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LABORATORY LOCATION/ CENTRAL OFFICE: 	TUV Rheinland Malaysia Sdn. Bhd. No.27, Jalan Para U8/103 Metropolitan Business Park Seksyen U8, Bukit Jelutong 40150 Shah Alam, Selangor , 40150, SELANGOR MALAYSIA
ACCREDITED SINCE :	06 APRIL 2025
FIELD(S) OF TESTING:	ELECTRICAL ELECTROMAGNETIC COMPATIBILITY (EMC) MECHANICAL

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:	TUV Rheinland Malaysia Sdn. Bhd. No.27, Jalan Para U8/103 Metropolitan Business Park Seksyen U8, Bukit Jelutong 40150 Shah Alam, Selangor , 40150, Selangor
FIELD(S) OF TESTING :	ELECTRICAL, ELECTROMAGNETIC COMPATIBILITY (EMC), MECHANICAL

SCOPE OF TESTING : ELECTRICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
And Heat Pumps- Testing	None	ISO 5151:2010
And Rating For Performance	Cooling seasonal performance	(ISO 5151:2017)
Conditioners And	conditioners and dehumidifiers	22.116, Annex and Annex NN
Dehumidifiers	None	None
Electrical Appliances	for fans	+ AMD2:2008 IEC
	None	60335-2-80:2015
		MS IEC 60335-1:2005
Electrical Heat Pumps, Air-	for electrical heat pumps, air-	IEC 60335-2-40:2018 except
Equipment	None	clause
		EN 55032:2015+A1:2020

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Immunity requirements	CISPR: 35:2016
	multimedia equipment - Emission	None
	None	RSS-Gen, RSS-119, RSS-130
	None	None
	None	None
	None	None
	None	0.45 + 7.6 nA
	None	None
	None	None
Household And Similar	Safety, Particular requirements	IEC 60335-2-80:2002 + AMD1:2004
	Safety Requirements	MS IEC 60335-1:2015
Household Appliances,	Safety, Particular requirements	IEC 60335-2-2:2009 + AMD1:2012 +
	Safety, Particular requirements	IEC 60335-2-40:2013
	Emission requirements	EN55014-1:2006 + A1:2009 + A2
Non-ducted Air Conditioners	Full Test, (Air-Enthalpy Methods)	MS ISO 5151:2012
Products For Industrial	None	IEC 61000-6-3:2006+A1:2010
Suction Cleaning Appliances	suction cleaning appliances	IEC 60335-2-2:2019
	3,4, 9, 12, 14, 17, 18, 27, 31 &	1:2010, COR1:2010, COR2:2010,
	3,4, 9, 12, 14, 17, 18, 27, 31 &	1:2010, COR1:2010, COR2:2010,
Vacuum Cleaners And Water-	for vacuum cleaners and water-	AMD2:2016

SCOPE OF TESTING : ELECTROMAGNETIC COMPATIBILITY (EMC)

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
(continued)	test	None
	Power frequency magnetic field	IEC 61000-4-8:2009
	11. Determination of Viscosity	In-house ESL QPL A011
	None	None
	Boron (as % B ₂ O ₃)	In-house Method P02-10 based on
	None	and Management unit PORIM pg.31
	None	1994
	None	None
	Seal Degradation Test	AS/NZS 4284: 2008 (Clause 8.10)
	Seismic and Wind Induced Inter	AAMA 501.4-2018 (Clause 7.0)
	None	None
	None	None
	None	None
	None	None
	Escherichia coli	APHA 9221.F (MPN) APHA 9222.H (Membrane Filter)

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Fecal Streptococci	APHA 9230.C (Membrane Filter)
	Clostridium perfringens	HPA NSM WS5 Issue 3 (Membrane Filter)
	Pseudomonas aeruginosa	APHA 9213.E (Membrane Filter)
	Sulphite reducing anaerobes	ISO 6461-2:1986 (Membrane Filter)
	penetration)	None
	Dynamic Water Penetration Test	AAMA 501.1-17
	Seal Degradation Test	AS/NZS 4284:2008
	Seismic and Wind Induced Inter	AAMA 501.4-2009
	None	ASTM E330/ E330M-14
	of Transparent and Opaque Liquids	None
	Smoke Point	ASTM D1322
	Determination of Calcium	MS 679: Part - V: Part IV, Clause 5,
	Force at Break(0-500N)	None
	Elongation at break (0 -" 1000%)	None
	None	None
	None	None
	None	None
	None	None
	None	ASTM E 190:2014
	a. Vickers (HvN)	ASTM E384-2017
	Nitrofurans residues:	In-house Method, Ref. No. MOH D03-
	None	DIN ISO 34-1:2016 AS 1683.12: 2001 (2018)
	Abrasion Resistance	ASTM D5963-04 (2019) (Method A) ISO 4649: 2017 (Method A) DIN ISO 4649:2014 (Method A)
	DC to 1 kHz	(of reading) 0.0035 Q
	at Frequency: 2.5 MHz to 1.3 GHz	(of reading)
	1 kHz	0.000048 nF
	100 Q DC to 1 kHz	0.023 Q
	None	0.5 bar
	None	None
	Liquid Limit	None
	None	None
	None	None
	None	None
Apparatus	None	CISPR 14-1:2016
Electric Tools And Similar	None	2011
Electrical/ Electronic	Electrostatic Discharge Immunity	IEC 61000-4-2:2008
	Radiated, radio-frequency,	IEC 61000-4-3:2020
	Emission requirements	IEC 61000-6-4:2018
Environments And	None	EN IEC 61000-6-4:2019
Frequency Equipment	None	None

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Household Appliance	Safety, general requirements	IEC 60335-1:2010 + AMD1:2013 +
Industrial, Scientific And	Emission requirements	CISPR 11:2015+A1:2016+A2:2019
	Radio-frequency disturbance	EN 55011:2016
Ite And Multimedia	Emission requirements	CISPR 32:2015+A1:2019
	Electromagnetic compatibility of	BS EN 55032:2015
Laboratory Equipment	None	EN 61326-1:2013
Light- Industrial Environments	None	IEC 61000-6-3:2020
	Immunity requirements	IEC 61000-6-1:2016
Measurement, Control And	General requirements	IEC 61326-1:2020
Medical (ism) Radio	None	EN 55011:2016+A11+2020
Products	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
	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
	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
	None	None

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	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	None
	None	on Mettler Toledo Ti-Note EasyPlus
	None	C (2008)
	None	None
	None	None
	Yeast & Mould	FDA-BAM Chapter 18 (Plate Count)
	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
	None	None
	Coliform	FDA-BAM Chapter 4 (2020)
	Fecal Coliform	FDA-BAM Chapter 4 (2020)
	None	None

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	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
	None	None
	-35S Promoter	Detection Using Real Time PCR
	None	None
	None	None
	None	968.28
	None	None
	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

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	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
	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
	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
	None	None
	Aerobic Plate Count	None

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	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
	Phytosterols Content	None
	(Sitosterol, Stigmasterol)	EvTM_0008/HPLC
	Plant Squalene	None
	Solvent Residue	EvTM_0007/HPLC
	(Hexane, Ethyl Acetate, Methanol,	EvTM_0005/GC Headspace
	Isopropanol, Dichloromethane,	None
	Ethanol)	None
	Benzo A Pyrene	None
	Benzo A Pyrene	EvTM_0004, Based on AOCS Cd
	Moisture	21 - 91, 5 th Edition (2003)
	Moisture	AOCS Ca 2e - 84, Edition
	Mixed Carotene	(2003)
	Mixed Carotene	None
	Solvent Residue	EvTM_0150/HPLC
	(Hexane, Ethyl Acetate, Methanol,	EvTM_0151/GC-HS
	Isopropanol, Dichloromethane,	None
	Ethanol)	None
	Moisture	None
	Moisture	AOCS Ca 2e - 84, Edition
	None	(2003)
	2,6-Di-Tert-Butyl Hydroxytoluene	None
		EvTM_0049/GC

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Tocotrienol, Beta Tocotrienol,	1993/HPLC
	Gamma Tocotrienol, Delta	None
	Tocotrienol)	None
	Benzo A Pyrene	EvTM_0114, Based on AOCS Cd 21-91, 5th 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,	EvTM_0126/GC HS
	Isopropanol, Dichloromethane,	None
	Ethanol)	None
	Moisture	AOCS Ca 2e - 84, Edition
	Moisture	(2003)
	Total Aerobic Microbial Count	XVI B
	Total Combined Yeasts/ Moulds	BP 2020/Volume
	Count	XVI B
	Coliform Count	FDA BAM Chapter 4, 2020
	Bile-Tolerant Gram-Negative	BP 2020/Volume
	Bacteria	XVI B
	Detection of Specific Microorganism	BP 2020/Volume
	Pseudomonas aeruginosa	IV/Appendix XVI B
	Staphylococcus aureus	None
	Escherichia coli	None
	Salmonella spp	None
	Total Aerobic Microbial Count	XVI B
	Total Combined Yeasts/ Moulds	BP 2020/Volume
	Count	XVI B
	Coliform Count	FDA BAM Chapter 4, 2020
	Bile-Tolerant Gram-Negative	BP 2020/Volume
	Bacteria	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

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Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
	Free Fatty Acids	None
	Moisture and Volatile Matter Hot	AOCS Ca 2b-38 (1997)
	Plate Method	None
	Insoluble Impurities	AOCS Ca 3a-46 (1997)
	Iodine Value of Fats and Oils	None
	Cyclohexane-Acetic Acid	AOCS Cd 1d-92 (1997)
	Method	None
	Slip Melting Point	None
	AOCS Standard Open Tube	AOCS Cc 3-25 (1997)
	Melting Point	None
	Color	AOCS Cc (1997)
Residential, Commercial And	None	EN IEC 61000-6-3:2007+A1:2011

SCOPE OF TESTING : MECHANICAL

Material / Product Tested	Type Of Test / Properties Measured / Range Of Measurement	Standard Test Methods / Equipment / Techniques
Mechanical And Automotive Components And Materials All Related Product As Per Standard	Environmental Testing	TSM0502G Rev.11 (May.2013) Toyota Engineering Standard Title: General test method regarding material properties for plastics parts

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