Issue date: 26 November 2024
Valid Until: 19 March 2029

NO: SAMM 133

LABORATORY LOCATION/ CENTRAL OFFICE:	Jabatan Kimia Malaysia Negeri Pulau Pinang Cawangan Pulau Pinang Jalan Tull 10450 Pulau Pinang , 10450, PULAU PINANG MALAYSIA
ACCREDITED SINCE :	24 MARCH 2025
FIELD(S) OF TESTING:	CHEMICAL MICROBIOLOGICAL

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).

CENTRAL LOCATION:	Jabatan Kimia Malaysia Negeri Pulau Pinang Cawangan Pulau Pinang Jalan Tull 10450 Pulau Pinang , 10450, Pulau Pinang
FIELD(S) OF TESTING :	CHEMICAL, MICROBIOLOGICAL

SCOPE OF TESTING : CHEMICAL

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
Industry Section foods Alcoholic Beverages	Gas Chromatographic determination of Ethanol in alcoholic beverages	JKM K1 Issue No. 2, 1999
Tobacco And Tobacco Products	Identification of tobacco leaves and cloves by Thin Layer chromatography	JKM K45, Issue No.1, 2001
Cigarettes Tobacco Leaves And Cloves	Analysis of Cigarettes for Enforcement Purpose	JKM I03/42, Issue No. 1, 2011
Palm Oil/ Palm Oil Products	Lovibond Colour	MPOB Test Method p4.1:2004
	Iodine Value	MPOB Test Method p3.2:2004
	Free Fatty Acids	MPOB Test Method p2.5:2004
	Slip Melting Point	MPOB Test Method p4.2:2004

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Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
	Moisture and Volatile Matter	MPOB Test Method p2.1 Part 1:2004
	Impurities	MPOB Test Method p2.2:2004
	Saponification Value	MPOB Test Method p3.1:2004
	Identification of Fatty Acid Composition (FAC) as their Methyl Easters (FAME)	MPOB Test Method p3.5:2004
	Preparation of Methyl Easters of Fatty Acid – Part 4	MPOB Test Methods p3.4:Part 4:2004
Petroleum And Petroleum Products	Qualitative determination of petrol, kerosene and diesel by Gas Chromatography	JKMPP I 01, Issue No. 1, 2006
	Determination of Flash Point by Small Scale Closed Cup	Small Scale Closed Cup JKMPP I 03, Issue No. 1, 2008, based on ASTM D 3828-05 Method B.
Leather Products / Brush	Identification of Pig Skin in Leather Products and Pig Bristle in Brushes	JKM 1 02/2-18, Issue No. 2, 2017
Liquefied Petroleum Gas (lpg)	Detection of Liquefied Petroleum Gas (LPG) by GC-MS	JKM I 01/04, Issue No. 1, 2016
Environmental Section water And Environmental Monitoring Industrial Effluent, Potable Water, Ground Water & Surface Water	pH	APHA 4500-H+ B. Electrometric Method. APHA 21st Edition 2005
	Phosphate	APHA 4500-P E. Ascorbic Acid Method. APHA 21st Edition 2005
	Chloride	APHA 4500-CI-B. Argentometric Method. APHA 21st Edition 2005
	Total Solids	APHA 2540 B. Total Solids Dried at 103-105 á´¼C. APHA 21st Edition 2005
	Total Suspended Solids	APHA 2540 D. Total Suspended Solids Dried at 103-105 á´¼C. APHA 21st Edition 2005
	Chemical Oxygen Demand (COD)	APHA 5220 B. Open Reflux Method. APHA 21st Edition 2005
	Biochemical Oxygen Demand (BOD)	APHA 5210 B. 5 Days BOD Test; APHA 4500-O C. Azide Modification; APHA 4500-O G. Membrane Electrode Method, APHA 21st Edition 2005.
	Metals (Cd, Zn, Cu, Ni, Mn, Pb, Fe, Cr)	APHA 3111 B. Direct Air-Acetylene Flame Method. APHA 21st Edition 2005
	Sulphate	APHA 4500 S042 – E.Turbidimetric Method. APHA 21st Edition 2005
	Chromium Hexavalent	APHA 3500-Cr B Colorimetric Method APHA 21st Edition 2005

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
Environmental Section water And Environmental Monitoring Portable Water, Ground Water & Surface Water	Colour	APHA 2120 B. Visual Comparisons Method. APHA 21st Edition 2005
	Total Hardness	APHA 2340 C. EDTA Titrimetric Method. APHA 21st Edition 2005
	Conductivity	APHA 2510 B. Laboratory Method. APHA 21st Edition 2005
	Turbidity	APHA 2130 B. Nephelometric Method. APHA 21st Edition 2005
Surface And Industrial Effluent	Oil and grease	APHA 5520 B. Liquid-liquid, Partition-Gravimetric Method. APHA 21st Edition 2005
	Alkalinity	APHA 2320 B. Titration Method. APHA 21st Edition 2005
	Flouride	APHA 4500-F-D. SPADNS Method. APHA 21st Edition 2005
Ground Water, Surface Water And Industrial Effluent	Arsenic	APHA 3114 C. Continuous Hydride Generation/Atomic Absorption Spectrometric Method. APHA 21st Edition 2005
	Mercury	APHA 3112 B. Cold Vapour Atomic Absorption Spectrometric Method. APHA 21st Edition 2005
Surface Water And Waste Water	Total Dissolved Solids	APHA 2450 C. Total Dissolved Solids Dried at 180 á´¼C. APHA 21st Edition 2005
Water And Environmental Monitoring Palm Oil & Rubber Effluents And Surface Water	Cyanide	APHA 4500-CN-C. Total Cyanide After Distillation; and APHA 4500CN-D. Titrimetric Method. APHA 21st Edition 2005
	Oil and Grease	DOE Revised Standard Methods (1985) for Analysis of Rubber and Palm Oil Mill Effluent. 3rd Edition 2011, Oil and Grease; and APHA 5520 B. Liquid-liquid, Partition Gravimetric Method. APHA 21st Edition 2005
	BOD (Reference Method)	DOE Revised Standard Methods (1985) for Analysis of Rubber and Palm Oil Mill Effluent. 3rd Edition 2011
	COD (Reference Method)	DOE Revised Standard Methods (1985) for Analysis of Rubber and Palm Oil Mill Effluent. 3rd Edition 2011

Material / Product Tested	**Type Of Test / Properties Measured / Range Of Measurement**	**Standard Test Methods / Equipment / Techniques**
	Total Nitrogen (Reference Method)	DOE Revised Standard Methods (1985) for Analysis of Rubber and Palm Oil Mill Effluent. 3rd Edition 2011
	Ammoniacal Nitrogen (Reference Method)	DOE Revised Standard Methods (1985) for Analysis of Rubber and Palm Oil Mill Effluent. 3rd Edition 2011
Water And Environmental Monitoring Water And Wastewater	Colour ADMI	APHA 2120F/Spectrophotometer APHA 21st Edition, 2005
Industrial Effluent And Ground Water	Phenol	APHA 5530 D. Direct Photometric Method. APHA 21st Edition 2005
Water And Wastewater	Chemical Oxygen Demand (COD)	HACH Method 8000 using Spectrophotometer
	Nitrate	HACH Method 10049 using Spectrophotometer
	Ammonia	HACH Method 8038 using Spectrophotometer
Water, Industrial Effluent	Cyanide	APHA 4500-CN-E. Colorimetric Method using Spectrophotometer
Industrial Effluent And Sewage	Determination of Ammonical Nitrogen	APHA 4500-NH3 B, C. Preliminary Distillation Step and Titrimetric Method. APHA 21st Edition 2005.
Water An Effluent	Metals (Al, As, Ba, B, Cd, Cr, Cu, Fe, Pb, Mn, Ni, Se, Ag and Zn)	APHA 3120 B. Inductively Coupled Plasma (ICP) Method. APHA 21st Edition 2005.
Liquid, Solid And Semisolidwaste	Elemental Analysis by Using Energy Dispersive X-Ray Fluorescence (ED XRF)	JKMPP E 01/2019 based on Rigaku NEX DE Energy Dispersive X-Ray Fluorescence Spectrometer Method
Food Section **foods** Sauce, Herbs, Spices, And Condiments	Sorbic Acid and Benzoic Acid	JKM F 0102* based on J.A.O.A.C., Vol, 70 (1987) p. 892-896 by Direct Solvent and HPLC
	Water Soluble Coal Tar Dyes	JKM F 0202* based on Pearson's Chemical Analysis of Food, 6th Edition (1970), page 56-59
Vinegar	Acetic Acid	JKM (PP) 30/98 – KES8 6902* based on Pearson's Chemical Analysis of Food, 9th Edition (1991)
Rice	Rice Grading	JKM (PP) 32/98 – KES10* based on the Rice (Grade and Price Control Order 1992)
	Ochratoxin A	JKMPP F 0611* (HPLC) based on Vicam OchraTest Instruction Manual (G9551 REV B, 8 th December 2008)

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Foods Nut, Fruits, Vegetables, And Derived Product	Aflatoxins: (B1, B2, G1, and G2)	JKMPP F0609* (HPLC) based on Vicam AflaTest Instruction Manual (715001733 Rev. B)
Foods Sauces, Herbs, Spices, And Condiments	Acidity	JKMPP F 0930 based on AOAC 17th Edition, Ch. 37.37, p 11. JKM MDS 264:1982 and JKM MDS 236:1981.
	Aflatoxins: (B1, B2, G1, and G2)	JKMPP F 0610 (HPLC) based on Vicam Instruction Manual (715001733 Rev. B)
	Total Nitrogen	JKMPP F 0908* based on Pearson's Chemical Analysis of Food, 8th Edition (1981)
	Sodium Chloride	JKM F 0910* based on Pearson's Chemical Analysis of Food, 8th Edition (1981)
	Total Ash/Acid Insoluble Ash	JKM F 0902* based on the Pearson's Chemical Analysis of Food, 8 th Edition
Foods Flour And Confection, Non-alcoholic Beverages	Total Ash	JKM (PP) 43/00 – KES12 6005* based on AOAC 13th Edition 14.006.
	Total Ash/Water Soluble Ash and Water Insoluble Ash	JKM F 0910* based on Pearson's Chemical Analysis of Food 8th Edition
Foods Non-alcoholic Beverages	Caffeine	JKM F 0907 based on Pearson's Chemical Analysis of Food, 8th Edition, and AOAC 13th edition, 15.025 – 028
	Theobromine	JKMPP F 0931* based on Nestle Laboratory Instruction LI No. 33 119- 2 on Theobromine and Caffeine by HPLC and JKM F 0941*
	Water Soluble Extract	JKM F 0912 based on AOAC Official Methods of Analysis (1990) page 762; and International Standard, ISO 9768;1994 (E) page 1 – 2
Foods Non-alcoholic Beverages Edible Oil, Fats, And Their Products - Sugar And Sugar Products - Sauce, Herbs, Spices, And Condiments	Moisture	JKMPP F 0302* based on AOAC Vol. 2, 15th Edition (1990) and Pearson's Composition and Analysis of Foods, 9th Edition (1991)
Foods Common Salts	Sodium Chloride	JKM F 0920* (Titrimetric method) based on Pearson's Chemical Analysis of Food 7th Edition

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Foods Fish And Fish Products	Fish Contents	JKMPP F 0108* based on Official Methods of Analysis, AOAC International 17th Edition
Foods Edible Oil, Fats, And Their Products	Total Fat	JKM F 0904* based on AOAC 936.06B
Foods Dairy Products	Fat in Milk	JKM F 0905* (Gerber Method) based on Pearson's Chemical Analysis of Food 8th Edition, page 437 – 438
	Acidity	JKM F 0918* (using Titration) based on Pearson's Chemical Analysis of Food, page 433 – 400
	Total Solids	JKMPP F 0913* based on JKM MDS 261: 1986/469: 1989 (Pindaan 1993).
Foods Milk And Milk Products	Aflatoxin M1	JKM F 0602* based on i. Vicam Afla M1 Instruction Manual ii. Jr. AOAC International, Vol. 84 (2001) Pg. 437 – 443
Foods Sugar And Sugar Products	Sucrose	JKMPP F 0921* Polarimeter based on Pearson's Chemical Analysis of Foods, 6th Edition page 119 – 122
	Solids (soluble) in Fruit and Fruit Products and Citrus Fruit Juice	JKMPP F 0909* based on AOAC Standard Method 932. 12, 932. 14C. 983. 17, and 942. 15A of the 15th Edition
	Patulin	JKMPP F 0605* based on Journal of AOAC International, Vol. 90, No. 3, 2007 and Maria H. I., Myrna S. (2007) Incidence of Patulin in Brazillian apple-based drinks, Food Control 19, 417 – 422
Foods Sauce, Herbs, Spices, And Condiments	Total Dissolved Solids	JKMP F 0929* based on Pearson's Composition and Analysis of Foods 9 th Edition (1991) page 224
	Volatile Essential Oil (VEO)	JKM 0922* based on AOAC Official Methods of Analysis (1990) page 1001
Foods Non-alcoholic Beverages, Coffee	Ochratoxin A	JKMPP F 0603* using Immunoaffinity Column Cleanup and Liquid Chromatography based on AOAC, Vol. 84, No. 1, 2001 and AOAC Vol. 88, No. 3 (2005)

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Foods Cereal And Cereal Products, Non-alcoholic Beverages	Zearalenone	JKMPP F 0604* (HPLC) based on Journal of AOAC International, Vol. 88, No. 6, 2005 and Vol. 84, No. 5, 2001 and Vicam ZearalaTest TMWB Instruction manual using Immunoaffinity Column Cleanup (GN-MC9537-0, 30 May 2022)
	Deoxynivalenol (DON)	JKMPP F 0606* (HPLC) based on Vicam DONTest TMWB Instruction manual using Immunoaffinity Column Cleanup (GN-MC9560-1, Rev. B)
Foods Edible Oils, Fats, And Their Products	Aflatoxins (B1, B2, G1, and G2)	JKMPP F 0612 based on Food Control 70, 152-160
Feedmeals	Aflatoxins (B1, B2, G1, and G2)	JKMPP F 0607* (HPLC) based on Vicam AflaTest TMWB Instruction Manual (715001733, Rev. B)
Fish And Fish Products	Aflatoxins B1	JKMPP F 0608* (HPLC) based on Vicam AflaTest TMWB Instruction Manualusing Immunoaffinity Column Cleanup (715001733, Rev. B)
Seed	Determination of Mycotoxins in Herbal Seed by Liquid Chromatography	JKMPP F 0613 based on AflaTest TMWB Instruction Manual (715001733, Rev. B)
Rhizome	Ochratoxin A in herbal rhizome	JKMPP F 0614* (HPLC) based on OchraTest Instruction Manual (8th September 2008)
Milk And Milk Products	Aflatoxin M1	JKMPP F 0615* (LC-MS/MS) based on AflaTest Instruction Manual (April 2021)

SCOPE OF TESTING : MICROBIOLOGICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Water Raw And Treated Water	Detection and Identification of Coliform Bacteria and Escherichia coli	JKM M 2032 based Detection and Identification using Chromocult® Coliform Agar Membrane Filtration Method

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Coliform, Fecal Coliform, and Escherichia coli	JKM M 2033 based on APHA 9221 B. Standard Total Coliform Fermentation Technique; APHA 9221 E Fecal Coliform Procedure; and APHA 9221 F Escherichia Coli Procedure. APHA 21st Edition 2005
	Enumeration of Culturable Microorganisms	JKM M 2038 based on Colony Count By Inoculation in a Nutrient Agar Culture Medium – ISO 6222:1992 (E)
	Enumeration of Clostridium perfingens	JKM M 2035 based on Wales 513. 1, Membrane Filtration
	Enumeration of Pseudomonas aeruginosa	JKM PP M 2001 based on APHA 9213E, Membrane Filtration. APHA 21st Edition 2005
	Detecton and Enumeration of Intestinal enterococci	JKM M 2036 based on Part 2; Membrane Filtration Method – ISO 7899-2:2000 (E)
	Coliform and E. coli	JKM M 2040; APHA 9921 A, B, C, F and 9223 A, B; 23 rd Edition; Most Probable Number (MPN)
Foods Cereals, Nuts, Dairy Products, Meat, Fish, Eggs, Vegetables, Confectionary, Beverages, And Juice	Coliform and Escherichia coli	JKM M 3053 based on AOAC 20th Edition 2016 17.3.04. Dry Dehydrated Film
	Howard Mold Count	JKM M 3021 based on AOAC 17th Edition 2000 16.19.02
	Aerobic Plate Counts	JKM M 3012 based on FDA Bacteriological Analytical Manual Online 2001, Chapter 3
	Detection of Salmonella	JKM M 3101 based on Horizontal Method for Detection of Salmonella spp. – ISO 6579//;2002
	Staphylococus aureus Counts	JKM M 3073 based on AOAC 20023, 11. Petrifilm Staph Express Count (STX Plates)
	Colony Count of Yeast and Moulds	JKM M 3020 based on Australian Standards AS 1766.2.2 – 1997, Food Microbiology, method 2.2
Foods Cereals, Nuts, Dairy Products, Meat, Eggs, Rice/flour, Herbs And Spices	Bacillus cereus	JKM M 3080 based on AOAC, 18th Edition, 2005 17.8.01 (980.31), MPN