Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

Envirolab Services Reference: 44679

Methodology

A two litre volume of synthetic solution was prepared in the laboratory from certified standard solutions using ultra high purity water as the base. The analytes added where are described in the table below. Approximately 1200ml of this solution was processed through the filter unit. The first 50ml or so of solution was discarded and the next 7-800mL was collected for analytical testing –this portion of the solution is labeled as the 'AFTER FILTRATION' solution in the tables below. The remaining unfiltered solution was collected for analytical testing and is labeled as the 'BEFORE FILTRATION' in the tables below.

Results

Table 1: Anolyte Concentrations before and after filtration - miscellaneous

Analyte	BEFORE FILTRATION/(mg/L or ppm)	AFTER FILTRATION/(mg/L or ppm)
Fluoride	1.8	0.8
Sodium	74.3	72.2
Potassium	8.65	3.9
Calcium	10.0	2.7
Magnesium	9.84	2.0
Aluminium	0.95	0.007
Iron	0.77	<0.01
Mercury	0.005	<0.0005
Copper	0.087	<0.001
Lead	0.058	<0.001
Zinc	0.089	0.088
Chlorine	1.90	<0.1
Polycyclic Aromatic Hydrocarbons	See table below	See table below
VOCs	See table below	See table below
pH (pH units)	6.20	9.54
Electrical Conductivity (µS/cm)	554	398
Total Dissolved Solids	349	251

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Table 2: Anolyte Concentrations before and after filtration – Volatile Organic Compounds

Analyte	BEFORE FILTRATION/(mg/L or ppm)	AFTER FILTRATION/(mg/L or ppm)
1,1-Dichloroethene	0.041	<0.001
Trans-1,2-Dichloroethene	0.046	<0.001
1,1-Dichloroethane	0.022	<0.001
Cis-1,2-Dichloroethene	0.023	<0.001
Bromochloromethane	0.098	<0.001
Chloroform	0.045	0.004
2,2-Dichloropropane	0.019	<0.001
1,2-Dichloroethane	0.024	<0.001
1,1,1-Trichloroethane	0.017	<0.001
1,1-Dichloropropene	0.017	<0.001
Carbon Tetrachloride	0.016	<0.001
Benzene	0.638	<0.001
Dibromomethane	0.014	<0.001
1,2-Dichloropropane	0.014	<0.001
Trichloroethene	0.012	<0.001
Bromodichloromethane	0.014	<0.001
Trans-1,3-Dichloropropene	0.015	<0.001
Cis-1,3-Dichloropropene	0.015	<0.001
1,1,2-Trichloroethane	0.013	<0.001
1,3-Dichloropropane	0.014	<0.001
Dibromochloromethane	0.013	<0.001
1,2 -Dibromoethane	0.014	<0.001
Tetrachloroethene	0.011	<0.001
1,1,1,2-Tetrachloroethane	0.013	<0.001
Chlorobenzene	0.016	<0.001
Ethyl benzene	0.015	<0.001
Bromoform	0.016	<0.001
m,p-Xylene	0.030	<0.001

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Table 3: Anolyte Concentrations before and after filtration – Polycyclic Aromatic Hydrocarbons

Analyte	BEFORE FILTRATION/(mg/L or ppm)	AFTER FILTRATION/(mg/L or ppm)
Naphthalene	0.017	<0.001
Acenaphene	0.004	<0.001
Fluorene	0.005	<0.001
Phenanthrene	0.005	<0.001
Anthracene	0.001	<0.001
Fluoranthene	0.005	<0.001
Pyrene	0.003	<0.001
Benz(a)anthracene	0.004	<0.001
Chrysene	0.004	<0.001
Benzo(b,k)fluoranthene	0.014	<0.002
Benzo(a)pyrene	0.002	<0.001
Indeno (1,2,3 – cd) pyrene	0.007	<0.001
Dibenzo (a,h) anthracene	0.007	<0.001
Benzo (g,h,i) perylene	0.006	<0.001

Comments

- Removal of Organics is effective (note different standard mix used to previous)
- The initial pH is was adjusted up with
- The volatile organics reported are indicative as these analytes are volatile and degassing mat have occurred during the process
- please note the analyses here are not covered by NATA accreditation

Gr

Reported by: Simon Mills

Date:19/08/2010

Authorised by: David Springer

Date:19/08/2010