Schedule of Accreditation

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Accredited to ISO/IEC 17025:2017

INOVYN ChlorVinyls Ltd

Issue No: 037 **Issue date:** 14 April 2021

INOVYN ChlorVinyls Analytical Group **Runcorn** **Cheshire** **WA7 4JE**	**Contact: No Commercial Enquiries**

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 INOVYN ChlorVinyls Analytical Group Runcorn Cheshire WA7 4JE	**Local contact** Ms Sarah Hall Tel: +44 (0)1928 512004 Fax: +44 (0)1928 568921 Email: sarah.hall@inovyn.com Website: http://www.inovyn.com	**Support Functions:** Quality System Quality Audit Administration Chemical Testing	A

Site activities performed away from the locations listed above:

Location details	Activity	Location code
Runcorn Site Cheshire WA7 4JE	Stack Emissions Testing Ambient Air Testing Waste Water Sampling and Testing	B

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
BODY FLUIDS/TISSUE	Chemical Tests	Documented In-House Methods:	
- Urine	Creatinine	UR/02 using Colorimetry	A
	Mercury	UR/05 using Atomic fluorescence Spectroscopy	A
POLLUTANTS EFFLUENTS: Atmospheric	Chemical Tests	Documented In-House Methods:	
	Chlorohydrocarbons: Vinyl Chloride Vinylidene Cloride Dichloromethane Chloroform 1,2-Dichloroethane Carbon Tetrachloride Trichloroethene Tetrachloroethene	VEN/07, VEN/13 using ATD-GC-FID	A, B
	Halogenated and fluorinated hydrocarbons: Hexachlorobutadiene Trichloroethene Vinyl Chloride Dichloromethan Chloroform 1,2-Dichloroethane Carbon Tetrachloride Tetrachloroethene	ENV/04 using ATD coupled with GC/MS	A, B
	Dust (mass on filter)	VEN/20 using Gravimetric Analysis	A
	Particulates	ENV/01 using Gravimetric Analysis based on BS EN 13284 (isokinetic)	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
POLLUTANTS EFFLUENTS: Atmospheric (cont'd)	Chemical Tests (cont'd)	Documented In-House Methods:	
	Particulates phase metals: Arsenic Cadmium Chromium Copper Iron Nickel Lead Platinum Vanadium Zinc	VEN/21 using ICP-OES	A
	Mercury	VEN/18 using Atomic Fluorescence Spectroscopy	A, B
	Hydrogen Fluoride, Hydrogen Chloride, Hydrogen Bromide, Hydrogen Sulphate	VEN/09 using Ion Chromatography	A
	Sulphur Trioxide	VEN/23 using titrimetric analysis	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
POLLUTANTS EFFLUENTS: Vent gases	<u>Chemical Tests (cont'd)</u>	Documented In-House Methods:	
	Mercury	VEN/30 using cold vapour atomic absorption	A
	Chlorine	VEN/28 using ion chromatography	A
	Organic Components in Vents: Vinyl Chloride Vinylidene Chloride Methylene Chloride Trans-Dichloroethene Cis-Dichlorothene 1,1 Dichloroethane Chloroform Carbon Tetrachloride Ethylene Dichloride B-Trichlorothethane Perchloroethane Bromochloroethane A-Tetrachloroethane S-Tetrachloroethane Pentachloroethane Hexachloroethane Methane Dimethyl Ether Methyl Chloride Dimethoxymethane	SPL/01 using GC-FID	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
POLLUTANTS EFFLUENTS: Vent Gases (cont'd)	<u>Chemical Tests (cont'd)</u> Vinyl Chloride Ethylene Ethyl Chloride Vinylidene Chloride Dichloromethane Trans – dichlorothene Cis – Dichloroethene 1,1 – Dichloroethane Chloroform Carbon Tetrachloride Ethylene dichloride B-Trichloroethane Trichloroethene Perchloroethene Bromochloroethane A-Tetrachloroethane S-Tetrachloroethane Pentachloroethane Oxygen Carbon Dioxide Carbon Monoxide	Documented In-House Methods: DSP\57 using Gas Chromatography with FID and TCD	A
Organics and Solvents Plant Lab Vent Gas	Oxygen Ethylene Carbon Monoxide Carbon Dioxide	SPL/50 using GC-TCD	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
POLLUTANTS AND EFFLUENTS: Liquid	Chemical Tests	Documented In-House Methods:	
WATERS	Alkalinity and pH	AE/04a using Autotitration	A
	Chlorine (available)	AE/11 using Titrimetric Analysis	A
	Arsenic, Boron, Cadmium, Chromium, Copper, Lead, Nickel, Zinc	AE/41 using ICP-OES	A
	Mercury	AE/10 using Atomic Fluorescence Spectroscopy	A
	Hexachlorobenzene (HCB)	ENV/03 using GC/MS	A
	Sulphide	AE/15a using Titrimetric Technique	A
	Suspended Solids	AE/06 using Gravimetric Technique	A
	Total Organic Carbon by Calculation	AE/42 using Catalytic oxidation with infra-red detection	A
Trade Effluent	Halocarbons (high range): Methylene Chloride Chloroform Carbon Tetrachloride 1,2-Dichloroethane Trichloroethylene 1,1,2 Trichloroethane Tetrachloroethylene	AE/13 using GC-FID and GC-MS	A
Surface Water	Halocarbons (low range): Methylene Chloride Chloroform Carbon Tetrachloride 1,2-Dichloroethane Trichloroethylene 1,1,2 Trichloroethane Tetrachloroethylene 1,3,5 Trichlorobenzene 1,2,4 Trichlorobenzene 1,2,3 Trichlorobenzene Hexachlorobutadiene	AE/13 using GC-FID and GC-MS	
Effluent	Sodium chlorate	AE/43 by Ion Chromatography	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
AQUEOUS EFFLUENTS, WATERS Industrial, Commercial and Domestic Outfalls, Lagoons, Canals, Rivers	Physical Tests	Documented In-House Method:	
	Temperature measurements	AE/25 using a calibrated mercury-in-glass thermometer	B
	Chemical Tests		
	pH	AE/04a using autotitration	A
	Conductivity	ENV/16 using conductivity meter	A, B
	Bisulphite	AE/54 titration	A
Brine, Waste and Surface Waters	Free Chlorine	AE/57 using Colorimetry	A
POLLUTANTS AND EFFLUENTS Atmospheric Gas	Sampling	Documented In-House Methods:	
	Chlorohydrocarbons	VEN/13	B
	Sampling and Analysis		
	NO_x, SO_2, CO and O_2	VEN/05 using electrochemical cells	B
	Mercury	ENV/09 using portable UV detector	B
Testing of Stack Emissions to Atmosphere	Sampling with subsequent analysis by an ISO/IEC 17025 Accredited Laboratory	National, International and other recognised standards using documented In-House work instructions to meet the requirements of DD CEN/TS 15675:2007	
	Total Particulate Matter	ENV/01 based on procedural requirements of BS EN 13284:2017	B
	Particulates phase heavy metals: As, Cd, Cr, Cu, Fe, Hg, Ni, Pb, Pt, V, Zn	VEN/21 based on procedural requirements of BS EN 13284:2017	B
	Heavy Metals	VEN/31 based on procedural requirements of BS EN 14385:2004	B
	Mercury	VEN/30 based on procedural requirements of BS EN 13211:2001	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Testing of Stack Emissions to Atmosphere (cont'd)	Sampling and Analysis	National, International and other recognised standards using documented In-House work instructions to meet the requirements of DD CEN/TS 15675:2007	
	Heavy Metals and Mercury (combined sampling train)	VEN/31 based on procedural requirements of BS EN 14385:2004 and BS EN 13211:2001	B
	Polyaromatic Hydrocarbons, Dioxins and furans	VEN/24 based on procedural requirements of BS EN 1948:2006 and ISO11338-1 2003	B
	Hydrogen Chloride	VEN/25 based on procedural requirements of BS EN 1911:1998	B
	Sulphur Trioxide	VEN/23	B
	Total Gaseous Organic Carbon (TOC / VOC)	VEN/26 (Analysis by GC-MS)	B
Testing of Vent Gas to Atmosphere	Sampling with subsequent analysis by an ISO/IEC 17025 Accredited Laboratory	Documented In-House Methods:	
	Chlorinated organics	SPL/01	B
	Oxygen Ethylene Carbon Monoxide Carbon Dioxide	SPL/50	B
	Chlorine	VEN/28	B
	Mercury	VEN/30	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
ATMOSPHERIC POLLUTANTS AND EFFLUENTS – STACK GAS SAMPLES	Chemical Tests	Documented In-House Methods based on the following national, international and other recognised standards.	
Impinger Solutions (Dionex Eluent)	Hydrogen Chloride	BS EN 1911:2010 using Ion Chromatography analysis (VEN/25)	A
ATMOSPHERIC POLLUTANTS AND EFFLUENTS - STACK GAS SAMPLES	Physical Testing	National, European, International and Environment Agency specified standards including MIDs and Documented In-House work instructions to meet the requirements of the Environment Agency (MCERTS) Performance Standard for laboratories carrying out testing of samples from stack emissions monitoring	
Filter Papers and Rinse Solutions	Weighing of Particulate Matter	BS EN 13284-1:2017 (ENV/01)	A
Testing of Stack Emissions to Atmosphere	Sampling with subsequent analysis by an ISO/IEC 17025 Accredited Laboratory (cont'd)	National, European, International and Environment Agency specified standards including MIDs and Documented In-House work instructions to meet the requirements of DD CEN/TS 15675:2007	
	Total Particulate Matter	BS EN 13284-1:2017 (ENV/01)	B
	Hydrogen Chloride	BS EN 1911:2010 (VEN/25)	B
	Sampling and On-Site Analysis		
	Water Vapour	BS EN 14790:2017 (VEN/32)	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Testing of Stack Emissions to Atmosphere (cont'd)	Sampling and On-Line Analysis	National, European, International and Environment Agency specified standards including MIDs and Documented In-House work instructions to meet the requirements of DD CEN/TS 15675:2007	
	Presure, Temperature and Velocity	BS EN 16911-1:2013 (ENV/01)	B
	Carbon Monoxide*	BS EN 15058:2017 (VEN/05 – Validated Electrochemical Cell analyser)	B
	Oxides of Nitrogen*	BS EN 14792:2017 (VEN/05 – Validated Electrochemical Cell analyser)	B
	Oxygen*	BS EN 14789:2017 (VEN/05 – Validated Electrochemical Cell analyser)	B
	Sulphur dioxide*	PD CEN/TS 17021:2017 (VEN/05 – Validated Electrochemical Cell analyser)	B

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