



ENVIRONMENT AGENCY

**Index of Methods for the Examination of Waters and
Associated Materials 1976 - 2011**

Methods for the Examination of Waters and Associated Materials

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Methods for the Examination of Waters and Associated Materials

This booklet contains an index of the methods for the examination of waters and associated materials in order of their publication. There then follows an alphabetical listing of the more important parameters and topics covered in the published series where these may not be apparent from the title of the bluebook. This document replaces the previous index produced in 2008 (bluebook 217).

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About this series

Introduction

This booklet is part of a series intended to provide authoritative guidance on recommended methods of sampling and analysis for determining the quality of drinking water, ground water, river water and sea water, waste water and effluents as well as sewage sludges, sediments and biota.

Performance of methods

Ideally, all methods should be fully evaluated with results from performance tests. These methods should be capable of establishing, within specified or pre-determined and acceptable limits of deviation and detection, whether or not any sample contains concentrations of parameters above those of interest.

In the procedures described in each method any reference to the tolerances to be adopted with respect to, for example the amount or volume of reagents to be used is left to the discretion of the laboratory. These tolerances should be as low as possible in order to satisfy stringent performance criteria. Tolerances of between 1 - 5 % have been shown to be satisfactory for most purposes. Lower tolerances should result in improved precision.

In the methods described, for example for wavelengths, storage conditions, concentrations of the same or similar reagents, etc, differences may be noted. This information is provided by individual laboratories operating under their own management systems and is dependent on specific conditions pertaining to each laboratory. It is assumed this information is supported by sufficient data to justify its inclusion. Users intending to use or vary the quoted wavelengths, storage conditions, concentrations, etc, should ensure they are appropriate to their own laboratory and verify their application to demonstrate

appropriate performance of the method. In addition, good laboratory practice and analytical quality control are essential if satisfactory results are to be achieved.

Standing Committee of Analysts

The preparation of booklets within the series "Methods for the Examination of Waters and Associated Materials" and their continuing revision is the responsibility of the Standing Committee of Analysts. This committee was established in 1972 by the Department of the Environment and is now managed by the Environment Agency.

Methods are produced by panels of experts in the appropriate field, often in co-operation with working groups and the main committee. The names of those members principally associated with these methods are listed at the back of this booklet. A report describing all SCA activities for the period 1 July to 30 June is produced annually and is available from the Agency's web-page (www.environment-agency.gov.uk/nls).

Users should ensure they are aware of the most recent version of the draft they seek. If users wish to receive copies or advance notice of forthcoming publications, or obtain details of the index of methods then contact the Secretary on the Agency's internet web-page or by post, see address listed at the back of this booklet.

Great efforts are made to avoid errors appearing in the published text. If, however, any are found, please notify the Secretary.

Dr D Westwood

Secretary

February 2010

Warning to users

The analytical procedures described in this booklet should only be carried out under the proper supervision of competent, trained analysts in properly equipped laboratories.

All possible safety precautions should be followed and appropriate regulatory requirements complied with. This should include compliance with the Health and Safety at Work etc Act 1974 and all regulations made under the Act, and the Control of Substances Hazardous to Health Regulations 2002 (SI 2002/2677). Where particular or exceptional hazards exist in carrying out the procedures described in this booklet, then specific attention is noted.

Numerous publications are available giving practical details on first aid and laboratory safety. These should be consulted and be readily accessible to all analysts. Amongst such publications are; "Safe Practices in Chemical Laboratories" and "Hazards in the Chemical Laboratory", 1992, produced by the Royal Society of Chemistry; "Guidelines for Microbiological Safety", 1986, Portland Press, Colchester, produced by Member Societies of the Microbiological Consultative Committee; and "Safety Precautions, Notes for Guidance" produced by the Public Health Laboratory Service. Another useful publication is "Good Laboratory Practice" produced by the Department of Health.

Glossary

AAS	atomic absorption spectrometry / spectrometric
AFS	atomic fluorescence spectrometry / spectrometric
APDC	ammonium pyrrolidine dithiocarbamate
API	American petroleum industry
AQC	analytical quality control
BOD	biological oxygen demand
BTEX	benzene, toluene, ethylbenzene and xylenes
CIELAB	international commission on illumination L*a*b* values
COD	chemical oxygen demand
DNA	desoxyribonucleic acid
DPD	N-N-diethyl-p-phenylenediamine
DTA	direct toxicity assessment
<i>E. coli</i>	<i>Escherichia coli</i>
EAAAS	electrothermal atomisation atomic absorption spectrometry
EC	electron capture
EDTA	ethylenediaminetetraacetic acid
FIA	flow injection analysis
FID	flame ionisation detector
FPD	flame photometric detector
GC	gas chromatography / chromatographic
HPLC	high performance liquid chromatography / chromatographic
IC	ion chromatography / chromatographic
ICP	inductively coupled plasma
IR	infra-red spectrometry
ISE	ion selective electrode
LTPRI	linear temperature programmed Rf index
MF	membrane filtration
MIBK	methyl isobutyl ketone
MS	mass spectrometry / spectrometric
MT	multiple tube
NSD	nitrogen specific detector
OECD	Organisation for Economic Co-operation and Development
OES	optical emission spectrometry
P and T	purge and trap
PAH	polynuclear aromatic hydrocarbons
PCB	polychlorinatedbiphenyls
QC	quality control
Rf	retention time
Rp	reverse phase
SRT	sludge Rf time
TLC	thin layer chromatography / chromatographic
UV	ultraviolet

STANDING COMMITTEE OF ANALYSTS

METHODS FOR THE EXAMINATION OF WATERS AND ASSOCIATED MATERIALS

Index of publications

(Documents with an ISBN number were previously published by HMSO, documents without an ISBN number are available via the Environment Agency (www.environment-agency.gov.uk/nls).

Book Number		ISBN
1.	Emission spectrophotometric multielement methods of analysis for waters, sediments and other materials of interest to the water industry 1980	0117500151
2.	Cadmium in potable waters by atomic absorption spectrophotometry 1976	0117511366
3.	Lead in potable waters by atomic absorption spectrophotometry 1976	0117511374
4.	Chemical oxygen demand (dichromate value) of polluted and waste waters 1977 (see bluebooks 215 and 216)	0117512494
5.	Amenability of sewage sludge to anaerobic digestion 1977	0117512508
6.	The sampling and initial preparation of sewage and waterworks' sludge, soils, sediments and plant materials prior to analysis 1977 (replaced by bluebook 89)	0117512516
7.	Determination of the pH value of sludge, soil, mud and sediment; and lime requirement of soil 1977	0117512524
8.	Magnesium in waters and sewage effluents by atomic absorption spectrophotometry 1977	0117513121
9.	Calcium in waters and sewage effluents by atomic absorption spectrophotometry 1977	011751313X
10.	Mercury in waters, effluents, and sludges by flameless atomic absorption spectrophotometry 1978	0117513261
11.	Iron in raw and potable waters by spectrophotometry (using 2, 4, 6 - tripyridyl - 1, 3, 5 - triazine) 1977	011751327X
12.	Manganese in raw and potable waters by spectrophotometry (using formaldoxime) 1977	0117513288

13.	Organochlorine insecticides and polychlorinated biphenyls in waters 1978	0117513733
14.	The measurement of electrical conductivity and the laboratory determination of the pH value of natural, treated and waste waters 1978	0117514284
15.	The determination of material extractable by carbon tetrachloride and of certain hydrocarbon oil and grease components in sewage sludge 1978	0117514365
16.	Dissolved oxygen in natural and waste waters 1979	011751442X
17.	Arsenic in potable and sea water by spectrophotometry (arsenomolybdenum blue procedure) 1978 Tentative Method	0117514519
18.	Methods for biological sampling - Handnet sampling of aquatic benthic macro-invertebrates 1978	0117514527
19.	The instrumental determination of total organic carbon, total oxygen demand and related determinands 1979	0117514586
20.	Atomic absorption spectrophotometry - An essay review 1979	0117514616
21.	Determination of volatile fatty acids in sewage sludge 1979	0117514624
22.	The analysis of sludge digester gas 1979	0117514632
23.	Acid soluble aluminium in raw and potable waters by spectrophotometry (using pyrocatechol violet) 1979	0117514640
24.	Air segmented continuous flow automatic analysis. An essay review 1979	0117514705
25.	General principles of sampling and accuracy of results 1980 (replaced by bluebook 143)	0117514918
26.	Sulphate in waters, effluents and solids 1979 (replaced by bluebook 136)	0117514926
27.	Chemical disinfecting agents in waters and effluents, and chlorine demand 1980 (updated by bluebook 218)	0117514934
28.	Chromium in raw and potable waters and sewage effluents 1980	0117515280
29.	A survey of multielement and related methods of analysis for waters, sediments and other materials of interest to the water industry 1980	0117515299

30.	Ultra-violet and visible solution spectrophotometry and colorimetry 1980	0117515388
31.	Zinc in potable waters by atomic absorption spectrophotometry 1980	0117515418
32.	Copper in potable waters by atomic absorption spectrophotometry 1980	0117515426
33.	Bromide in waters, high level titrimetric method 1981	0117515434
34.	Chloro- and bromo-tri halogenated methanes in water 1980	0117515442
35.	Dissolved potassium in raw and potable waters 1980 Tentative Methods	0117515450
36.	Dissolved sodium in raw and potable waters 1980 Tentative Methods	0117515469
37.	Silicon in waters and effluents 1980	0117515574
38.	Phosphorus in waters, effluents and sewages 1980	0117515825
39.	Boron in waters, effluents, sewage and some solids 1980	0117515833
40.	Oxidized nitrogen in waters 1981	0117515930
41.	Odour and taste in raw and potable waters 1980 (see bluebooks 156, 171, 196, 197 and 233)	0117515973
42.	Hydrazine in waters - spectrophotometric method 1981	011751599X
43.	Total hardness, calcium hardness and magnesium hardness in raw and potable waters by EDTA titrimetry 1981	0117516007
44.	The determination of alkalinity and acidity in Water 1981	0117516015
45.	Cobalt in potable waters 1981	0117516031
46.	Nickel in potable waters 1981	011751604X
47.	Analysis of surfactants in waters, waste waters and sludges 1981	0117516058
48.	Ammonia in waters 1981	0117516139
49.	Cadmium, chromium, copper, lead, nickel and zinc in sewage sludges by nitric acid/AAS 1981	0117516155

50.	Phenols in waters and effluents by gas chromatography - 4-aminoantipyrine and 3-methyl-2-benzothiazolinehydrazone 1981	0117516171
51.	Chloride in waters, sewage and effluents 1981	0117516260
52.	Quantitative samplers for benthic macro-invertebrates in shallow flowing waters 1980	0117516279
53.	Pyrethrins and permethrin in potable waters by electron capture gas chromatography 1981	0117516287
54.	Biochemical oxygen demand 1981 (replaced by bluebook 130)	0117516309
55.	The assessment of the nitrifying ability of activated sludge 1980 (Tentative Methods)	0117516554
56.	Antimony in effluents and raw, potable and sea waters by spectrophotometry (using crystal violet) 1982 Tentative Method	0117516562
57.	Determination of cation exchange capacity and exchangeable cations (including water soluble ions) in soils, related materials and sewage sludge 1979	0117516570
58.	Gas chromatography. An essay review 1982	0117516589
59.	The determination of alkali extractable organic matter in ash 1981	0117516597
60.	Organo-phosphorus pesticides in river and drinking water 1980 Tentative Method	0117516600
61.	Assessment of biodegradability 1981	0117516619
62.	Fluoride in waters, effluents, sludges, plants and soils 1982	0117516627
63.	Methods for the isolation and identification of <i>Salmonellae</i> (other than <i>Salmonella Typhi</i>) from water and associated materials 1982	0117516643
64.	Acute toxicity testing with aquatic organisms 1981	0117516724
65.	The determination of chlorophyll a in aquatic environments 1980	0117516740
66.	The bacteriological examination of drinking water supplies 1982 (Report 71)	0117516759

67.	Gas chromatographic and associated methods for the characterization of oils, fats, waxes and tars 1982	0117516775
68.	Silver in waters, sewages and effluents by atomic absorption spectrophotometry 1982	0117516783
69.	Arsenic in potable waters by atomic absorption spectrophotometry (semi automatic method) 1982	0117516791
70.	Molybdenum, especially in sewage sludges and soils by spectrophotometry 1982	0117516805
71.	Extractable metals in soils, sewage sludge-treated soils and related materials 1982	0117516899
72.	Formaldehyde, methanol, and related compounds in raw, waste and potable waters 1982 (Tentative Methods)	0117516902
73.	Sulphide in waters and effluents 1983 (Tentative Methods)	0117517186
74.	Sampling for non-planktonic algae (benthic algae or priphyton) 1982	0117517259
75.	High performance liquid chromatography, ion chromatography, thin layer and column chromatography of water samples 1983	0117517267
76.	Iron and manganese in potable waters by atomic absorption spectrophotometry 1983	0117517275
77.	The determination of hydrocarbon oils in waters by solvent extraction, infra-red absorption and gravimetry 1983	0117517283
78.	Classical methods for the characterization of oils, fats and waxes by saponification, hydroxyl, iodine and acid values 1983	0117517291
79.	Methods for biological sampling - Sampling of benthic macro-invertebrates in deep rivers 1983	0117517402
80.	Determination of iodine, iodate, iodide and traces of bromide in waters (Tentative Method) 1984	0117517607
81.	Four essay reviews on applications of radiation measurement in the water industry 1984	0117517763

82.	The determination of organochlorine insecticides and polychlorinated biphenyls in sewages, sludges, muds and fish 1978 Organochlorine insecticides and polychlorinated biphenyls in water, an addition, 1984	0117517771
83.	The conditionability, filterability, settleability and solids content of sludge 1984. A compendium of methods and tests	0117517879
84.	Methods of biological sampling - Sampling macro-invertebrates in water supply systems 1983	0117517895
85.	Methods of biological sampling - A colonization sampler for collecting macro-invertebrate indicators of water quality in lowland rivers 1983	0117517909
86.	Thin layer chromatographic characterization of oils, fats, waxes and tars 1983	0117517917
87.	Urea in waters 1984	0117518638
88.	The direct determination of biomass of aquatic macrophytes and measurement of underwater light 1985	0117518832
89.	The sampling and initial preparation of sewage and waterworks sludges, soils, sediments, plants and contaminated wildlife (2nd Edition) 1986	0117518859
90.	Chlorophenoxy acidic herbicides, trichlorobenzoic acid, chlorophenols, triazines and glyphosate in water 1985	0117518867
91.	Total nitrogen and total phosphorus in sewage sludge. 1985	0117518883
92.	Mercury in waters, effluent, soils and sediments etc (additional methods) 1985	0117519073
93.	Methods for the determination of metals in soils, sediments, and sewage sludge, and plants by hydrochloric-nitric acid digestion, with a note on the determination of insoluble metal contents 1986	0117519081
94.	Measurement of alpha and beta activity of water and sludge samples. The determination of radon-222 and radium-226. The determination of uranium (including general X-ray fluorescent spectrometric analysis) 1985-6	011751909X

95.	Organophosphorus pesticides in sewage sludge; organophosphorus pesticides in river and drinking water, an addition, 1985	011751912X
96.	Chlorobenzenes in waters; organochlorine insecticides and PCBs in turbid waters; halogenated solvents and related compounds in sewage sludge and waters 1985	0117519138
97.	Chemical oxygen demand (dichromate value) of polluted and waste waters 1986 (Second Edition) (see bluebooks 215 and 216)	0117519154
98.	The determination of carbon dioxide in natural, treated and beverage waters, with a supplement on sampling bottled and canned waters 1986	0117519278
99.	Selenium in waters 1984 Selenium and arsenic in sludges, soils and related materials 1985 A note on the use of hydride generator kits 1987	0117519332
100.	Determination of sulphite, sulphur dioxide, thiosulphate and thiocyanate, with notes on the determination of total sulphur and other sulphur compounds 1985	0117519340
101.	Material extractable by light petroleum from sewage sludge (Tentative Method) 1985	0117519421
102.	Determination of the inhibitory effects of chemicals and waste waters on the anaerobic digestion of sewage sludge 1986.	011751943X
103.	Colour and turbidity of waters 1981	0117519553
104.	The sampling of oils, fats, waxes and tars in aqueous and solid systems 1983	0117519561
105.	Suspended, settleable and total dissolved solids in waters and effluents 1980	011751957X
106.	Methods for assessing the treatability of chemicals and industrial waste waters and their toxicity to sewage treatment processes 1982	0117519596
107.	The permanganate index and permanganate value tests for waters and effluents 1983	011751960X

108.	Methods for the use of aquatic macrophytes for assessing water quality 1985-6	0117520004
109.	Lead and cadmium in fresh waters by atomic absorption spectrophotometry. (Second Edition). A general introduction to electrothermal atomization atomic absorption spectrophotometry 1986	0117520039
110.	Determination of very low concentrations of hydrocarbons and halogenated hydrocarbons in water 1984-5	0117520047
111.	Lithium, magnesium, calcium, strontium and barium in waters and sewage effluents by atomic absorption spectrophotometry 1987	0117520160
112.	Temperature measurement for natural, waste and potable waters and other items of interest in the water and sewage disposal industry 1986	0117520179
113.	The determination of six polynuclear aromatic hydrocarbons in waters (with notes on the determination of other PAHs) 1985	0117520322
114.	Examining biological filters, toxicity to aerobic bacteria, effect of SRT and temperature 1985-6	0117520373
115.	Determination of acrylamide monomer in waters and polymers 1987	011752039X
116.	Acid soluble aluminium in marine, raw and potable waters (Second Edition) 1987	0117520403
117.	Determination of diquat and paraquat in river and drinking waters. (Tentive Spectrophotometric Methods) 1987	0117520756
118.	The determination of oils and fats in waste water by filtration, solvent extraction and gravimetry 1987	0117520764
119.	The determination of colour of waters and waste waters. A supplement, 1988	0117520837
120.	The determination of pH in low ionic strength waters 1988	0117520845
121.	Methods for sampling fish populations in shallow rivers and streams 1983	0117520853
122.	The determination of twelve trace metals in marine and other waters by voltammetry or AAS 1987	0117520861

123.	Antimony, arsenic, beryllium, chromium, cobalt, copper, gallium, germanium, indium, nickel, selenium, silver, thallium, vanadium, and zinc by electrothermal AAS 1988	0117520950
124.	The determination of microgram and sub-microgram amounts of individual phenols in river and potable waters 1988	0117520993
125.	The determination of methane and other hydrocarbon gases in water 1988	0117521280
126.	Kjeldahl nitrogen in waters 1987	0117521299
127.	The determination of carbamates, thiocarbamates, related compounds and ureas in water 1987	0117521515
128.	Analysis of hydrocarbons in waters - A review, and An ultra-violet fluorescence spectrometric method 1988	0117521701
129.	The assessment of biodegradability in anaerobic digesting sludge 1988	0117521914
130.	5 Day biochemical oxygen demand (BOD ₅) Second Edition 1988 (with amendments to dissolved oxygen in waters).	0117522120
131.	Cyanide in waters etc 1988 (updated by bluebook 214)	0117522198
132.	Determination of radioactivity in water by multinuclide gamma ray spectrometry 1989	0117522201
133.	The tentative identification of volatilizable organic compounds by linear temperature programmed gas chromatographic R _f indices, with notes on other methods for identifying organic substances 1988	0117522228
134.	Titrimetric determination of total and bicarbonate alkalinity and volatile fatty acids in sewage sludge 1980/89	0117522252
135.	The determination of formaldehyde, other volatile aldehydes, ketones and alcohols in water 1988	011752235X
136.	Sulphate in waters, effluents and solids 1988 (Second Edition)	0117522406
137.	Discrete and air segmented automated methods of analysis including robots An essay review (Second Edition) 1988	0117522546
138.	Isolation and identification of <i>Giardia</i> cysts, <i>Cryptosporidium</i> oocysts and free-living pathogenic amoebae in water etc 1989	0117522821

139.	The enumeration of algae, estimation of cell volume, and use in bioassays 1990	0117523070
140.	The determination of anions and cations, transition metals, other complex ions and organic acids and bases in water by chromatography 1990	0117523313
141.	Flow injection analysis An essay review and analytical methods 1990	0117523399
142.	The determination of organic, inorganic, total and specific tin compounds in water, sediments and biota 1992	0117523607
143.	General principles of sampling water and associated materials (Second Edition) 1996; Estimation of flow and load 1996	011752364X
144.	Use of plants to monitor heavy metals in freshwaters 1991	0117523712
145.	Information on concentration and determination procedures in atomic spectrophotometry 1992	0117523755
146.	Determination of synthetic pyrethroid insecticides in water by gas-liquid chromatography 1992	0117523763
147.	Phosphorus and silicon in waters, effluents and sludges 1992	0117523771
148.	Determination of the adsorption characteristics of organic test substances in sewage treatment processes (Tentative Method) 1992	0117524166
149.	Determination of the pH value of sludge, soil, mud and sediment and the lime requirement of soil (Second Edition) 1992	0117524174
150.	Index of methods for the examination of waters and associated materials 1976 - 1992 (replaced by bluebook 217)	011752669X
151.	Chlorophenylid, flucofuron and sulcofuron in waters (Tentative Methods) 1993	0117527122
152.	Linear alkylbenzene sulphonates (LAS) and alkylphenol ethoxylates (APE) in waters, waste waters and sludges by high performance liquid chromatography 1993	0117527149

153.	A review and methods for the use of epilithic diatoms for detecting and monitoring changes in river water quality 1993	0117527718
154.	Determination of microcystin-LR in drinking waters by HPLC 1994	0117529273
155.	Phenylurea herbicides (urons), dinocap, dinoseb, benomyl, carbendazim and metamitron in waters 1994	0117529281
156.	The determination of taste and odour in potable waters 1994 (see bluebooks 41, 171, 196, 197 and 233)	0117529672
157.	The instrumental determination of total organic carbon and related determinands 1995	0117529796
158.	Determination of aldicarb and other N-methyl carbamates in waters 1994	0117529923
159.	The Microbiology of Water 1994 - Part 1 - Drinking Water	0117530107
160.	Methods for the isolation and identification of human enteric viruses from waters and associated materials 1995	0117531391
161.	Method for isolation and identification of <i>Escherichia coli</i> O157:H7 1996	0117532290
162.	An evaluation of presence-absence tests for coliform organisms and <i>Escherichia coli</i> 1996	0117532436
163.	Inductively coupled plasma spectrometry 1996	0117532444
164.	Determination of long alkyl chain quaternary ammonium compounds in environmental matrices by high performance liquid chromatography 1996	0117532614
165.	The determination of polynuclear aromatic hydrocarbons in waters (additional methods) 1997	
166.	The determination of acidic herbicides, bromoxynil, ioxynil and pentachlorophenol in waters 1997	
167.	The determination of bromate, chlorate and chlorite in waters by ion chromatography 1997	
168.	The determination of microcystin algal toxins in raw and treated waters by high performance liquid chromatography 1998	
169.	Evaluation trials for two media for the simultaneous detection and enumeration of <i>Escherichia coli</i> and coliform organisms 1998	

170. The determination of volatile organic compounds in waters and complex matrices by purge and trap or by headspace techniques 1998
171. The assessment of taste, odour and related aesthetic problems in drinking waters 1998 (see bluebooks 41, 156, 196, 197 and 233)
172. Isolation and identification of *Cryptosporidium* oocysts and *Giardia* cysts in waters 1999 (replaced by bluebook 224)
173. The determination of tritium (tritiated water) activity concentration by alkaline distillation and liquid scintillation counting 1999
174. The determination of organochlorine pesticides and polychlorinated biphenyls in waters and complex matrices (2000)
175. The Microbiology of Recreational and Environmental Waters (2000)
176. The Microbiology of Drinking Water (2002) - Part 1 - Water quality and public health
177. The Microbiology of Drinking Water (2002) - Part 2 - Practices and procedures for sampling (replaced by bluebook 232)
178. The Microbiology of Drinking Water (2002) - Part 3 - Practices and procedures for laboratories
179. The Microbiology of Drinking Water (2002) -Part 4 - Methods for the isolation and enumeration of coliform bacteria and *Escherichia coli* (including *E. coli* O157:H7) (replaced by bluebook 223)
180. The Microbiology of Drinking Water (2002) - Part 5 - Isolation and enumeration of enterococci by membrane filtration (see bluebooks 202 and 229)
181. The Microbiology of Drinking Water (2002) - Part 6 - Methods for the isolation and enumeration of sulphite-reducing clostridia and *Clostridium perfringens* by membrane filtration (replaced by bluebook 192)
182. The Microbiology of Drinking Water (2002) -Part 7 - The enumeration of heterotrophic bacteria by pour and spread plate techniques (replaced by bluebook 212)
183. The Microbiology of Drinking Water (2002) - Part 8 - Methods for the isolation and enumeration of *Aeromonas* and *Pseudomonas aeruginosa* by membrane filtration (replaced by bluebook 231)
184. The Microbiology of Drinking Water (2002) - Part 9 - Methods for the isolation and enumeration of *Salmonella* and *Shigella* by selective enrichment, membrane filtration and multiple tube most probable number techniques (replaced by bluebook 194)
185. The Microbiology of Drinking Water (2002) - Part 10 - Methods for the isolation of *Yersinia*, *Vibrio* and *Campylobacter* by selective enrichment

186. The determination of polycyclic aromatic hydrocarbons in soil by dichloromethane extraction using gas chromatography with mass spectrometric detection (2003)
187. The determination of polychlorinated biphenyls by gas chromatography using mass spectrometric detection (2003)
188. The Microbiology of Sewage Sludge (2003) - Part 1 - An overview of the treatment and use in agriculture of sewage sludge in relation to its impact on the environment and public health
189. The Microbiology of Sewage Sludge (2003) - Part 2 - Practices and procedures for sampling and sample preparation
190. The Microbiology of Sewage Sludge (2003) - Part 3 - Methods for the isolation and enumeration of *Escherichia coli*, including verocytotoxigenic *Escherichia coli*
191. The Microbiology of Sewage Sludge (2003) - Part 4 - Methods for the detection, isolation and enumeration of *Salmonellae* (replaced by bluebook 195)
192. The Microbiology of Drinking Water (2004) - Part 6 - Methods for the isolation and enumeration of sulphite-reducing clostridia and *Clostridium perfringens* by membrane filtration (replaces bluebook 181 but replaced by bluebook 213)
193. A guide to practices, procedures and methodologies following oil spill contamination incidents (2004)
194. The Microbiology of Drinking Water (2004) - Part 9 - Methods for the isolation and enumeration of *Salmonella* and *Shigella* by selective enrichment, membrane filtration and multiple tube most probable number techniques (replaces bluebook 184, but replaced by bluebook 206)
195. The Microbiology of Sewage Sludge (2004) - Part 4 - Methods for the detection, isolation and enumeration of *Salmonellae* (replaces bluebook 191)
196. The Microbiology of Drinking Water (2004) - Part 11 - Taste, odour and related aesthetic problems (see bluebooks 41, 156, 171, 197 and 233)
197. The Microbiology of Drinking Water (2004) - Part 12 - Methods for the isolation and enumeration of micro-organisms associated with taste, odour and related aesthetic problems (see bluebooks 41, 156, 171, 196 and 233)
198. Guidance on the measurement of tritium in environmental samples (2005)
199. The assessment of aerobic biodegradability by measurement of dissolved and/or gaseous inorganic carbon in sealed vessels (2005)
200. The determination of *Legionella* bacteria in water and other environmental samples (2005) - Part 1 - Rationale of surveying and sampling

201. The preparation and pre-treatment of potentially contaminated soils prior to chemical analysis (2006)
202. The Microbiology of Drinking Water (2006) - Part 5 - The isolation and enumeration of enterococci by membrane filtration (replaced by bluebook 229)
203. The direct toxicity assessment of aqueous environmental samples using the oyster (*Crassostrea gigas*) embryo-larval development test (2006) (replaced by bluebook 209)
204. The determination of metals in solid environmental samples (2006)
205. The direct toxicity assessment of aqueous environmental samples using the marine copepod *Tisbe battagliai* lethality test (2006) (replaced by bluebook 210)
206. The Microbiology of Drinking Water (2006) - Part 9 - Methods for the isolation and enumeration of *Salmonella* and *Shigella* by selective enrichment, membrane filtration and multiple tube-most probable number techniques (replaces bluebook 194)
207. Determination of the inhibitory effect of chemicals, industrial and other waste waters on nitrification by *Nitrosomonas* bacteria (2006)
208. The direct toxicity assessment of aqueous environmental samples using the juvenile *Daphnia magna* immobilisation test (2007)
209. The direct toxicity assessment of aqueous environmental samples using the oyster (*Crassostrea gigas*) embryo-larval development test (2007) (replaces bluebook 203)
210. The direct toxicity assessment of aqueous environmental samples using the marine copepod *Tisbe battagliai* lethality test (2007) (replaces bluebook 205)
211. The Microbiology of Drinking Water (2007) - Part 13 - The isolation and enumeration of aerobic spore-forming bacteria by membrane filtration
212. The Microbiology of Drinking Water (2007) - Part 7 - Methods for the enumeration of heterotrophic bacteria (replaces bluebook 182)
213. Microbiology of Drinking Water (2007) - Part 6 - Methods for the isolation and enumeration of sulphite-reducing clostridia and *Clostridium perfringens* by membrane filtration (replaces bluebook 192) (replaced by bluebook 222, and subsequently by bluebook 230)
214. The determination of cyanide in waters and associated materials (2007) (updates bluebook 131) (See also bluebook 235)
215. The determination of chemical oxygen demand in waters and effluents (2007) (revises bluebook 97)
216. An inter-laboratory trial on chemical oxygen demand determinations (2007)

217. Index of Methods for the examination of waters and associated materials 1976 - 2008 (replaces bluebook 150) (replaced by bluebook 236)
218. Chemical disinfecting agents in waters and effluents (2008) (updates bluebook 27)
219. The direct toxicity assessment of aqueous environmental samples using the *Pseudokirchneriella subcapitata* freshwater algal growth inhibition test (2008)
220. The determination of steroid oestrogens in waters using chromatography and mass spectrometry (2008)
221. The direct toxicity assessment of aqueous environmental samples using the *Skeletonema costatum* marine water algal growth inhibition test (2008) (replaced by bluebook 225)
222. The Microbiology of Drinking Water (2009) - Part 6 - Methods for the isolation and enumeration of sulphite-reducing clostridia and *Clostridium perfringens* by membrane filtration (replaces bluebook 213 but replaced by bluebook 230)
223. The Microbiology of Drinking Water (2009) - Part 4 - Methods for the isolation and enumeration of coliform bacteria and *Escherichia coli* (including *E. coli* O157:H7) (replaces bluebook 179)
224. The Microbiology of Drinking Water (2009) - Part 14 - Methods for the isolation, identification and enumeration of *Cryptosporidium* oocysts and *Giardia* cysts (replaces bluebook 172 and replaced by bluebook 234)
225. The direct toxicity assessment of aqueous environmental samples using the *Skeletonema costatum* marine water algal growth inhibition test (2009) (replaces bluebook 221)
226. The determination of metaldehyde in waters using chromatography with mass spectrometric detection (2009)
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230. The Microbiology of Drinking Water (2010) - Part 6 - Methods for the isolation and enumeration of sulphite-reducing clostridia and *Clostridium perfringens* by membrane filtration (replaces bluebook 222)

231. The Microbiology of Drinking Water (2010) - Part 8 - Methods for the isolation and enumeration of *Aeromonas* and *Pseudomonas aeruginosa* by membrane filtration (replaces bluebook 183)
232. The Microbiology of Drinking Water (2010) - Part 2 - Practices and procedures for sampling (replaces bluebook 177)
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234. The Microbiology of Drinking Water (2010) - Part 14 - Methods for the isolation, identification and enumeration of *Cryptosporidium* oocysts and *Giardia* cysts (replaces bluebook 224)
235. The determination of cyanide and thiocyanate in soils and similar matrices (2011) (See also bluebook 214)
236. Index of Methods for the Examination of Waters and Associated Materials 1976 - 2011 (replaces bluebook 217)

February 2011

STANDING COMMITTEE OF ANALYSTS

Methods for the Examination of Waters and Associated Materials

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