

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 7742 Accredited to ISO/IEC 17025:2017	Dŵr Cymru Cyfyngedig Issue No: 035 Issue date: 03 March 2022	
	Dŵr Cymru Welsh Water Glaslyn Laboratory Glaslyn Cleppa Park Newport NP10 8UG	Contact: Amanda Rogers Tel: +44 (0)1633 373008 Fax: +44 (0)1633 810398 E-Mail: amanda.rogers@dwrwymru.com Website: www.dwrwymru.com

Testing performed by the Organisation at the locations specified below

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details		Activity	Location code
Address Bretton Laboratory Lester Lane Chester CH4 0DA	Local contact Paul Woodbridge Tel: +44 (0)1633 373007 Fax: +44 (0)1633 810398 Email: paul.woodbridge@dwrwymru.com	<u>Testing:</u> Microbiological	B
Address Glaslyn Laboratory Glaslyn Cleppa Park Newport NP10 8UG	Local contact Paul Woodbridge Tel: +44 (0)1633 373007 Fax: +44 (0)1633 810398 Email: paul.woodbridge@dwrwymru.com	<u>Testing:</u> Microbiological Chemical	G



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Sampling depots:

Location details	Activity	Location code
<p>North</p> <p>Dinas Depot Llannwnda Caernarfon LL54 5UD</p> <p>Local contact Sean Dunne Tel: +44 (0)1633 373033</p>	<p><u>Sampling</u> Sampling of water and wastewater for subsequent chemical and microbiological testing</p> <p><u>Testing</u> Physical and Chemical</p>	SAMP
<p>North</p> <p>Kinmel Park Royal Welch Avenue Bodelwyddan LL18 5TQ</p> <p>Local contact Sean Dunne Tel: +44 (0)1633 373033</p>	<p><u>Sampling</u> Sampling of water and wastewater for subsequent chemical and microbiological testing</p> <p><u>Testing</u> Physical and Chemical</p>	SAMP
<p>South</p> <p>Glaslyn Cleppa Park Newport NP10 9UG</p> <p>Local contact Sean Dunne Tel: +44 (0)1633 373033</p>	<p><u>Sampling</u> Sampling of water and wastewater for subsequent chemical and microbiological testing</p> <p><u>Testing</u> Physical and Chemical</p>	SAMP
<p>West</p> <p>Players Ind Estate Clydach Road Clydach SA6 5BQ</p> <p>Local contact Sean Dunne Tel: +44 (0)1633 373033</p>	<p><u>Sampling</u> Sampling of water and wastewater for subsequent chemical and microbiological testing</p> <p><u>Testing</u> Physical and Chemical</p>	SAMP



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DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
WATERS: Potable, Raw (Surface and Ground) Waters	<u>Testing for the purpose of enforcement of the Water Supply (Water Quality) Regulations 2018 (Wales) The Private Water Supplies (Wales) Regulations 2017 & Private Water Supplies (England) 2016 (As amended)</u> <u>The testing is in accordance with the Drinking Water Testing Specification (DWTS)</u> <u>Microbiological Testing</u> Enumeration of:	Documented In-House Methods based on Standing Committee of Analysts Methods for the Examination of Waters and Associated Materials	
	Coliforms, presumptive and confirmed and Escherichia coli confirmed	LPM001 and LPM002 based on "The Microbiology of Drinking Water" Part 4 (2016) using membrane filtration (MLGA) (standard and large volume analysis)	B, G
	Clostridium perfringens, presumptive and confirmed	LPM001 and LPM004 based on "The Microbiology of Drinking Water" Part 6 (2015) using membrane filtration (standard and large volume analysis), confirmation using acid phosphatase	B, G
	Enterococci, presumptive and confirmed	LPM001 and LPM003 based on "The Microbiology of Drinking Water" Part 5 (2012) using membrane filtration (standard and large volume analysis)	B, G
Heterotrophic plate counts at 22°C and 37°C	LPM005 based on "The Microbiology of Drinking Water" Part 7 (2020) using pour plate (YEA)	B, G	



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<p>WATERS (cont'd):</p> <p>Potable, Raw (Surface and Ground) Waters (cont'd)</p>	<p><u>Testing for the purpose of enforcement of the Water Supply (Water Quality) Regulations 2018 (Wales) The Private Water Supplies (Wales) Regulations 2017 & Private Water Supplies (England) 2016 (As amended)</u></p> <p><u>The testing is in accordance with the Drinking Water Testing Specification (DWTS) (cont'd)</u></p> <p><u>Microbiological Testing (cont'd)</u></p> <p>Isolation and enumeration of Cryptosporidium oocysts</p>	<p>Documented In-House Methods based on Standing Committee of Analysts Methods for the Examination of Waters and Associated Materials</p> <p>LPM071 based on "The Microbiology of Drinking Water" Part 14 (2010) using filtration, elution and aspiration. Filta max, IMS, confirmation by microscopy</p>	G
<p>Treated surface water, treated ground water, raw surface water and raw ground water</p>	<p>Flow Cytometry Bacterial Viability and Counting (Total cell counts, Intact cell counts, Dead Cell Counts)</p> <p>Confirmation and species Identification:</p>	<p>LPM077 in house method using Attune NxT Flow Cytometer</p>	G
<p>Indicator bacteria isolated from Potable, Raw (Surface and Ground) Waters using LPM methods</p>	<p>Coliforms Enterococci Escherichia coli Clostridium perfringens</p> <p>Enumeration of:</p>	<p>In-house method LPM075, using MALDI-TOF (Matrix Assisted Laser Desorption Ionisation – Time of Flight)</p>	B, G
	<p>Identification and enumeration of Algae</p>	<p>LPM057 in house method using inverted light microscopy and light chambers</p>	G
<p>Swab samples (gel medium transport and cotton swabs)</p>	<p>Detection of:</p> <p>Coliforms, confirmed Escherichia coli, confirmed</p>	<p>LPM030 – in house method using elution into MRD followed by filtration onto selective media. Confirmation using procedures in LPM 002 and LPM003 as relevant</p>	B, G



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	<u>The testing is in accordance with the Drinking Water Testing Specification (DWTS) (cont'd)</u>		
	<u>Chemical Testing</u>		
	Absorbance at 254nm Transmission at 254nm	In-house method LPM 064 by spectrometry	G
	pH	In-house method LPM 032 using manual pH meter	G
	Turbidity	In-house method LPM 033 using manual turbidity meter	G
	Electrical Conductivity	In-house method LPM 034 using manual conductivity meter	G
	pH Conductivity Turbidity	In-house method LPM 043 using automated Skalar	G
	Colour	In-house method LPM 063 using spectrophotometry	G
Chlorophyll A	In-house method LPM 044 using manual spectrophotometry	G	
Alkalinity	In-house method LPM 035 using manual titration	G	



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	Nutrients: Alkalinity Ammonia Chloride Fluoride Nitrite Phosphate Silica as SiO ₂ Sulphate Total Oxidised Nitrogen Nitrate (by calculation) Nitrate/nitrite ratio (by calculation)	In-house method LPM 036 Using discrete photometric analyser	G
	Fluoride	In-house method LPM 037 using ion selective electrode	G
	Bromate Bromide Chlorate Chlorite	In-house method LPM 048 using Dionex IC	G



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	Suspended solids	In-house method LPM 045 using filtration, followed by weight difference to derive concentration	G
	Volatile Organic Compounds: Benzene Bromodichloromethane Bromoform Carbon Tetrachloride Chlorodibromomethane Chloroform 1,2-Dichloroethane Tetrachloroethene Trichloroethene 1,1,1-Trichloroethene Total Tetrachloroethene & Trichloroethene (by calculation) Total THM (by calculation)	In-house method LPM 042 using headspace GC-MS	G
	Polycyclic Aromatic Hydrocarbons (PAHs): Fluoranthene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene Total PAH (by calculation)	In-house method LPM 047 using solid phase extraction and HPLC with fluorescence detection	G



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	Taste and Odour causing contaminants: 2-Methyl isoborneol Geosmin	In-house method LPM 046 using GCMSMS	G
	GCMS qualitative screen for unknown organic compounds (Non DWTS)	In-house method LPM 054 using GC-MS (Non DWTS)	G
Potable Water	Taste and Odour (Qualitative and Quantitative)	In-house method LPM 041 based on SCA Blue Book Method 233 (2014) using testing panel	G
Potable, Raw (Surface and Ground) Waters	Taste and Odour (Qualitative)	In-house methods LPM 056 based on SCA Blue Book Methods 233 Method A1 (2014) using laboratory based single panellist	G



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POTABLE AND RAW WATER (Surface and Ground) sampled from: Water Treatment Works Service Reservoirs (tap sample) Consumer taps Service Reservoirs and Contact Tanks (dip sample) Hydrants Consumer Boundary Box (via standpipe) Water Bowser Sample Taps	<u>Sampling for Chemical and Microbiological Testing of Water</u> Sampling for eventual testing for the purpose of enforcement of the Water Supply (Water Quality) Regulations 2010 (Wales) as amended the sampling and appropriate testing is in accordance with the Drinking Water Testing Specification (DWTS) and includes sampling for Cryptosporidium Swab sampling <u>Chemical Tests at Site</u>	In house procedures as documented in the company sampling procedures manual Water sampling documents prefixed: LSC - Core Skills LSP- Procedures LSF - Forms	SAMP
Free Residual Chlorine Total Chlorine	Free Residual Chlorine Total Chlorine	By Colorimetry, in-house Procedure LPM031	SAMP
WASTE WATER Sampled from: Treated Sewage Effluent from Waste Water Treatment Works Trade effluent to controlled water from Water Treatment Works	<u>Sampling Waste Water</u> Spot Sampling to meet the requirements of the Environment Agency MCERTS (Water) Performance Standard, and the subsequent chemical testing at a laboratory accredited to ISO 17025:2017 and the MCERTS for testing <u>Physical Tests at Site</u> On-site measurement of temperature. Chemical Tests at Site	In house procedures as documented in the company sampling procedures manual Waste water sampling documents prefixed: WSC - Core Skills WSP- Procedures WSF - Forms	SAMP
Water Treatment Works Effluent Only	Free Residual Chlorine Total Chlorine	By Colorimetry, in house Procedure LPM079	
END			



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