

# Schedule of Accreditation



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|---|---|
| Organisation Name                             | Public Analyst's Laboratory Galway                      |
| Trading As                                    |   |
| INAB Reg No                                   | 9T  |
| Contact Name                                  | Helena McGrath  |
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| Accreditation Standard                        | EN ISO/IEC 17025 T                                      |
| Standard Version                              | 2017  |
| Date of award of accreditation                | 12/12/1989  |
| Scope Classification                          | Chemical testing  |
| Services available to the public <sup>1</sup> |   |

<sup>1</sup> Refer to document on interpreting INAB Scopes of Accreditation

| Sites from which accredited services are delivered   |                                     |   |
|--|-------------------------------------|---|
| (the detail of the accredited services delivered at each site are on the Scope of Accreditation) |                                     |   |
|  | Name                                | Address   |
| 1  | Public Analyst's Laboratory, Galway | Seamus Quirke Road, Galway, Galway, Ireland, H91 Y952 |

# Scope of Accreditation

## Public Analyst's Laboratory, Galway

### Chemical Testing

Category: A

| Chemistry Field - Tests                          | Test name  | Analyte      | Range of measurement  | Matrix   | Equipment/technique  | Standard reference/SOP   |
|--|--|--------------|---|--|--|--|
| 751 Food testing - .02<br>Nutritional analysis   | Additives in Food by HPLC Analysis <sup>1 2 3</sup><br>**4 | Folic Acid   | 2-160µg/100ml (Milk & Non-alcoholic beverages) 10-1000µg/100g (Dairy Spreads & Fat & Oil Spreads) 6-1000µg/100g (Cereal & bakery products, babyfood, body building foods) 400µg-512mg /100g (Food Supplements) 40 to 10,000µg/g (Vitamins and Food Supplements) | Milk, Dairy Spreads, Spreads, Cereals & bakery products, Non-alcoholic Beverages, Babyfoods, Body Building Foods, Food Supplements | Liquid Chromatography (HPLC /uHPLC) with Mass Spectroscopy (LC-MS) | Laboratory Method 1/42   |
|  |  |              | 40 to 10,000µg/g  | Vitamins and Food Supplements  | High Performance Liquid Chromatography with UV Detection           | Laboratory method 1/43, Based on USP Monograph for Oil and Water Soluble Vitamins with Minerals Capsules |
| 751 Food testing - .03<br>Compositional analysis |  | Benzoic Acid | 10-500mg/L (Liquids)<br>75-3000mg/kg (Solids)   | Food and Drink   | High Performance Liquid Chromatography                             | Laboratory Method 1/55   |

|                                |                  |  |  |  |  |
|--------------------------------|------------------|--|--|--|--|
|                                | Folic Acid       | 2-160µg/100ml (Milk & Non-alcoholic beverages) 10-1000µg/100g (Dairy Spreads & Fat & Oil Spreads) 6-1000µg/100g (Cereal & bakery products, babyfood, body building foods) 400µg-512mg /100g (Food Supplements) 40 to 10,000 µg/g (Vitamins and Food Supplements) | Milk Dairy Spreads, Spreads Cereals & bakery products Non-alcoholic Beverages Babyfoods, Body Building Foods, Food Supplements | Liquid Chromatography - Mass Spectroscopy (LC-MS)        | Laboratory Method 1/42   |
|                                |                  | 40 to 10,000µg/g   | Vitamins and Food Supplements  | High Performance Liquid Chromatography with UV Detection | Laboratory method 1/43, Based on USP Monograph for Oil and Water Soluble Vitamins with Minerals Capsules |
|                                | Sorbic Acid      | 10-500mg/L (Liquids) 75-3000mg/kg (Solids)   | Food and Drink   | High Performance Liquid Chromatography                   | Laboratory Method 1/55   |
| Moisture **4                   | Moisture         | 0.5-100%m/m  | Food and Drink   | Gravimetric  | Labroatory Method 1/18   |
| pH **4                         | pH               | 2-12 pH Units  | Dairy Products Fruit & Vegetables Non-alcoholic beverages Wine Alcoholic beverages Confectionery                               | Electrometry   | Laboratory Method 1/19   |
| Potassium <sup>3</sup> **1,2,4 | Potassium        | 0.01 - 10.0%   | Food and Drink   | Flame Photometry   | Laboratory Method 1/40   |
| Refractive Index **1,3,4       | Refractive Index | 1.32 -1.56   | Fats & Oils Soups, Broths & Sauces Non-alcoholic beverages Preserves   | Refractometry  | Laboratory Method 1/17   |
| Sodium **1,2,3,4               | Sodium           | 0.01-39.0%   | Food and Drink   | Flame Photometry   | Laboratory Method 1/40   |

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|                                     | Soluble Solids as Sucrose **3,4                            | Soluble Solids as Sucrose   | 0 -85% w/w   | Fats & Oils<br>Soups, Broths & Sauces<br>Non-alcoholic beverages<br>Preserves | Refractometry                          | Laboratory Method 1/17   |
|                                     | Sugars in Food **1,2,4                                     | Sucrose<br>Glucose<br>Fructose<br>Maltose<br>Galactose<br>Lactose | Sucrose<br>0.005g/100g to 70g/100g<br>Glucose<br>0.005g/100g to 60g/100g<br>Galactose<br>0.005g/100g to 40g/100g<br>Fructose<br>0.005g/100g to 40g/100g<br>Lactose 0.005g/100g to 40g/100g<br>Maltose 0.005g/100g to 40g/100g<br>(or ml/100ml) | Food and Drink  | Ion-chromatography (IC)                | In-House Laboratory Method   |
|                                     | Sulphur Dioxide / Sulphites **1,3,4                        | Sulphur Dioxide   | 10-4500 mg/kg or /L  | Food and Drink  | Tanner Method - Distillation           | Laboratory Method 1/50 , Tanner Method, Distillation                     |
|                                     | Titrateable Acidity **4                                    | Titrateable Acidity   | 1.4 -3.0ml of 0.1N NaOH/10ml   | Milk  | Titration                              | Laboratory Method 1/7 based on BS1741:1989 Section 10.1 and ISO6091:1980 |
| 751 Food testing - .04 Adulteration | Contaminants in Food by HPLC Analysis <sup>1 2 3</sup> **4 | Cadaverine  | 10-3700mg/kg   | Cheese<br>Fish, Crustaceans & molluscs,<br>Fish Products/<br>Sauces           | High Performance Liquid Chromatography | Laboratory Method 1/36, based on JAOAC Vol. 78, No.4, 1995               |
|                                     |  | Histamine   | 10-3700mg/kg   | Cheese<br>Fish, Crustaceans & molluscs,<br>Fish Products/<br>Sauces           | High Performance Liquid Chromatography | Laboratory Method 1/36, based on JAOAC Vol. 78, No.4, 1995               |

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|  | Putrescine  | 10-3700mg/kg   | Cheese<br>Fish, Crustaceans &<br>molluscs,<br>Fish Products/<br>Sauces | High Performance<br>Liquid<br>Chromatography           | Laboratory Method<br>1/36, based on<br>JAOAC Vol. 78, No.4,<br>1995 |
|  | Tyramine  | 10-3700mg/kg   | Cheese<br>Fish, Crustaceans &<br>molluscs,<br>Fish Products/<br>Sauces | High Performance<br>Liquid<br>Chromatography           | Laboratory Method<br>1/36, based on<br>JAOAC Vol. 78, No.4,<br>1995 |
| Detection of Irradiated<br>Foods **4   | Irradiation   | Screening<br>Positive,<br>Intermediate,<br>Negative  | Foods  | Photo-Stimulated<br>Luminescence (PSL)                 | Based on IS EN<br>13751:2009  |
| Extraneous Water                       | Extraneous Water  | 0.5 to 16%   | Milk   | Calculation from<br>Freezing Point<br>Depression.      | Laboratory Method<br>1/6A based on IS EN<br>ISO5764:2009            |
| Foreign Objects **4                    | Foreign Objects   |  | Foreign objects,<br>Food and Drink,                                    | Physical, Chemical<br>and Microscopical<br>examination | Laboratory Method<br>1/80   |
| Freezing Point<br>Depression **4       | Freezing Point<br>Depression                                      | -422 to -621m° H   | Milk   | Cryoscope  | Laboratory Method<br>1/6A based on IS EN<br>ISO5764:2009            |
| Sugars in Food<br>**1,2,4              | Sucrose<br>Glucose<br>Fructose<br>Maltose<br>Galactose<br>Lactose | Sucrose<br>0.005g/100g to<br>70g/100g<br>Glucose<br>0.005g/100g to<br>60g/100g<br>Galactose<br>0.005g/100g to<br>40g/100g<br>Fructose<br>0.005g/100g to<br>40g/100g<br>Lactose 0.005g/100g<br>to 40g/100g<br>Maltose 0.005g/100g<br>to 40g/100g<br>(or ml/100ml) | Food and Drink   | Ion-chromatography<br>(IC)                             | In-House Laboratory<br>Method                                       |
| Sulphur Dioxide /<br>Sulphites **1,3,4 | Sulphur Dioxide   | 10-45000 mg/kg or<br>/L  | Food and Drink   | Tanner Method -<br>Distillation                        | Laboratory Method<br>1/50 , Tanner Method,<br>Distillation          |

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| 751 Food testing - .06 Allergens            | Casein   | Casein          | 0.5 to 112,500 mg/kg | Food and Drink   | Enzyme Linked Immunosorbent Assay (ELISA), Casein Kit                           | Laboratory Method 1/39                               |
|   | Egg  | Egg             | 0.25 to 10,000 mg/kg | Food and Drink   | Enzyme Linked Immunosorbent Assay (ELISA), Egg Kit                              | Laboratory Method 1/38                               |
|   | Gluten <sup>1 2 3 **4</sup>                    | Gluten          | 10-25000mg/kg        | Foods and Drink (excluding fermented-hydrolyzed foods) | Enzyme Linked Immunosorbent Assay (ELISA), Gliadin Kit                          | Laboratory Method 1/31A                              |
|   | Peanut <sup>1 2 3 **4</sup>                    | Peanut          | 0.75 to 25,000 mg/kg | Food and Drink   | Enzyme Linked Immunosorbent Assay (ELISA), Peanut Kit                           | Laboratory Method 1/41                               |
|   | Sulphur Dioxide / Sulphites <sup>**1,3,4</sup> | Sulphur Dioxide | 10-45000 mg/kg or /L | Food and Drink   | Tanner Method - Distillation  | Laboratory Method 1/50 , Tanner Method, Distillation |
| 752 Chemical residue testing - .02 Elements | Elements in Food <sup>1 2 3 **4</sup>          | Arsenic         | 0.2-100mg/kg         | Food and Drink   | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24                               |
|   |  | Cadmium         | 0.2-100mg/kg         | Food and Drink   | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24                               |
|   |  | Chromium        | 0.25-100mg/kg        | Food and Drink   | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24                               |
|   |  | Cobalt          | 0.01-1.00 mg/kg      | Food and Drink   | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24A                              |
|   |  | Iron            | 6-12,500 mg/kg       | Food and Drink   | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24A                              |
|   |  | Lead            | 0.2-100mg/kg         | Food and Drink   | Inductively Coupled Plasma- Mass  | Laboratory Method 1/24                               |

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|  |            |                         |                | Spectrometry (ICP-MS) with Microwave Digestion                                  |                            |
|  | Magnesium  | 8-70,000 mg/kg          | Food and Drink | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24A    |
|  | Manganese  | 0.2-1500 mg/kg          | Food and Drink | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24A    |
|  | Molybdenum | 0.2-70 mg/kg            | Food and Drink | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24A    |
|  | Nickel     | 0.5-100mg/kg            | Food and Drink | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24     |
|  | Selenium   | 0.2-100mg/kg            | Food and Drink | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24     |
|  | Zinc       | 2-10,000 mg/kg          | Food and Drink | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24A    |
| Elements in Food <sup>1 2 3</sup><br>**4 | Calcium    | 100 to 111,000 Ca mg/kg | Food and Drink | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 1/24-Ca  |
|  | Mercury    | 0.04 to 1mg Hg /kg      |                |   | Laboratory Method 1/24- Hg |
| Metals in Cosmetics<br>**1,2,3,4         | Arsenic    | 0.5-500mg/kg            | Cosmetics      | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 4/1      |

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|   |   | Chromium   | 0.5-500mg/kg          | Cosmetics              | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 4/1   |
|   |   | Lead   | 0.6-500mg/kg          | Cosmetics              | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 4/1   |
|   |   | Nickel   | 1.2-1000mg/kg         | Cosmetics              | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 4/1   |
|   | Metals in Cosmetics<br>**1,2,3,4  | Cadmium  | 0.5-500mg/kg          | Cosmetics              | Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) with Microwave Digestion | Laboratory Method 4/1   |
| 756 Drugs and pharmaceuticals - .01<br>Identification of pharmaceutical samples | Identification by Absorption Spectrophotometry <sup>3</sup><br>**4        | Identification by Absorption Spectrophotometry           |                       | Pharmaceutical Samples | UV/VIS Spectrometry   | Laboratory Method 3/6, Based on Customer Supplied Methods or European, British or United States Pharmacopoeia |
|   | Identification by High Performance Liquid Chromatography <sup>3</sup> **4 | Identification by High Performance Liquid Chromatography |                       | Pharmaceutical Samples | High Performance Liquid Chromatography  | Laboratory Method 3/5, Based on Customer Supplied Methods or European, British or United States Pharmacopoeia |
| 756 Drugs and pharmaceuticals - .02<br>Quantification of pharmaceutical samples | Assay by Absorption Spectrophotometry <sup>1</sup> <sup>3</sup><br>**4    | Assay by Absorption Spectrophotometry                    | % of Labelled Content | Pharmaceutical Samples | UV/VIS Spectrometry   | Laboratory Method 3/6, Based on Customer Supplied Methods or European, British or United States Pharmacopoeia |
|   | Assay by High Performance Liquid  | Assay by High Performance Liquid Chromatography          | % of Labelled Content | Pharmaceutical Samples | High Performance Liquid Chromatography  | Laboratory Method 3/5, Based on Customer Supplied   |



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| Chromatography <sup>1 3</sup><br>**4                                 |   |                       |   |  | Methods or European, British or United States Pharmacopoeia   |
| Disintegration **4   | Disintegration  |                       | Pharmaceutical Samples (Tablets /Capsules/Granules) | Disintegration Apparatus   | Laboratory Method 3/4, Based on European, British or United States Pharmacopoeia                              |
| Dissolution <sup>1 3</sup> **4                                       | Dissolution   | % of Labelled Content | Pharmaceutical Samples-Solid Oral Dosage Units      | Dissolution Apparatus with High Performance Liquid Chromatography or UV/Vis Spectrometry | Laboratory Method 3/9, Based on Customer Supplied Methods or European, British or United States Pharmacopoeia |
| pH **4   | pH  | 1-13 pH Units         | Pharmaceutical Samples                              | Electrometry   | Laboratory Method 3/8   |
| Subdivision of Tablets **4   | Uniformity of Mass-Subdivision of Tablets                                       | 10mg-100g             | Pharmaceutical Samples                              | Gravimetric  | Laboratory Method 3/2 , Based on European or British Pharmacopoeia  |
| Uniformity of content of single dose preparations <sup>1 3</sup> **4 | Assay by Absorption Spectrophotometry or High Performance Liquid Chromatography | % of Labelled Content | Pharmaceutical Samples                              | UV/VIS Spectrometry or High Performance Liquid Chromatography                            | Laboratory Method 3/7, Based on Customer Supplied Methods or European or British Pharmacopoeia                |
| Uniformity of Dosage Units <sup>1 3</sup> **4                        |   | % of Labelled Content | Pharmaceutical Samples                              | UV/VIS Spectrometry or High Performance Liquid Chromatography                            | Laboratory Method 3/7, Based on Customer Supplied Methods or European, British or United States Pharmacopoeia |
| Uniformity of Mass of Delivered Doses from Multi-Dose Containers **4 | Uniformity of Mass  | 10mg-100g             | Pharmaceutical Samples                              | Gravimetric  | Laboratory Method 3/2 , Based on European or British Pharmacopoeia  |
| Uniformity of Mass of Single Dose Preparations **4                   |   | 10mg-100g             | Pharmaceutical Samples                              | Gravimetric  | Laboratory Method 3/2 , Based on European or British Pharmacopoeia  |

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| 766 Environmental testing<br>(inc waters) - .04 Organic | Volatile Organic<br>Compounds **1                | Total THMs<br>(Chloroform,<br>Bromodichloromethane,<br>Dibromochloromethane,<br>Bromoform) | 6 to 900 µg/L     | Waters for Potable<br>and Domestic<br>PurposesBore<br>Waters, Other<br>Waters - Bottled<br>Waters | Addition   | Laboratory Method<br>2/81, Based on S.M.<br>of Examination of<br>Waters and Waste<br>Waters 6200B |
|   |  | Total Trichloroethene<br>and Tetrachloroethene   | 4 to 150µg/L      | Waters for Potable<br>and Domestic<br>PurposesBore<br>Waters, Other<br>Waters - Bottled<br>Waters | Addition   | Laboratory Method<br>2/81, Based on S.M.<br>of Examination of<br>Waters and Waste<br>Waters 6200B |
|   | Volatile Organic<br>Compounds <sup>1</sup> **2,4 | 1,2 Dichloroethane   | 0.3-45 µg/L       | Waters for Potable<br>and Domestic<br>PurposesBore<br>Waters, Other<br>Waters - Bottled<br>Waters | Gas Chromatography -<br>Mass Spectroscopy<br>(GC-MS) | Laboratory Method<br>2/81, Based on S.M.<br>of Examination of<br>Waters and Waste<br>Waters 6200B |
|   | Volatile Organic<br>Compounds <sup>1</sup> **4   | Benzene  | 0.25 - 31.25 µg/L | Waters for Potable<br>and Domestic<br>PurposesBore<br>Waters, Other<br>Waters, Bottled<br>Waters  | Gas Chromatography -<br>Mass Spectroscopy<br>(GC-MS) | Laboratory Method<br>2/81, Based on S.M.<br>of Examination of<br>Waters and Waste<br>Waters 6200B |
|   |  | Bromodichloromethane   | 1-150 µg/L        | Waters for Potable<br>and Domestic<br>PurposesBore<br>Waters, Other<br>Waters - Bottled<br>Waters | Gas Chromatography -<br>Mass Spectroscopy<br>(GC-MS) | Laboratory Method<br>2/81, Based on S.M.<br>of Examination of<br>Waters and Waste<br>Waters 6200B |
|   |  | Bromoform  | 1-150 µg/L        | Waters for Potable<br>and Domestic<br>PurposesBore<br>Waters, Other<br>Waters - Bottled<br>Waters | Gas Chromatography -<br>Mass Spectroscopy<br>(GC-MS) | Laboratory Method<br>2/81, Based on S.M.<br>of Examination of<br>Waters and Waste<br>Waters 6200B |
|   |  | Chloroform   | 3-450 µg/L        | Waters for Potable<br>and Domestic<br>PurposesBore<br>Waters, Other<br>Waters - Bottled<br>Waters | Gas Chromatography -<br>Mass Spectroscopy<br>(GC-MS) | Laboratory Method<br>2/81, Based on S.M.<br>of Examination of<br>Waters and Waste<br>Waters 6200B |

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|  |   | Dibromochloromethane | 1-150 µg/L     | Waters for Potable and Domestic Purposes<br>Bore Waters, Other Waters - Bottled Waters  | Gas Chromatography - Mass Spectroscopy (GC-MS) | Laboratory Method 2/81, Based on S.M. of Examination of Waters and Waste Waters 6200B                     |
|  | Volatile Organic Compounds <sup>1 **4</sup> | Tetrachloroethene    | 2-75 µg/L      | Waters for Potable and Domestic Purposes<br>Bore Waters, Other Waters - Bottled Waters  | Gas Chromatography - Mass Spectroscopy (GC-MS) | Laboratory Method 2/81, Based on S.M. of Examination of Waters and Waste Waters 6200B                     |
|  |   | Trichloroethene      | 2-75 µg/L      | Waters for Potable and Domestic Purposes<br>Bore Waters, Other Waters - Bottled Waters  | Gas Chromatography - Mass Spectroscopy (GC-MS) | Laboratory Method 2/81, Based on S.M. of Examination of Waters and Waste Waters 6200B                     |
| 766 Environmental testing (inc waters) - .05 Inorganic | Ammonium <sup>1 **4</sup>                   | Ammonium             | 0.03 - 1.6mg/L | Water for potable and domestic purposes<br>Drinking Waters<br>Bottled Waters  | Aquakem- Automated Salicylate Method           | Laboratory Method 2/37  |
|  | Chloride <sup>1 **4</sup>                   | Chloride             | 20-1000mg/L    | Waters for Potable and Domestic Purposes, Drinking Waters<br>Bore Waters, Other Waters - Bottled Waters                                     | Aquakem Discrete analyser                      | Laboratory Method 2/30 Based on Standard Methods for Examination of Waters and Waste Waters Method 4500Cl |
|  | Colour <sup>1 **4</sup>                     | Colour               | 2.0 -500mg/L   | Water for potable and domestic purposes<br>Drinking Waters<br>Bottled Waters<br>Bathing Waters (Saline waters and waters other than saline) | Spectroscopy @400nm                            | Laboratory Method 2/6   |
|  | Conductivity <sup>1 **4</sup>               | Conductivity         | 10-6000 µS/cm  | Water for potable and domestic purposes<br>Drinking Waters<br>Bottled Waters  | Electrometry                                   | Laboratory Method 2/8, Based on S.M. for Examination of Waters and Waste Waters 2510A                     |

|  |                         |                     |   |                                      |   |
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| Flouride <sup>1</sup> **2,4              | Fluoride                | 100-5000µg/L        | Water for potable and domestic purposes<br>Drinking Waters<br>Bottled Waters  | Ion Chromatography                   | Laboratory Method 2/25, Based on S.M. for Examination of Waters and Waste Waters 4100B                      |
| Free and Total Chlorine <sup>1</sup> **4 | Free and Total Chlorine | 0.02 - 50mg/L       | Water for potable and domestic purposes<br>Drinking Waters<br>Bottled Waters<br>Other Waters - Swimming Pool & Jacuzzi                      | Colourimetry                         | Laboratory Method 2/10, Based on S.M. for Examination of Waters and Waste Waters 4500-CL                    |
| Nitrate**1                               | Nitrate                 | 2.0 to 80mg/L       | Water for potable and domestic purposes<br>Drinking Waters<br>Bottled Waters  | Calculation                          | Laboratory Method 2/37, Based on S.M. of Examination of Waters and Waste Waters 4500 NO3 H                  |
| Nitrite <sup>1</sup> **4                 | Nitrite                 | 0.02-1.0mg/L        | Water for potable and domestic purposes<br>Drinking Waters<br>Bottled Waters  | Aquakem- Automated Salicylate Method | Laboratory Method 2/37, Based on S.M. of Examination of Waters and Waste Waters 4500-NO2 B                  |
| pH <sup>**4</sup>                        | pH                      | 3.0 - 10.0 pH Units | Water for potable and domestic purposes<br>Drinking Waters<br>Bottled Waters<br>Bathing Waters (Saline waters and waters other than saline) | Electrometry                         | Laboratory Method 2/9, Based on S.M. for Examination of Waters and Waste Waters 4500-HB                     |
| Sulphate <sup>1</sup> **4                | Sulphate                | 20-1000mg/L         | Waters for Potable and Domestic Purposes, Drinking Waters<br>Bore Waters,<br>Other Waters - Bottled Waters                                  | Aquakem Discrete analyser            | Laboratory Method 2/30 Based on Standard Methods for Examination of Waters and Waste Waters Method 4500 SO4 |
| Total Alkalinity <sup>1</sup> **4        | Total Alkalinity        | 20-1000mg/L         | Waters for Potable and Domestic Purposes, Drinking Waters<br>Bore Waters,   | Aquakem Discrete analyser            | Laboratory Method 2/30 Based on Standard Methods for Examination of   |

|   |                         |               |  |   |  |
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|   |                         |               | Other Waters - Bottled Waters  |   | Waters and Waste Waters Method 2320B   |
| Total Hardness <sup>1</sup> <sup>**2,4</sup>        | Total Hardness          | 20-1000mg/L   | Waters for Potable and Domestic Purposes, Drinking Waters<br>Bore Waters,<br>Other Waters - Bottled Waters | Aquakem Discrete analyser                             | Laboratory Method 2/30 Based on Standard Methods for Examination of Waters and Waste Waters Method 2340C |
| Total Oxidised Nitrogen <sup>1</sup> <sup>**4</sup> | Total Oxidised Nitrogen | 2.0-80.0mg/L  | Water for potable and domestic purposes<br>Drinking Waters<br>Bottled Waters                               | Aquakem- Automated Salicylate Method                  | Laboratory Method 2/37, Based on S.M. of Examination of Waters and Waste Waters 4500 NO3 H               |
| Trace Metals <sup>1**2,4</sup>                      | Cadmium                 | 0.1 - 5.0µg/L | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters - Dialysis Waters, Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8   |
| Trace Metals <sup>1</sup> <sup>**2,4</sup>          | Iron                    | 20-1000 µg/L  | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters - Dialysis Waters, Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8   |
| Trace Metals <sup>1</sup> <sup>**4</sup>            | Aluminium               | 20-500 µg/L   | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters - Dialysis Waters, Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8   |
|   | Arsenic                 | 4-200 µg/L    | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters - Dialysis Waters, Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8   |

|           |              |  |   |  |
|-----------|--------------|--|---|--|
| Boron     | 20-500 µg/L  | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters -<br>Dialysis Waters,<br>Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8 |
| Chromium  | 4-200 µg/L   | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters -<br>Dialysis Waters,<br>Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8 |
| Copper    | 40-2000 µg/L | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters -<br>Dialysis Waters,<br>Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8 |
| Lead      | 4-200 µg/L   | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters -<br>Dialysis Waters,<br>Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8 |
| Manganese | 20-1000 µg/L | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters -<br>Dialysis Waters,<br>Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8 |
| Nickel    | 4-200 µg/L   | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters -<br>Dialysis Waters,<br>Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8 |

|  |                                       |           |                  |  |   |   |
|--|---------------------------------------|-----------|------------------|--|---|---|
|  |                                       | Selenium  | 4-200 µg/L       | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters -<br>Dialysis Waters,<br>Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8                                  |
|  |                                       | Zinc      | 40-2000 µg/L     | Waters for Potable and Domestic Purposes<br>Bore Waters,<br>Other Waters -<br>Dialysis Waters,<br>Bottled Waters | Inductively Couple Plasma- Mass Spectrometry (ICP-MS) | Laboratory Method 2/46, Based on US EPA Method 200.8                                  |
|  | Turbidity <sup>1</sup> <sup>**4</sup> | Turbidity | 0.2 - 500 N.T.U. | Water for potable and domestic purposes<br>Drinking Waters<br>Bottled Waters                                     | Nephelometry-Formazin                                 | Laboratory Method 2/7, Based on S.M. for Examination of Waters and Waste Waters 2130B |

*\*\*The laboratory has been awarded flexible scope in the ST3CRM categories as noted in the scope document and in accordance with the laboratories approved and documented procedures.*

*Note 1 - Range may be extended for the test*

*Note 2 – New parameters / tests may be added*

*Note 3 – New matrices may be added*

*Note 4 - Equipment/kit*

*For further details please refer to the laboratories 'Master list of Flexible scope changes', available directly from the laboratory.*