

Schedule

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Certificate No. : LA-2013-0546-F
Issue No. : 2
Date : 23 September 2014
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FIELD OF TESTING : Environmental Testing

MATERIALS/ PRODUCTS TESTED	TESTS/ PROPERTIES		STANDARD METHODS/ TECHNIQUES EQUIPMENT
			APHA Methods are based on 22nd Edition: 2012
A. Water Analysis 1. Potable water 2. Non-potable water 3. Sewage, effluents and trade wastes 4. Water for industrial purposes 5. Swimming pool water 6. Ground water 7. RO water 8. Sea water	1	Acidity	APHA 2310 B
	2	Alkalinity (as CaCO ₃)/Bicarbonate/Carbonate	APHA 2320 B
	3	Aluminium (Al)	APHA 3120 B
	4	Ammonia (NH ₃)	APHA 4500-NH ₃ F
	5	Antimony (Sb)	APHA 3120 B
	6	Arsenic (As)	APHA 3120 B
	7	Barium (Ba)	APHA 3120 B
	8	Beryllium (Be)	APHA 3120 B
	9	Biochemical Oxygen Demand (BOD)	APHA 5210 B
	10	Boron (B)	APHA 3120 B
	11	Cadmium (Cd)	APHA 3120 B
	12	Calcium (Ca)	APHA 3120 B
	13	Chemical Oxygen Demand (COD)	Hach 8000
	14	Chloride (Cl ⁻)	APHA 4110 B
	15	Chlorine (Total Residual)	Hach 8167
	16	Chlorine (Free)	Hach 8021
	17	Chromium (Cr)	APHA 3120 B
	18	Cobalt (Co)	APHA 3120 B
	19	Colour	Hach 8025

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	20	Conductivity	APHA 2510 B
	21	Copper (Cu)	APHA 3120 B
	22	Cyanide (CN-)	Hach 8027
	23	Detergents (Linear alkylate sulphonate as methylene blue active substances)	APHA 5540 C
	24	Dissolved Oxygen	APHA 4500-O, Dissolved Oxygen Meter
	25	Fluoride (F-)	APHA 4110 B
	26	Hardness	APHA 2340 C
	27	Iron (Fe)	APHA 3120 B
	28	Lead (Pb)	APHA 3120 B
	29	Lithium (Li)	APHA 3120 B
	30	Magnesium (Mg)	APHA 3120 B
	31	Manganese (Mn)	APHA 3120 B
	32	Mercury (Hg)	APHA 3120 B
	33	Molybdenum (Mo)	APHA 3120 B
	34	Nickel (Ni)	APHA 3120 B
	35	Nitrate (NO ₃ -)	APHA 4110B
	36	Nitrite (NO ₂ -)	APHA 4110B
37	Oil & Grease (Total)	APHA 5520 G	
A. Water Analysis	38	Oil & Grease (Hydrocarbon)	APHA 5520 F
	39	pH	APHA 4500-H B
	40	Phenolic Compounds (as Phenol)	Hach 8047
	41	Phosphate (PO ₄ ³⁻)	APHA 4110B
	42	Potassium (K)	APHA 3120 B
	43	Salinity	APHA 2520 B
	44	Selenium (Se)	APHA 3120 B
	45	Silver (Ag)	APHA 3120 B
	46	Sodium (Na)	APHA 3120 B

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7. RO water 8. Sea water	47	Total Solid	APHA 2540 B
	48	Total Dissolved Solid	APHA 2540 C
	49	Total Suspended Solid	APHA 2540 D
	50	Strontium (Sr)	APHA 3120 B
	51	Sulphate (SO ₄ ²⁻)	APHA 4110B
	52	Sulphide (S ₂ ⁻)	APHA 4500-S ₂ - F/Hach 8131
	53	Temperature	APHA 2550 B
	54	Tin (Sn)	APHA 3120 B
	55	Total Organic Carbon (TOC)	APHA 5310 B
	56	Turbidity	HACH 8195
	57	Vanadium (V)	APHA 3120 B
60	Zinc (Zn)	APHA 3120 B	
B. Environmental Samples (Water, Soil, Sediment Sludge)	1	Toxicity Characteristic Leaching Procedure As, Ag, Ba, Cr, Cd, Cu, CN, Fe, F, Hg, Mn, Ni, Pb, Se, Zn and Phenolic Compounds (as Phenol)	USEPA 1311: 1992 (exclude ZHE: Zero Headspace Extraction)
	2	Heavy Metals (As, Al, Ag, B, Be, Ba, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Se, Sn, Sr, V, Zn and Hg)	Digestion by: USEPA 3051 A: 2007
	3	Volatile Organic Compounds by GC/MS	USEPA 8260 C: 2006 Refer to Appendix 1 for the list of volatile organic compounds
	4	Semivolatile Organic Compounds by GC/MS	USEPA 8270 D: 2007 Refer to Appendix 2 for the list of semivolatile organic compounds
C. Mixing water for concrete	Suitability of Water		BS EN 1008: 2002
	1	Oil and Fats	
	2	Detergents	
	3	Colour	
	4	Suspended Matter	
	5	Odour	

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	6	Acids	BS EN 1008: 2002
	7	Humic Matter	
	8	Chloride Content	
	9	Sulphate Content	
	10	Alkali Content	
D. Non-metallic Products for Use in Contact with Water, and Glass Reinforced Polyester Sectional Water Tanks for PUB Potable Water	Effects on Water		SS 375: 2001
	1	Odour	
	2	Appearance	
	3	Extraction of Metals	

Approved Signatories

Mr Lu Jin Ping

) All accredited tests

Note :

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005. A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid test results. The **management system requirements** in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 **Quality Management Systems — Requirements** and are aligned with its pertinent requirements.