



Accredited Laboratory

A2LA has accredited

REAGECON DIAGNOSTICS LTD.

Shannon Free Zone, Shannon, REPUBLIC OF IRELAND

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of any additional program requirements in the Chemical field. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).



Presented this 18th day of January 2023.

A blue ink signature of Mr. Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 6739.03
Valid to May 30, 2024

For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

REAGECON DIAGNOSTICS LTD.
Shannon Free Zone
Shannon, Co. Clare, Ireland
Darren McGrath 00353 867806778

CHEMICAL

Valid To: May 30, 2024

Certificate Number: 6739.03

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on the analytes listed below:

<u>Tests/Technologies</u>	<u>Range of Measurement</u>	<u>Test Method(s)</u>
Acid Solutions Dibasic Acids Monobasic Acids	0.0249 to 10.01M (0.0498N to 20.02N) 0.0099M to 0.0240M (0.0099N to 0.0240N) 0.0249M to 10.01M (0.0249N to 10.01N)	TPATA
Base Solutions	0.0199M to 0.0491M (0.0199N to 0.0491N) 0.0499M to 10.01M (0.0499N to 10.01N)	TPATB
Chloride Solutions	0.0099M to 0.0905M (0.0099N to 0.0905N) 0.0998M to 4.008M (0.0998N to 4.008N)	TPATPPT1
Conductivity	1.25 $\mu\text{S}/\text{cm}$ to 1.35 $\mu\text{S}/\text{cm}$ @ 25°C 4.95 $\mu\text{S}/\text{cm}$ to 505,000 $\mu\text{S}/\text{cm}$ @ 25°C	TPCOND
Density	0.63g/ml to 1.63 g/ml	TPPYC based on ASTM D1480-2015
Density of Liquid Materials	0.65 g/ml to 1.034 g/ml	TPDMA5000M based on ASTM D4052-2018
EDTA	0.00998M to 0.1002M (0.01996N to 2.004N)	TPEDTA
Internal Standards by ICP-MS Bismuth Germanium Indium Lithium (Li 6) Lutetium Rhodium	48 $\mu\text{g}/\text{Kg}$ to 1.43 mg/Kg	TPICPIS based on US EPA Method 6020A

Tests/Technologies	Range of Measurement	Test Method(s)
Internal Standards by ICP-MS (cont) Scandium Terbium Yttrium Lithium (Li 7)	48 µg/Kg to 1.43 mg/Kg 50 µg/Kg to 1.49 mg/Kg	TPICPIS based on US EPA Method 6020A
Iodine	0.0499M to 0.5005M (0.0998N to 0.1001N)	TPATRX2
Mercury	47 µg/Kg to 1.41 mg/Kg	TPICPHG based on US EPA Method 6020A
Metals by ICP-MS Aluminum Antimony Arsenic Barium Beryllium Boron Cadmium Cesium Calcium Cerium Chromium Cobalt Copper Dysprosium Erbium Europium Gadolinium Gallium Hafnium Holmium Iron Lanthanum Lead Magnesium Manganese Molybdenum Neodymium Nickel Niobium Phosphorus Potassium Praseodymium Rubidium Samarium Selenium Silver Sodium Strontium	49 µg/Kg to 1.48 mg/Kg	TPICP based on US EPA Method 6020A



Tests/Technologies	Range of Measurement	Test Method(s)
Metals by ICP-MS (cont.) Tantalum Tellurium Thallium Thorium Thulium Tin Titanium Tungsten Uranium Vanadium Ytterbium Zinc Zirconium Silicon	49 µg/Kg to 1.48 mg/Kg 86 µg/Kg to 1.48 mg/Kg	TPICP based on US EPA Method 6020A
Osmolality	50 to 3000 mOsm/kgH2O	TPOSM-1500 and TPOSM-3000 based on USP -785 and EP – 7.0
Perchloric Acid	0.0998M to 0.1002M (0.0998N to 0.1002N)	TPAHCLO
Pesticides Aldrin Alpha HCH Atrazine Beta HCH Chlorobenzilate Chloroneb Chlorothalonil cis Permethrin DCPA Delta-HCH Dieldrin Endosulfan 1 Endosulfan 2 Endosulfan sulfate Endrin Etridiazole Gamma-Chlordane Gamma-HCH (Lindane) Heptachlor Heptachlor epoxide Hexachlorobenzene Methoxychlor p,p'-DDD p,p'-DDT p,p'-DDE Propachlor	30 to 100 µg/ml	TPGCMS04

Tests/Technologies	Range of Measurement	Test Method(s)
Pesticides (cont.) Trans Permethrin Trifluralin Endrin aldehyde Simazine	30 to 100 µg/ml 55 to 100 µg/ml 55 to 100 µg/ml	TPGCMS04
pH	pH 0.98 to 13.05 pH 3.98 to 10.02 pH 0.98 to 13.05	TPPHB TPPHC TPPHG
Phenols 2,3,4,6-Tetrachlorophenol 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethyl phenol 2,4-Dinitrophenol 2-(1-Methylpropyl)-4,6-dinitrophenol 2,6-Dichlorophenol 2-Chlorophenol 2-Methyl phenol 2-Nitrophenol 3-Methyl phenol 4,6-Dinitro-2-methyl phenol 4-Chloro-3-methyl phenol 4-Nitrophenol Pentachlorophenol	30 to 100 µg/ml	TPGCMS02
Polynuclear Aromatic Hydrocarbons Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenz(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	20 to 100 µg/ml	TPGCMS03
Precious Metals and Sulphur by ICP-MS Gold Iridium Osmium Palladium Platinum	47 µg/Kg to 1.41 mg/Kg	TPICPPR based on US EPA Method 6020A

Tests/Technologies	Range of Measurement	Test Method(s)
Precious Metals and Sulphur by ICP-MS (cont.) Rhenium Ruthenium Sulphur	47 µg/Kg to 1.41 mg/Kg 1.50 mg/Kg to 3.50 mg/Kg	TPICPPR based on US EPA Method 6020A
Refractive Index	1.33310 to 1.65812nD Brix Value range 5% to 60% wt/wt	TPRIA 01
Silver Nitrate	0.0499M to 1.002M (0.0499N to 1.002N)	TPAGNO
Sodium Thiosulphate	0.0099M to 1.001M (0.0099N to 1.001N)	TPATRX1
Total Acid Number	0.09 mg/g KOH to 4.70 mg/g KOH	TP-TAN in accordance with ASTM D664-17a Test Method A
Total Base Number	0.9 mg/g KOH to 75 mg/g KOH	TPTBN in accordance with ASTM D2896:2015 Test Method A
Total Inorganic Carbon	475 µg/l to 52.5 mg/l	TPTIC
Total Organic Carbon	475 µg/l to 52.5 mg/l	TPTOC
Viscosity Dynamic Kinematic	0.55 mPa.s to 99,000 mPa.s +20°C to +60°C 0.85 mm ² /s to 110,000 mm ² /s +20°C to +60°C	ASTM D2162-2017
Volatile Organic Compounds 1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethene 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,1-Dichloropropene 1,2,3-Trichlorobenzene 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2,4-Trimethylbenzene 1,2-Dibromo-3-chloropropane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,3,5-Trimethylbenzene 1,3-Dichlorobenzene 1,3-Dichloropropane 1,4-Dichlorobenzene 2,2-Dichloropropane 2-Chlorotoluene 4-Chlorotoluene 4-Isopropyltoluene Benzene	20 to 100 µg/ml	TPGCMS01

<u>Tests/Technologies</u>	<u>Range of Measurement</u>	<u>Test Method(s)</u>
Volatile Organic Compounds (cont.) Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Carbon Tetrachloride Chlorobenzene Chloroform cis-1,2-Dichloroethane cis-1,2-Dichloropropene Dibromochloromethane Dibromoethane Dibromomethane Dichloromethane Ethylbenzene Hexachlorobutadiene Isopropylbenzene Naphthalene n-Butylbenzene n-Propylbenzene o-Xylene sec-Butylbenzene Styrene tert-Butylbenzene Tetrachloroethane Toluene trans-1,2-Dichloroethane trans-1,2-Dichloropropene Trichloroethene (m+p) Xylenes o-Xylene	20 to 100 µg/ml	TPGCMS01

