

NO: SAMM 730

Page: 1 of 23

LABORATORY LOCATION:
(PERMANENT LABORATORY)



AMCEN LAB SDN. BHD.
NO. 16, 18, 20, LORONG TALANG 9
& NO. 24 & 26, TINGKAT TALANG 1
TAMAN EMAS
SEBERANG PERAI TENGAH
13600, PULAU PINANG
MALAYSIA

FIELDS OF TESTING: CHEMICAL, MICROBIOLOGY & NUCLEIC ACID

This laboratory has demonstrated its technical competence to operate in accordance with MS ISO/IEC 17025:2017 (ISO/IEC 17025:2017).

This laboratory’s fulfillment of the requirements of ISO/IEC 17025 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 and calibrations. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001 (see Joint ISO-ILAC-IAF Communiqué dated April 2017).

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Food <ul style="list-style-type: none"> • Flour and Confectionery • Sauces, Herbs, Spices and Condiments • Dairy products • Non-alcoholic beverages • Sugar and sugar products • Nut, fruits and vegetables and derived products • Meat, poultry and derived products • Fish and fish products 	Moisture	In-house method, WI-TEC-M001, based on AOAC 984.25, 22 nd Edition 2023
	Ash	In-house method, WI-TEC-M002, based on AOAC 923.03, 22 nd Edition 2023
	Total fat	In-house method, WI-TEC-M003, based on AOAC 989.05, 22 nd Edition 2023 / AOAC 920.39, 22 nd Edition 2023
	Crude Protein/Total Nitrogen	In-house method, WI-TEC-M004, based on MS 1194:1999
		In-house method, WI-TEC-M062, based on AOAC 2001.11, 22 nd Edition 2023
	Carbohydrate/ Available Carbohydrate	Methods of Analysis for Nutrition Labeling, AOAC: 1993 and Food Act 1983 (Act 281) & Regulations
	Energy from fat/ Calories from fat	Methods of Analysis for Nutrition Labeling, AOAC: 1993 and Food Regulations: 1985

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 730

Page: 2 of 23

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Food <ul style="list-style-type: none"> • Flour and Confectionery • Sauces, Herbs, Spices and Condiments • Dairy products • Non-alcoholic beverages • Sugar and sugar products • Nut, fruits and vegetables and derived products • Meat, poultry and derived products • Fish and fish products 	Energy/Total Calories	Methods of Analysis for Nutrition Labeling, AOAC: 1993 and Food Regulations: 1985
	Total Sugar	In-house method, WI-TEC-M018, based on AOAC 968.28, 22 nd Edition 2023 and Pearson's Composition & Analysis of Foods (1991)
	Vitamin A (Retinol)	In-house method, WI-TEC-M020, based on AOAC 992.06, 22 nd Edition 2023
	Sulphur dioxide	AOAC 990.28 , 22 nd Edition 2023
	Arsenic, Mercury	In-house method, WI-TEC-M022, based on AOAC 977.15, 22 nd Edition 2023
	Total Dietary Fiber	In-house method, WI-TEC-M063, based on AOAC 985.29, 22 nd Edition 2023
Food <ul style="list-style-type: none"> • Flour and Confectionery • Sauces, Herbs, Spices and Condiments • Dairy products • Non-alcoholic beverages • Sugar and sugar products • Nut, fruits and vegetables and derived products 	Cholesterol	In-house method, WI-TEC-M014, based on AOAC 994.10 , 22 nd Edition 2023
	Benzoic acid & Sorbic acid	In-house method, WI-TEC-M008, based on AOAC 994.11, 22 nd Edition 2023
	Vitamin C (Ascorbic acid)	In-house method, WI-TEC-M009, based on HPLC with HILIC column and UV detection
	Element (Al, Ca, Cd, Cu, Pb, Na, Sn, Sb, Fe, Zn)	In-house method, WI-TEC-M010, based on AOAC 985.01, 22 nd Edition 2023
Food <ul style="list-style-type: none"> • Non-alcoholic beverage • Coffee and Coffee Products • Tea and Tea Products 	Caffeine	In-house method, WI-TEC-M013, based on African Journal of Food Science Vol. 4(6), 2010 page 353 – 358

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 730

Page: 3 of 23

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Food <ul style="list-style-type: none"> Dairy products Edible oils, fats and their products Fish and fish products Flour and confectionery Meat, poultry and derived products Non-alcoholic beverages Nut, fruits and vegetables and derived products Sauces, herbs, spices and condiments Sugar and sugar products 	Fatty Acid Composition: <ul style="list-style-type: none"> Monounsaturated Fat Polyunsaturated Fat Saturated Fat Trans Fat Omega Fatty Acid of n-3 and n-6 	In-house method, WI-TEC-M019, based on AOAC 969.33 , 22 nd Edition 2023 and AOCS Ce 1e-91 and AOCS Ce 1- 62
Food <ul style="list-style-type: none"> Dairy products Flour and confectionery Non-alcoholic beverages Nut, fruits and vegetables and derived products Sauces, herbs, spices and condiments 	<ul style="list-style-type: none"> Aflatoxin B1 Aflatoxin B2 Aflatoxin G1 Aflatoxin G2 Aflatoxin M1 	In-house method, WI-TEC-M021, based on AOAC 990.33, 22 nd Edition 2023
Food <ul style="list-style-type: none"> Fish and fish products Sauces, herbs, spices and condiments 	Histamine	In-house method, WI-TEC-M017, based on Journal of Chromatography A, 809 (1998) 241–245 using OPA Derivatization by HPLC Fluorescence Detector
Food <ul style="list-style-type: none"> Flour and confectionery Meat, poultry and derived products Sauces, herbs, spices and condiments 	Glutamic Acid	In-house method, WI-TEC-M016, based on Food Chemistry 104 (2007) using OPA Derivatization by HPLC Fluorescence Detector

NO: SAMM 730

Page: 4 of 23

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Food <ul style="list-style-type: none"> • Flour and confectionery • Nuts, fruits and vegetables and derived product 	Pesticides <u>Organophosphate</u> <ul style="list-style-type: none"> • Azinphos-ethyl • Azinphos-methyl • Bromophos-ethyl • Bromophos-methyl • Carbophenothion • Chlorpyrifos • Chlorpyrifos-methyl • Diazinon • Dichlorofenthion • Dichlorvos • Ethion • Etrimfos • Fenchlorphos • Fonofos • Malathion • Methacrifos • Methidathion • Pirimiphos-methyl • Pirimiphos-ethyl • Propetamphos • Sulfotep • Tetrachlorfenvinphos 	In-house method, WI-TEC-M025, based on AOAC 2007.01, 22 nd Edition 2023
Food <ul style="list-style-type: none"> • Sauces, herbs, spices and condiments • Meat, poultry and derived products • Flour and Confectionery • Dairy products • Non-alcoholic beverages • Sugar and sugar products • Nut, fruits and vegetables and derived products • Fish and fish products 	Salt content (as sodium chloride)	MS 1120: 2004
	pH	MS 1120: 2004
Food <ul style="list-style-type: none"> • Vinegar and sauces, herbs, spices and condiments 	Acidity (as acetic acid)	MS 1120: 2004
Food <ul style="list-style-type: none"> • Bird Nest and Edible Bird Nest 	<ul style="list-style-type: none"> • Nitrate • Nitrite 	In-house method, WI-TEC-M050, based on MS 2509:2015

NO: SAMM 730

Page: 5 of 23

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<p>Water</p> <ul style="list-style-type: none"> • Deionized water • Distilled water • Domestic water • Drinking water • Mineral water • Reverse osmosis water • Swimming pool water • Cooling tower water • Dialysis water 	<p>Anions</p> <ul style="list-style-type: none"> • Fluoride • Chloride • Nitrite • Bromide • Nitrate • Phosphate • Sulfate 	<p>APHA 4110 B, 24th Edition 2022</p>
<p>Water</p> <ul style="list-style-type: none"> • Boiler water • Deionized water • Industrial Effluent • Mineral water • Reverse osmosis water • River water • Tap water • Underground water • Drinking water 	<p>Conductivity</p>	<p>APHA 2510 B, 24th Edition 2022</p>
<p>Water</p> <ul style="list-style-type: none"> • Boiler water • Deionized water • Industrial Effluent • Mineral water • Reverse osmosis water • River water • Tap water • Underground water • Drinking water • Dialysis water • Sewage water 	<p>pH</p>	<p>APHA 4500H⁺ B, 24th Edition 2022</p>
<p>Water</p> <ul style="list-style-type: none"> • Industrial Effluent • Sewage Water • River Water • Underground Water 	<p>Total Dissolved Solids</p>	<p>APHA 2540 C, 24th Edition 2022</p>
	<p>Total Suspended Solids</p>	<p>APHA 2540 D, 24th Edition 2022</p>

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation



NO: SAMM 730

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<p>Water</p> <ul style="list-style-type: none"> • Potable & Domestic Water • Drinking Water • Reverse Osmosis Water • River Water • Ground Water, etc. 	<p>Metals by ICP</p> <ul style="list-style-type: none"> • Aluminium • Barium • Boron • Calcium • Chromium • Copper • Iron • Magnesium • Manganese • Silver • Sodium • Tin • Zinc 	<p>APHA 3120 B, 24th Edition 2022</p> <p>Sample pre-treatment for metal analysis – APHA 3030 F, 24th Edition 2022</p>
	<p>Hardness as CaCO₃</p>	<p>APHA 2340 24th Edition 2022 APHA 3120 B, 24th Edition 2022</p> <p>Sample pre-treatment for metal analysis – APHA 3030 F, 24th Edition 2022</p>
<p>Water</p> <ul style="list-style-type: none"> • Mineral Water 	<p>Metals by ICP</p> <ul style="list-style-type: none"> • Aluminium • Arsenic • Barium • Boron • Calcium • Chromium • Copper • Iron • Lead • Magnesium • Manganese • Nickel • Silver • Sodium • Tin • Zinc 	<p>APHA 3120 B, 24th Edition 2022</p> <p>Sample pre-treatment for metal analysis – APHA 3030 F, 24th Edition 2022</p>
	<p>Hardness as CaCO₃</p>	<p>APHA 2340 B, 24th Edition 2022 APHA 3120 B, 24th Edition 2022</p> <p>Sample pre-treatment for metal analysis – APHA 3030 F, 24th Edition 2022</p>

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 730

Page: 7 of 23

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Water <ul style="list-style-type: none"> Deionized Water Industrial Effluent Mineral Water Sewage Water River Water Potable & Domestic Water Underground Water 	Hexavalent Chromium	APHA 3500-Cr B, 24 th Edition 2022
Water <ul style="list-style-type: none"> Industrial Effluent Mineral Water River Water Potable & Domestic Water Underground Water 	Trivalent Chromium	APHA 3500-Cr B & APHA 3120 B, 24 th Edition 2022 & Sample pre-treatment for metal analysis – APHA 3030 F, 24 th Edition 2022
Water <ul style="list-style-type: none"> Industrial Effluent Sewage Water River Water Potable & Domestic Water Underground Water 	Oil and Grease	In-house method, WI-TEC-M044, based on APHA 5520 B, 24 th Edition 2022
	Biochemical Oxygen Demand (BOD ₅)	APHA 5210 B, 22 nd Edition 2012
	Chemical oxygen demand (COD)	APHA 5220 D, 24 th Edition 2022
	Nitrate- Nitrogen	HACH Method 8039
Water <ul style="list-style-type: none"> Drinking Water Deionized Water Industrial Effluent Sewage Water Potable & Domestic Water River Water Underground Water 	Colour (ADMI)	In-house method, WI-TEC-M047, based on APHA 2120 F, 24 th Edition 2022 and HACH Method 10048
	Ammoniacal Nitrogen	APHA 4500-NH ₃ B&C, 24 th Edition 2022
Water <ul style="list-style-type: none"> Potable & domestic water Industrial effluent Sewage water River Water Underground water Dialysis water Reverse Osmosis water Deionised water Drinking water 	Free Chlorine	APHA 4500 Cl -G, 24 th Edition 2022

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 730

Page: 8 of 23

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<u>Water</u> <ul style="list-style-type: none"> • Deionised water • Ultrapure water • Distilled water • Potable & domestic water • Drinking water • Reverse osmosis water • Ground water • Mineral water • Industrial effluent • Storm water • Dialysis water 	Metals by ICP <ul style="list-style-type: none"> • Aluminium (Al) • Antimony (Sb) • Arsenic (As) • Barium (Ba) • Beryllium (Be) • Boron (B) • Cadmium (Cd) • Calcium (Ca) • Chromium (Cr) • Cobalt (Co) • Copper (Cu) • Iron (Fe) • Lead (Pb) • Lithium (Li) • Magnesium (Mg) • Manganese (Mn) • Mercury (Hg) • Molybdenum (Mo) • Nickel (Ni) • Potassium (K) • Selenium (Se) • Silver (Ag) • Sodium (Na) • Strontium (Sr) • Thallium (Tl) • Thorium (Th) • Tin (Sn) • Uranium (U) • Vanadium (V) • Zinc (Zn) 	APHA 3125 B, 24 th Edition 2022 Sample pre-treatment for analysis – APHA 3030 E, 24 th Edition 2022
	Hardness as CaCO ₃	APHA 2340 B & APHA 3125 B, 24 th Edition 2022 Sample pre-treatment for analysis – APHA 3030 E, 24 th Edition 2022
<u>Water</u> <ul style="list-style-type: none"> • Sewage water 	Phosphorus	APHA 3120 B, 24 th Edition 2022 Sample pre-treatment for analysis – APHA 3030 F, 24 th Edition 2022

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation



NO: SAMM 730

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<p>Water</p> <ul style="list-style-type: none"> • Boiler water • Potable & domestic water • Industrial effluent • Sewage water • River Water • Underground water • Dialysis water • Reverse osmosis water • Deionized water • Drinking water • Mineral water 	<p>Temperature</p>	<p>APHA 2550 B, 24th Edition 2022</p>
<p>Urine</p> <ul style="list-style-type: none"> • Urine 	<p>2,5-Hexanedione</p>	<p>In-house method, WI-TEC-M058, based on NMAM 8318:2017, US NIOSH Manual of Analytical Methods (NMAM), 5th Edition</p>
	<p>Hippuric Acid Methyl Hippuric Acid</p>	<p>In-house Method, WI-TEC-M073, based on NIOSH Method 8301:2003, US NIOSH Manual of Analytical Methods, 4th Edition</p>
	<ul style="list-style-type: none"> • Aluminium (Al) • Arsenic (As) • Barium (Ba) • Beryllium (Be) • Cadmium (Cd) • Chromium (Cr) • Cobalt (Co) • Copper (Cu) • Iron (Fe) • Lead (Pb) • Manganese (Mn) • Mercury (Hg) • Molybdenum (Mo) • Nickel (Ni) • Platinum (Pt) • Silver (Ag) • Strontium (Sr) • Tin (Sn) • Titanium (Ti) • Zinc (Zn) 	<p>In-house Method, WI-TEC-M066, based on NIOSH Method 8310:1994, US NIOSH Manual of Analytical Methods, 4th Edition</p>

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 730

Page: 10 of 23

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Blood <ul style="list-style-type: none"> Blood 	Lead	In-house Method, WI-TEC-M067, based on NIOSH Method 8005:1994, US NIOSH Manual of Analytical Methods, 4 th Edition
Others <ul style="list-style-type: none"> Polymer Metal Electronic 	Mercury	IEC 62321-4:2013+ AMD1:2017
Others <ul style="list-style-type: none"> Polymer Electronic 	Cadmium Lead Chromium	IEC 62321-5:2013
Others <ul style="list-style-type: none"> Metal 	Cadmium Lead	IEC 62321-5:2013
Environmental Monitoring <ul style="list-style-type: none"> Wastewater Industrial Effluent (Standard A) 	Metals by ICP <ul style="list-style-type: none"> Aluminium Arsenic Barium Boron Chromium Copper Iron Lead Manganese Nickel Silver Tin Zinc 	APHA 3120 B, 24 th Edition 2022 Sample pre-treatment for metal analysis – APHA 3030 F, 24 th Edition 2022
Environmental Monitoring <ul style="list-style-type: none"> Wastewater Liquid Waste Industrial Effluent (Standard B) 	Metals by ICP <ul style="list-style-type: none"> Aluminium Arsenic Barium Boron Cadmium Chromium Copper Iron Lead Manganese Mercury Nickel Selenium Silver Tin Zinc 	APHA 3120 B, 24 th Edition 2022 Sample pre-treatment for metal analysis – APHA 3030 F, 24 th Edition 2022

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation



NO: SAMM 730

Page: 11 of 23

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<p><u>Environmental Monitoring</u></p> <ul style="list-style-type: none"> • Solid waste • Liquid waste • Sludge waste 	<p>Metals by ICP</p> <ul style="list-style-type: none"> • Aluminium • Arsenic • Barium • Boron • Beryllium • Cadmium • Calcium • Chromium • Copper • Lead • Magnesium • Manganese • Mercury • Nickel • Selenium • Silver • Sodium • Sulphur • Tin • Zinc 	<p>USEPA SW846 6010 D (Rev 4, July 2014)</p> <p>Sample pre-treatment for metal analysis – USEPA SW846 3050 B (Rev 2, Dec 1996)</p>
<p><u>Environmental Monitoring</u></p> <ul style="list-style-type: none"> • Stationary Source Emissions 	<p>Metals by ICP</p> <ul style="list-style-type: none"> • Antimony • Arsenic • Barium • Beryllium • Cadmium • Chromium • Cobalt • Copper • Lead • Manganese • Mercury • Nickel • Phosphorus • Selenium • Silver • Thallium • Zinc 	<p>In-house method, WI-TEC-M042, based on USEPA Method 29</p>
	<p>Particulate Matter</p>	<p>In-house Method, WI-TEC-M041, based on MS 1596:2003</p>
	<p>Sulphuric Acid Sulphur Dioxide</p>	<p>USEPA 40 CFR 60, App. A, Method No. 8 - Determination of Sulphuric Acid and Sulphur Dioxide Emission from Stationary Sources</p>

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<p>Environmental Monitoring</p> <ul style="list-style-type: none"> Stationary Source Emissions 	<p>Hydrogen Halide and Halogen</p> <ul style="list-style-type: none"> Hydrogen Chloride (HCl) Hydrogen Fluoride (HF) Hydrogen Bromide (HBr) Chlorine (Cl₂) Bromine (Br₂) 	<p>In-house method, WI-TEC-M053, based on USEPA 40 CFR 60, App. A, Method No. 26A (Isokinetic Method) - Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources Isokinetic Method</p>
<p>Others</p> <ul style="list-style-type: none"> Cosmetics Personal Care Household Products 	<p>Heavy Metals</p> <ul style="list-style-type: none"> Arsenic, As Mercury, Hg Cadmium, Cd Lead, Pb 	<p>ASEAN Cosmetic Method (ACM) 005 (Revision 3, 22nd May 2013)</p>
<p>Others</p> <ul style="list-style-type: none"> Material and Articles in Contact with Foodstuffs 	<p>Overall Migration into Food Simulants by Total Immersion</p> <p>Aqueous Food Simulant</p> <ul style="list-style-type: none"> Distilled Water Acetic Acid 3% Ethanol 10% Ethanol 20% Ethanol 50% <p>Test Media</p> <ul style="list-style-type: none"> Ethanol 95% Isooctane 	<p>BS EN 1186-3:2002</p> <p>Commission Regulation (EU) No. 10/2011 and Amendment 2020/1245 Annex III and Annex V for Selection of Test Methods</p>
	<p>Overall Migration into Food Simulants by Pouch</p> <p>Aqueous Food Simulant</p> <ul style="list-style-type: none"> Distilled Water Acetic Acid 3% Ethanol 10% Ethanol 20% Ethanol 50% <p>Test Media</p> <ul style="list-style-type: none"> Ethanol 95% Isooctane 	<p>BS EN 1186-7:2002</p> <p>Commission Regulation (EU) No. 10/2011 and Amendment 2020/1245 with Annex III and Annex V for Selection of Test Methods</p>

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 730

Page: 13 of 23

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Others <ul style="list-style-type: none"> Material and Articles in Contact with Foodstuffs 	Overall Migration into Food Simulants by Article Filling Aqueous Food Simulant <ul style="list-style-type: none"> - Distilled Water - Acetic Acid 3% - Ethanol 10% - Ethanol 20% - Ethanol 50% Test Media <ul style="list-style-type: none"> - Ethanol 95% - Isooctane 	BS EN 1186-9:2002 Commission Regulation (EU) No. 10/2011 and Amendment 2020/1245 with Annex III and Annex V for Selection of Test Methods
	Specific Migration of Bisphenol A Aqueous Food Simulant <ul style="list-style-type: none"> - Distilled Water - Acetic Acid 3% - Ethanol 15% - Ethanol 20% - Ethanol 50% 	In-house method, WI-TEC-M057, based on EN13130-13

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation



NO: SAMM 730

Page: 14 of 23

SCOPE OF TESTING: CHEMICAL

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<p>Others</p> <ul style="list-style-type: none"> Material and Articles in Contact with Foodstuffs 	<p>Specific Migration into Aqueous Food Simulants and Test Media by Total Immersion, Pouch, Reverse Pouch and Article Filling</p> <p>Aqueous Food Simulant</p> <ul style="list-style-type: none"> - Distilled Water - Acetic Acid 3% - Ethanol 10% - Ethanol 20% - Ethanol 50% <p>Test Media</p> <ul style="list-style-type: none"> - Ethanol 95% - Isooctane <p>Heavy Metals</p> <ul style="list-style-type: none"> • Aluminium • Antimony • Arsenic • Barium • Beryllium • Cadmium • Calcium • Chromium • Cobalt • Copper • Europium • Gadolinium • Iron • Lanthanum • Lead • Lithium • Magnesium • Manganese • Mercury • Molybdenum • Nickel • Potassium • Selenium • Silver • Sodium • Terbium • Thallium • Thorium • Uranium • Vanadium • Zinc 	<p>In-house method, WI-TEC-M048, with reference to EN 13130-1:2004 and Commission Regulation (EU) No. 10/2011 and Amendment 2020/1245 by using ICP-MS</p>

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 730

Page: 15 of 23

SCOPE OF TESTING: CHEMICAL (INDUSTRIAL HYGIENE)

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Environment Monitoring <ul style="list-style-type: none"> Work place environment and hazard 	Methyl Ethyl Ketone	In-house method, WI-TEC-M033, based on NIOSH Method 2500:1996, US NIOSH Manual of Analytical Methods, 4 th Edition
	Hexane Cyclohexane	In-house method, WI-TEC-M035, based on NIOSH Method 1500:2003, US NIOSH Manual of Analytical Methods, 4 th Edition
	Benzene Toluene Ethylbenzene	In-house method, WI-TEC-M034, based on NIOSH Method 1501:2003, US NIOSH Manual of Analytical Methods, 4 th Edition
	Acetone	In-house method, WI-TEC-M036, based on NIOSH Method 1300:1994, US NIOSH Manual of Analytical Methods, 4 th Edition
	Mineral Oil Mist	In-house method, WI-TEC-M031, based on NIOSH Method 5026:1996, US NIOSH Manual of Analytical Methods, 4 th Edition
	Total Particulate Material	In-house method, WI-TEC-M040, based on NIOSH Method 0500:1994, US NIOSH Manual of Analytical Methods, 4 th Edition
	Respirable Dust	In-house method, WI-TEC-M040, based on NIOSH Method 0600:1998, US NIOSH Manual of Analytical Methods, 4 th Edition
	Lead	In-house Method, WI-TEC-M024, based on NIOSH Method 7082:1994, US NIOSH Manual of Analytical Methods, 4 th Edition
	Ammonia	In-house Method, WI-TEC-M059, based on NIOSH 6016:2016, US NIOSH Manual of Analytical Methods, 5 th Edition
	Formaldehyde Acetaldehyde	In-house Method, WI-TEC-M064, based on ISO 16000-3:2022

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 730

Page: 16 of 23

SCOPE OF TESTING: CHEMICAL (INDUSTRIAL HYGIENE)

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<p><u>Environmental Monitoring</u></p> <ul style="list-style-type: none"> Work place environment and hazard 	<ul style="list-style-type: none"> Aluminium Antimony Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Europium Gadolinium Iron Lanthanum Lead Lithium Magnesium Manganese Molybdenum Nickel Phosphorus Platinum Potassium Selenium Silver Sodium Strontium Tellurium Thallium Thorium Tin Titanium Uranium Vanadium Yttrium Zinc Zirconium 	<p>In-house Method, WI-TEC-M060, based on NIOSH Method 7302:2014, US NIOSH Manual of Analytical Methods, 5th Edition</p>

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation



NO: SAMM 730

Page: 17 of 23

SCOPE OF TESTING: CHEMICAL (INDUSTRIAL HYGIENE)

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<p><u>Environment Monitoring</u></p> <ul style="list-style-type: none"> • Work place environment and hazard 	<ul style="list-style-type: none"> • Aluminium • Antimony • Arsenic • Barium • Beryllium • Bismuth • Boron • Cadmium • Calcium • Chromium • Cobalt • Copper • Gallium • Indium • Iron • Lead • Magnesium • Manganese • Molybdenum • Nickel • Phosphorus • Selenium • Strontium • Thallium • Tin • Titanium • Vanadium • Zinc 	<p>NIOSH Method 7303:2003, US NIOSH Manual of Analytical Methods, 4th Edition</p>

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

Notes:

- AOAC – Association of Official Analytical Chemists
- AOCS – American Oil Chemist’s Society
- APHA – American Public Health Association
- BS - British Standard
- EN - European Standard
- IEC - International Electrotechnical Commission
- ISO - International Organization for Standardization
- MS – Malaysian Standard
- NIOSH – National Institute of Occupational Safety and Health
- USEPA – United States Environmental Protection Agency

NO: SAMM 730

Page: 18 of 23

SCOPE OF TESTING: CHEMICAL**SITE:**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Environmental Monitoring <ul style="list-style-type: none"> Stationary Source Emissions 	Particulate Matter	In-house method, WI-TEC-S001, based on MS 1596:2003 – Determination of concentration and mass flow of particulate matter in flue gas for stationary sources emissions (Sampling)
	Elemental Analysis	In-house method, WI-TEC-S002, based on USEPA Method 29 (Sampling)
	Dark Smoke density	Ringelmann Smoke Chart
	<ul style="list-style-type: none"> Sulphuric Acid Sulphur Dioxide 	In-house method, WI-TEC-S017, based on USEPA 40 CFR 60, App. A, Method No. 8 – Sampling of Sulphuric Acid and Sulphur Dioxide Emission from Stationary Sources
	Hydrogen Halide and Halogen <ul style="list-style-type: none"> Hydrogen Chloride (HCl) Hydrogen Fluoride (HF) Hydrogen Bromide (HBr) Chlorine (Cl₂) Bromine (Br₂) 	In-house method, WI-TEC-S018, based on USEPA 40 CFR 60, App. A, Method No. 26A (Isokinetic Method) - Sampling of Hydrogen Halide and Halogen Emissions from Stationary Sources
Environmental Monitoring <ul style="list-style-type: none"> Pollutant in Air 	Methyl Ethyl Ketone	NIOSH Method 2500:1996, US NIOSH Manual of Analytical Methods, 4 th Edition (Sampling)
	Hydrocarbons	NIOSH Method 1500:2003, US NIOSH Manual of Analytical Methods, 4 th Edition (Sampling)
	Aromatic Hydrocarbons	NIOSH Method 1501:2003, US NIOSH Manual of Analytical Methods, 4 th Edition (Sampling)
	Ketones I	NIOSH Method 1300:1994, US NIOSH Manual of Analytical Methods, 4 th Edition (Sampling)
	Mineral Oil Mist	NIOSH Method 5026:1996, US NIOSH Manual of Analytical Methods, 4 th Edition (Sampling)
	Particulate Material	NIOSH Method 0500:1994, US NIOSH Manual of Analytical Methods, 4 th Edition (Sampling)
	Respirable Dust	NIOSH Method 0600:1998, US NIOSH Manual of Analytical Methods, 4 th Edition (Sampling)



NO: SAMM 730

Page: 19 of 23

SCOPE OF TESTING: CHEMICAL

SITE:

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<p>Environmental Monitoring</p> <ul style="list-style-type: none"> • Work place environment and hazard 	<ul style="list-style-type: none"> • Ammonia 	In-house Method, WI-TEC-M059, based on NIOSH 6016:2016, US NIOSH Manual of Analytical Methods, 5 th Edition (Sampling)
	<ul style="list-style-type: none"> • Formaldehyde • Acetaldehyde 	In-house Method, WI-TEC-M064, based on ISO 16000-3:2022 (Sampling)
	<ul style="list-style-type: none"> • Aluminium • Antimony • Arsenic • Barium • Beryllium • Boron • Cadmium • Calcium • Chromium • Cobalt • Copper • Europium • Gadolinium • Iron • Lanthanum • Lead • Lithium • Magnesium • Manganese • Molybdenum • Nickel • Phosphorus • Platinum • Potassium • Selenium • Silver • Sodium • Strontium • Tellurium • Thallium • Thorium • Tin • Titanium • Uranium • Vanadium • Yttrium • Zinc • Zirconium 	In-house Method, WI-TEC-M060, based on NIOSH Method 7302:2014, US NIOSH Manual of Analytical Methods, 5 th Edition (Sampling)

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 730

Page: 20 of 23

SCOPE OF TESTING: CHEMICAL**SITE:**

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<u>Environmental Monitoring</u> • Pollutant in Air	<ul style="list-style-type: none"> • Aluminium • Antimony • Arsenic • Barium • Beryllium • Bismuth • Boron • Cadmium • Calcium • Chromium • Cobalt • Copper • Gallium • Lead • Indium • Iron • Magnesium • Manganese • Molybdenum • Nickel • Phosphorus • Selenium • Strontium • Thallium • Tin • Titanium • Vanadium • Zinc 	NIOSH Method 7303:2003, US NIOSH Manual of Analytical Methods, 4 th Edition (Sampling)

Notes:

MS – Malaysian Standard

NIOSH – National Institute of Occupational Safety and Health

USEPA – United States Environmental Protection Agency

NO: SAMM 730

Page: 21 of 23

SCOPE OF TESTING: MICROBIOLOGY

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
Food <ul style="list-style-type: none"> • Flour and Confectionery • Dairy products • Non-alcoholic beverages • Fish and Fish Products • Nut, fruits and vegetables and derived products • Sauces, Herbs, Spices and Condiments 	Aerobic Plate Count	AOAC 990.12, 19 th Edition 2012 Compendium of Methods for the Microbiological Examination of Foods, APHA, 4 th Edition (2001). – Pour Plate Method
	Coliform	AOAC 991.14, 19 th Edition 2012
	Escherichia coli	AOAC 991.14, 19 th Edition 2012
	Staphylococcus aureus	AOAC 2003.07/2003.08/2003.11, 19 th Edition 2012
	Enterobacteriaceae Count	AOAC 2003.01, 19 th Edition 2012
	Salmonella	AOAC 2014.01
	Yeast & Mould	AOAC 2014.05
		Food and Drug Administration, Bacteriological Analytical Manual, Chapter 18, Edition April 2001 – Pour Plate & Spread Plate Method
	Listeria spp	AOAC Performance Tested Method 060801
Food <ul style="list-style-type: none"> • Fish and Fish Products 	<ul style="list-style-type: none"> • Coliform • Fecal Coliform • Escherichia coli 	In-house method, WI-TEC-M015M, Food and Drug Administration, Bacteriological Analytical Manual, Chapter 4, Edition Sep 2002 – MPN Method
Environmental Monitoring <ul style="list-style-type: none"> • Air (Sedimentation) • Surface (Direct Contact) • Surface (Swab) 	<ul style="list-style-type: none"> • Total Aerobic Bacteria Count • Total Yeast & Mould Count • Total Coliform Count • Total Escherichia coli Count • Total Enterobacteriaceae Count 	Compendium of Methods for the Microbiological Examination of Foods, APHA, 4 th Edition (2001)
Environmental Monitoring Surface (Swab)	Salmonella Staphylococcus aureus	Compendium of Methods for the Microbiological Examination of Foods, APHA, 4 th Edition (2001)



NO: SAMM 730

Page: 22 of 23

SCOPE OF TESTING: MICROBIOLOGY

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<u>Water</u> <ul style="list-style-type: none"> • Potable & Domestic Water • Mineral Water • Pharmaceutical Water • Distilled demineralized • Reverse Osmosis Water • Ultrapure Water 	Total Heterotrophic Count	In-house method, WI-TEC-M010M based on APHA 9215 B, 22 nd Edition 2012
		In-house method, WI-TEC-M010M based on APHA 9215 D, 22 nd Edition 2012
	<ul style="list-style-type: none"> • Coliform Count • Fecal Coliform • Escherichia coli Count 	APHA 9221, 22 nd Edition 2012 – MPN Method
	<i>Pseudomonas aeruginosa</i>	APHA 9213, 22 nd Edition 2012 (Multiple Tube Technique)
<u>Medical Devices</u> <ul style="list-style-type: none"> • Medical Devices 	Estimation of Product Bioburden <ul style="list-style-type: none"> • Aerobic Bacteria • Yeasts and Molds 	ISO 11737-1:2006
	Sterility Test	ISO 11737-2: 2019
<u>Others</u> <ul style="list-style-type: none"> • Cosmetics • Personal Care • Household Products • Natural drugs (medicinal plant preparations) 	Total Aerobic Microbial Count	U.S. Pharmacopeia <61>
	Total Yeast & Molds Count	U.S. Pharmacopeia <61>
	<i>Escherichia coli</i>	U.S. Pharmacopeia <62>
	<ul style="list-style-type: none"> • <i>Pseudomonas aeruginosa</i> • <i>Staphylococcus aureus</i> 	U.S. Pharmacopeia <62>, 2016 U.S. Pharmacopeia <62>, 2016

Notes:

AOAC – Association of Official Analytical Chemists
 APHA – American Public Health Association
 ISO – International Organisation for Standardization
 U.S. – United States

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation

NO: SAMM 730

Page: 23 of 23

SCOPE OF TESTING: NUCLEIC ACID

Materials/ Products Tested	Type of Test/ Properties Measured/ Range of Measurement	Standard Test Methods/ Equipment/Techniques
<u>Pharmaceutical and cosmetics</u> <ul style="list-style-type: none"> • Cream • Ointment • Powder • Syrup • Tablet 	Porcine DNA	In-house Method, WI-TEC-M027M, based on RT-qPCR
<u>Food</u> <ul style="list-style-type: none"> • Cereal products • Nuts and nut products • Dairy products • Meat and meat products • Fish, crustaceans and mollusks • Poultry and poultry products • Eggs and egg products • Edible fats and oils • Margarine • Vegetables and vegetable products • fruit, jams and other fruit products • Fruit juices and concentrates sugar products, honey and confectionery • Beverages • Nutritional supplements • Additives to foods • Gelatin and other gums • Herbs and spices • Animal Feeds 	Porcine DNA	In-house Method, WI-TEC-M027M, based on RT-qPCR

Scan this QR Code or visit www.ism.gov.my/cab-directories for the current scope of accreditation