

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 565

Page: 1 of 8

LABORATORY LOCATION/ CENTRAL OFFICE:	Metalux Oil Analysis Sdn Bhd 110B, LG Floor, Industry Centre UTM Technovation Park KM 20, Jalan Pontian Lama, 81300 Skudai Johor , 81300, JOHOR MALAYSIA
	
ACCREDITED SINCE :	06 APRIL 2025
FIELD(S) OF TESTING:	CHEMICAL

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:	Metalux Oil Analysis Sdn Bhd 110B, LG Floor, Industry Centre UTM Technovation Park KM 20, Jalan Pontian Lama, 81300 Skudai Johor , 81300, Johor
FIELD(S) OF TESTING :	CHEMICAL,

SCOPE OF TESTING : CHEMICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Lubricating Oil	Acid Number	ASTM D664 method A
	Kinematic viscosity	ASTM D7279-18 Automated
	Chromium, Arsenic, Cadmium	JKM E 0505 based on Pan Analytical
	Water Content	ASTM D6304-20 Coulometric Karl Fisher Titration
	Flash Point	ASTM D93-20
	Total Acid Number	ASTM D664-18e2
	Kinematic Viscosity	ASTM D445-21
	Pour Point	ASTM D97-17b
	Na, Fe, Pb, Cu, Ag, Sn	In-House Method 0557 based on ASTM D5863-11 & ASTM D5184-"12

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 565

Page: 2 of 8

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Petroleum & Petroleum	Ash Content	ASTM D482-13
	Kinematic Viscosity	ASTM D445
	Kinematic Viscosity	ASTM D445
	None	None
	None	None
	Analysis of Natural Gas and pH Value	GPA 2261
	Density, Relative Density and	In-House Method 001 based on
	None	None
	None	None
	None	None
	None	None
Products	Aluminium	None
	None	None
	None	None
	None	None
	None	None
	Disturbance power from cable	CISPR 16-2-2:2010
	Nickel	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	campylobacter jejuni and C. coli)	None
	None	EN 61000-4-2:2009
	Electrical Fast Transient	IEC 61000-4-4:2012
	electromagnetic field immunity	EN IEC 61000-4-3:2020
	None	Based on Rapid Porcine Meat (Raw)
	None	Based on Gerhardt Dumatherm
	Gelatin/Collagen	HV/TM/BCLAB/005
	Fat/Oil	HV/TM/BCLAB/003
	None	and Analysis of Foods; 9' Edition,
	real-time PCR	In-house Method IHRAM-TM-101
	None	994.10 & AOAC 976.26, 17" Edition,
	None	950.35 17 Edition, 2000
	None	None
	Density	BP: Appendix V-A246 G. Density
	None	Determination of pH
	Weight per mL at 20-25 °C	BP Appendix V G Determination of

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 565

Page: 3 of 8

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Limit and method of measurements	ANSI C63.4:2014
	None	None
	Carbohydrate	In-House Method CLWI-TEC-F022
	None	Agrobot, Cluj 38 (1) 2010, 44-48
	None	None
	None	None
	None	None
	None	None
	Copper	None
	Electronic Apparatus -" Safety Requirements	Except:
	Total Carbohydrate	Method of Analysis for Nutrition
	None	2005.Page 393-397
	None	None
	e	None
	None	None
	None	None
	None	None
	None	None
	Impurities	MPOB p2.2:2004
	Peroxide Value	MPOB p2.3:2004
	Acidity/FFA	MPOB p2.5:2004
	Iodine Value	MPOB p3.2:2004
	Colour Lovibond	MPOB p4.1 Part 1:2004
	Slip Melting Point	MPOB p4.2:2004
	Anisidine value	MPOB p2.4:2004
	None	Specimen Clause 6.2 -" Rigid Tubes
	API Gravity of Crude Oils by	ASTM D5002
	Density, Relative Density of API	ASTM D4052
	Yield Strength	ASTM A370-21 (Section 7 to 14)
	None	on AOAC 925.45B
	None	None
	Butyric acid (C4:0)	None
	(cis)	None
	None	None
	None	None
	None	None
	None	None
	None	on Mettler Toledo Ti-Note EasyPlus
	None	C (2008)
	None	None
	None	None
	Yeast & Mould	FDA-BAM Chapter 18 (Plate Count)

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Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 565

Page: 4 of 8

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None
	None	None
	None	None
	None	None
	Fat (Acid Hydrolysis)	n House Method TM/F-014 Based on
	Moisture	n House Method TM/F-004 Based on
	None	Examination of Foods, 4th Edition
	Vibrio parahaemolyticus	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Coliform	FDA-BAM Chapter 4 (2020)
	Fecal Coliform	FDA-BAM Chapter 4 (2020)
	None	None
	None	AOAC 991.14 (3M Petrifilm) (2002)
	None	None
	Clostridium perfringens Count	FDA-BAM Chapter 16 (2001)
	None	None
	Dynamic Viscosity and Density and Fire Points by Cleveland	None
	Moisture Karl Fischer Reagent	ISO 8534 (M) / KF Volumeter (E) /
	Flash Point (Cleveland Open	ASTM D 92-90
	None	Gel-Clot Method
	None	None
	Test for absence of I	None
	None	None
	None	L03-004, Based on VICAM Zearala
	None	Spectrometry (WDXRF)
	in Fruit Juices and Related	onBrause et al., Journal of AOAC
	None	Lovibond Colour in Palm Oil and Palm
	None	(CTAB Protocol) based on
	None	Conventional Polymerase Chain
	None	(HPLC)
	None	None
	Violet	In-House No.FH 38
	None	None
	None	None
	Refer Appendix III	2007.01 (GCMSMS)
	None	None

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 565

Page: 5 of 8

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	None
	-35S Promoter	Detection Using Real Time PCR
	None	None
	None	None
	None	968.28
	None	None
	None	None
	None	None
	Mercury	In-house Method SOP-0217-1018,
	None	UHPLC
	None	UHPLC
	Ash	In-house Method 0510 based on
	None	AOAC 964.21
	None	None
	None	Edition, 1978
	None	None
	None	None
	None	2:2009
	Bioburden Estimation	ISO 11737-1:2006
	Sterility Test	ISO 11737-2:2009
	Endotoxin in Medical Devices	USP 29' Edition (LAL Gel Clot
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Bend Performance	Clause 7.2.4 e
	Lithium, Li Vanadium,V	001 with reference to USP 39 and USP 40
	None	nicotinic acid and nicotinamide in
	None	None
	phthalate, DIBP	None
	Dibutyl phthalate, DBP	006, with reference to ISO 8124-
	None	None
	None	None
	None	L03-007-Determination of Aflatoxin
	None	G03-123(1)-Detection of Maize in
	None	G03-143(1)-Detection of Event-Specific

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 565

Page: 6 of 8

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	None	G03-143(2)-Detection of Event-Specific
	None	G03-143(3)-Detection of Event-Specific
	None	G03-143(5)-Detection of Event-Specific
	None	G03-143(4)-Detection of Event-Specific
	NoneNone	None
	None	
	None	None
	Ultimate Tensile Strength e	(ref no: QA/METAL/05)
	None	None
	Monosodium Glutamate	F024 by HPLC Fluorescence
	None	None
	None	None
	None	None
	None	None
	None	None
	None	None
	Aerobic Plate Count	None
	Total Coliform Count	FDA-BAM, Ed, Chap 4
	Fecal Coliform	None
	Salmonella spp.	FDA-BAM, Ed, Chap 5
	- Sulphate	BS 1377, 1990-Part 3 Section 5
	- pH Value	BS 1377, 1990-Part 3 Section 9
	- Loss on Ignition	BS 1377, 1990-Part 3 Section 4
	Average Grain Size Measurement	Method)
	- Rockwell Method	ASTM E18: 20
	Break Test (Filled Weld)	None
	Properties Measured /	Method/
	Total Plate Count	Plating
	Coliform	Determination of Coliform & E.coli
	Escherichia Coli	(Pour Plate Method) - AOAC
	Escherichia Coli	performance tested. Certificate no.
	Escherichia Coli	020902
	Coliform	AOAC 998.08. Edition,
	Escherichia Coli (Petrifilm)	2019/Petrifilm
	Staphylococcus Aureus (Petrifilm)	AOAC 2003.11. 21% Edition,
	Staphylococcus Aureus (Petrifilm)	2019/Petrifilm
	Salmonella (Petrifilm)	AOAC 2014.01. 21% Edition,
	Salmonella	2019/Petrifilm
	(Alpha Tocopherol, Alpha Tocotrienol,	FDA BAM Chapter 5. 2020;
	Beta Tocotrienol, Gamma Tocotrienol,	70, No. 12, December 1993/HPLC
	Delta Tocotrienol)	None
		None

Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 565

Page: 7 of 8

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Phytosterols Content	EvTM_0008/HPLC
	(Sitosterol, Stigmasterol)	None
	Plant Squalene	EvTM_0007/HPLC
	Solvent Residue	EvTM_0005/GC Headspace
	(Hexane, Ethyl Acetate, Methanol, Isopropanol, Dichloromethane, Ethanol)	None
	Benzo A Pyrene	EvTM_0004, Based on AOCS Cd
	Benzo A Pyrene	21 - 91, 5 th Edition (2003)
	Moisture	AOCS Ca 2e - 84, Edition
	Moisture	(2003)
	Mixed Carotene	None
	Mixed Carotene	EvTM_0150/HPLC
	Solvent Residue	EvTM_0151/GC-HS
	(Hexane, Ethyl Acetate, Methanol, Isopropanol, Dichloromethane, Ethanol)	None
	Moisture	AOCS Ca 2e - 84, Edition
	Moisture	(2003)
	None	None
	2,6-Di-Tert-Butyl Hydroxytoluene	EvTM_0049/GC
	Tocotrienol, Beta Tocotrienol, Gamma Tocotrienol, Delta Tocotrienol)	1993/HPLC
	Benzo A Pyrene	EvTM_0114, Based on AOCS Cd 21-91, 5 th Edition (2003)
	Mixed Carotene	EvTM_0115/HPLC
	Mixed Carotene	EvTM_0116/UV-VIS
	Lycopene Content	EvTM_0118/UV-VIS
	Plant Squalene	EvTM_0124/HPLC
	Phytosterols Content (Sitosterol, Stigmasterol)	EvTM_0125/HPLC
	Solvent Residue (Hexane, Ethyl Acetate, Methanol, Isopropanol, Dichloromethane, Ethanol)	EvTM_0126/GC HS
	Moisture	None
	Moisture	AOCS Ca 2e - 84, Edition
	Moisture	(2003)
	Total Aerobic Microbial Count	XVI B
	Total Combined Yeasts/ Moulds Count	BP 2020/Volume
	Coliform Count	XVI B
	Bile-Tolerant Gram-Negative Bacteria	FDA BAM Chapter 4, 2020
	Detection of Specific Microorganism	BP 2020/Volume
	Pseudomonas aeruginosa	BP 2020/Volume
	Staphylococcus aureus	IV/Appendix XVI B
		None

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Schedule

Issue date: 06 April 2025
Valid Until: -



NO: SAMM 565

Page: 8 of 8

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Escherichia coli	None
	Salmonella spp	None
	Total Aerobic Microbial Count	XVI B
	Total Combined Yeasts/ Moulds Count	BP 2020/Volume XVI B
	Coliform Count	FDA BAM Chapter 4, 2020
	Bile-Tolerant Gram-Negative Bacteria	BP 2020/Volume XVI B
	Detection of Specific Microorganism	BP 2020/Volume
	Pseudomonas aeruginosa	XVI B
	Staphylococcus aureus	None
	Escherichia coli	None
	Salmonella spp	None
	None	spp. by Real-Time PCR (qPCR) -" SYBR
	None	None
	None	in Soybean by real-Time PCR (qPCR)
	None	DNA (Universal Plant) by Real-Time
	Free Fatty Acids	None
	Moisture and Volatile Matter Hot Plate Method	AOCS Ca 2b-38 (1997)
	Insoluble Impurities	None
	Iodine Value of Fats and Oils	AOCS Ca 3a-46 (1997)
	Cyclohexane-Acetic Acid Method	None
	Slip Melting Point	AOCS Cd 1d-92 (1997)
	AOCS Standard Open Tube Melting Point	None
	Color	AOCS Cc 3-25 (1997)
		None
		AOCS Cc (1997)

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