

WFD Determinand Data Sheet

ALS Environmental can provide an extensive range of testing for a variety of Water Framework Directive (WFD) compounds. Many of the substances present on the WFD priority hazardous substances list and the Watch list have been included in the suite of analysis for the Chemical Investigations Programme 2 (CIP2). Several new methods have been developed specifically for this programme and have been validated in accordance to the guidance present in NS30 and to the requirements of ISO17025. The requirements of the CIP2 presented a challenge in terms of the LoD's and performance data needed to ensure that ALS could provide the best quality data possible. By investing in state of the art instrumentation, ALS Environmental has achieved full sign off from the CIP2 technical working group to analyse for these determinands in a range of water matrices.

The CIP2 parameters are mostly a subset of the WFD Priority Substances list, with some emerging substances having been included from the WFD Watch List as well. Other contaminants of interest have also been included in these methods.

For more information on these determinands, or to see how ALS could assist with your large scale project, please contact your Customer Service Co-ordinator.

CAS No.	Determinand	Analytical Technique	Minimum Reporting Limit (MRL) for clean matrices	% Spike Recovery in Treated Sewage Effluent
Metals				
7439-97-6	Mercury (dissolved)	Atomic Fluorescence	0.001 µg/l	98.78%
7439-97-6	Mercury (total)	Atomic Fluorescence	0.001 µg/l	99.35%
7440-02-0	Nickel (dissolved)	ICP-MS	0.5 µg/l	91.09%
7440-02-0	Nickel (total)	ICP-MS	0.5 µg/l	90.26%
7439-92-1	Lead (dissolved)	ICP-MS	0.2 µg/l	99.78%
7439-92-1	Lead (total)	ICP-MS	0.2 µg/l	99.84%
7440-50-8	Copper (dissolved)	ICP-MS	0.3 µg/l	92.49%
7440-50-8	Copper (total)	ICP-MS	0.3 µg/l	92.21%
7440-66-6	Zinc (dissolved)	ICP-MS	0.8 µg/l	99.69%
7440-66-6	Zinc (total)	ICP-MS	0.8 µg/l	91.55%
7440-43-9	Cadmium (dissolved)	ICP-MS	0.02 µg/l	96.06%
7440-43-9	Cadmium (total)	ICP-MS	0.02 µg/l	96.01%
7439-89-6	Iron (dissolved)	ICP-MS	25 µg/l	94.30%
7439-89-6	Iron (total)	ICP-MS	25 µg/l	93.62%
7429-90-5	Aluminium (dissolved)	ICP-MS	25 µg/l	96.62%
7429-90-5	Aluminium (total)	ICP-MS	25 µg/l	95.54%
7440-47-3	Chromium (dissolved)	ICP-MS	0.5 µg/l	94.10%
7440-47-3	Chromium (total)	ICP-MS	0.5 µg/l	93.91%
7429-90-5	Aluminium (reactive)	Colorimetric	4 µg/l	N/A

CAS No.	Determinand	Analytical Technique	Minimum Reporting Limit (MRL) for clean matrices	% Spike Recovery in Treated Sewage Effluent
WFD Priority Substances & Specific Pollutants				
117-81-7	Diethylhexyl-phthalate	LC-MS	0.2 µg/l	102.92%
1763-23-1	Perfluorooctane sulfonic acid	LC-MS	0.00009 µg/l	96.89%
335-67-1	Perfluorooctanoic acid	LC-MS	0.00009 µg/l	94.76%
3380-34-5	Triclosan	LC-MS	0.014 µg/l	99.96%
41318-75-6	Polybrominated Ether 28	Diphenyl GC-MSMS	0.00005 µg/l	101.04%
5436-43-1	Polybrominated Ether 47	Diphenyl GC-MSMS	0.00005 µg/l	101.17%
60348-60-9	Polybrominated Ether 99	Diphenyl GC-MSMS	0.00005 µg/l	99.37%
189084-64-8	Polybrominated Ether 100	Diphenyl GC-MSMS	0.00005 µg/l	100.01%
68631-49-2	Polybrominated Ether 153	Diphenyl GC-MSMS	0.00005 µg/l	96.44%
207122-15-4	Polybrominated Ether 154	Diphenyl GC-MSMS	0.00005 µg/l	97.24%
3194-55-6	Hexabromocyclododecane	LC-MS	0.001 µg/l	98.79%
36643-28-4	Tributyltin	GC-MSMS	0.0001 µg/l	97.51%
206-44-0	Fluoranthene	GC-MSMS	0.0005µg/l	100.22%
50-32-8	Benzo (a) Pyrene	GC-MSMS	0.0017 µg/l	102.08%
3380-34-5	Triclosan	GC-MSMS	0.014 µg/l	99.96%
52315-07-8	Cypermethrin	GC-MSMS	0.00001 µg/l	98.25%
25154-52-3	Nonylphenol & NP Ethoxylates	GC-MSMS	0.04 µg/l	103.41%
1806-26-4	Octylphenol	GC-MSMS	0.01 µg/l	105.61%
WFD Watch List & Emerging Substances				
53-16-7	Oestrone (E1)	GC-MSMS	0.001 µg/l	98.14%
50-28-2	17β Oestradiol (E2)	GC-MSMS	0.0003 µg/l	96.51%
57-63-6	17α Ethinyloestradiol (EE2)	GC-MSMS	0.00003 µg/l	100.31%
15687-27-1	Ibuprofen	GC-MSMS	0.005 µg/l	95.83%
10540-29-1	Tamoxifen	GC-MSMS	0.005 µg/l	99.78%
25155-23-1	Trixylenyl phosphate (2,5 TxP isomer)	GC-MSMS	0.005 µg/l	101.09%
15307-86-5	Diclofenac	LC-MS	0.002 µg/l	100.81%
134523-00-5	Atorvastatin	LC-MS	0.001 µg/l	95.16%
214217-86-4	ortho-Hydroxy Atorvastatin	LC-MS	0.002 µg/l	96.60%
163217-70-7	para-Hydroxy Atorvastatin	LC-MS	0.002 µg/l	100.66%
525-66-6	Propranolol	LC-MS	0.0002 µg/l	98.75%
29122-68-7	Atenolol	LC-MS	0.001 µg/l	100.78%
114-07-8	Erythromycin	LC-MS	0.01 µg/l	98.23%
992-62-1	Norerythromycin	LC-MS	0.002 µg/l	86.91%
83905-01-5	Azithromycin	LC-MS	0.0002 µg/l	103.09%
81103-11-9	Clarithromycin	LC-MS	0.001 µg/l	98.10%
85721-33-1	Ciprofloxacin	LC-MS	0.002 µg/l	91.76%
657-24-9	Metformin	LC-MS	0.1 µg/l	99.38%
66357-35-5	Ranitidine	LC-MS	0.005 µg/l	93.17%
298-46-4	Carbamazepine	LC-MS	0.001 µg/l	92.68%
36507-30-9	10,11- Epoxycarbamazepine	LC-MS	0.0002 µg/l	98.92%
79559-97-0	Sertraline	LC-MS	0.0002 µg/l	100.57%
87857-41-8	Norsertaline	LC-MS	0.002 µg/l	99.73%
54910-89-3	Fluoxetine	LC-MS	0.0002 µg/l	99.70%
95-14-7	1,2,3 Benzotriazole	LC-MS	0.002 µg/l	100.47%
29385-43-1	Tolyltriazole	LC-MS	0.002 µg/l	102.35%