data provided to the ICES database with the NMMP data. It is hoped that this will make the data filter more accessible to a wider audience.

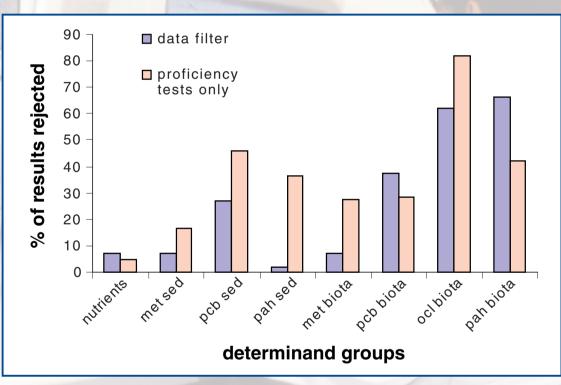


Figure 2

Data Assessment

The data assessment criteria for the first NMMP report in 1998 were based on participation and performance in the proficiency testing scheme. This was recognised as a very limited assessment of laboratories performance as it was based on results obtained in two distributions per year. It was agreed that routine in-house quality control should be included to provide continuous assessment of performance. A data filter was developed which included information on internal as well as external AQC. A comparison of data rejected by the two different approaches (Figure 2) shows that more data is rejected using PT information only for well established but difficult analyses e.g. organochlorine compounds in biota.

NMCAQC participants















Acknowledgements

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