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团 体 标 准

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世界可追溯优质农产品-马来西亚榴莲

World Traceable Quality Products-Malaysia Durian

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中国检验检疫科学研究院综合检测中心
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前 言

本文件按照GB/T1.1-2020给出的规则起草。请注意本文件的某些内容有可能涉及专利和商标，本文件的发布机构不应承担识别这些专利和商标的责任。

本文件由中国检验检疫科学研究院综合检测中心提出，由中国中小商业企业协会归口。

本文件主要起草单位：中国检验检疫科学研究院综合检测中心，CAIQTEST Malaysia SDN BHD、Warrants Capital Sdn Bhd（世丰福（马来西亚）有限公司）、马来西亚果农总会、马来西亚彭亨州果农公会、海南世丰福实业有限公司、中检科（北京）测试技术有限公司、中检科（上海）测试技术有限公司、北京新发地城市配送有限公司。

本文件主要起草人：乐粉鹏、CHNG SOO EE（马来西亚）、VOON SZE LIN（温世麟）、TAN ENG CHING(陈荣强)、别致、江丽、李春子、陈荣强、王云帆、杨勇、孙海锋、曹旻。

本文件为首次发布。

世界可追溯优质农产品 马来西亚榴莲

1 范围

本标准规定了马来西亚榴莲的保术语和定义、鲜果的等级、要求、试验方法、检验规则、标志、包装、贮存和运输。

本标准适用于马来西亚带壳榴莲和冷冻榴莲果肉。

2 规范性引用文件

下列文件中的条款通过本标准的引用而成为本标准的条款。凡是注日期的引用文件，其随后所有的修改单（不包括勘误的内容）或修订版均不适用于本标准，然而，鼓励根据本标准达成协议的各方研究是否可使用这些文件的最新版本。凡是不注日期的引用文件，其最新版本适用于本标准。

GB/T 191 包装储运图示标志

GB/T 5009.11 食品安全国家标准 食品中总砷及无机砷的测定

GB/T 5009.12 食品安全国家标准 食品中铅的测定

GB/T 5009.18 食品中氟的测定

SN/T 4698 出口果蔬中百草枯检测 拉曼光谱法

NY/T 761 蔬菜和水果中有机磷、有机氯、拟除虫菊酯和氨基甲酸酯类农药多残留的测定

GB 2763 食品安全国家标准 食品中农药最大残留限量

GB 5009.185 食品安全国家标准 食品中展青霉素的测定

GB 4789.2 食品安全国家标准 食品微生物学检验 菌落总数测定

GB 4789.3 食品安全国家标准 食品微生物学检验 大肠菌群计数

GB 4789.15 食品安全国家标准 食品微生物学检验 霉菌和酵母计数

GB 4789.4 食品安全国家标准 食品微生物学检验 沙门氏菌检验

GB 4789.10 食品安全国家标准 食品微生物学检验 金黄色葡萄球菌检验

GB 4789.36 食品安全国家标准 食品微生物学检验 大肠埃希氏菌 O157:H7/NM 检验

3 术语和定义

世界可追溯优质马来西亚榴莲：在马来西亚生长，符合本标准要求的榴莲。

榴莲鲜果：直接从榴莲树上摘取，未经处理的带壳榴莲鲜果。

冷冻带壳榴莲：将带壳榴莲鲜果经液氮冷冻后得到的榴莲，为冷冻带壳榴莲。

冷冻榴莲果肉：将榴莲果肉取出，冷冻后制得的产品为冷冻榴莲果肉。

4 要求

4.1 榴莲品种要求

榴莲品种为马来西亚农业部注册的榴莲品种，具体的榴莲品种信息见附录 A。

4.2 榴莲鲜果的要求

4.2.1 其他要求

榴莲鲜果应满足下列要求：

- 包装箱体内外无虫体、霉菌及其他污物；
- 无因环境的污染所造成的异味；
- 无腐烂和霉变；
- 无裂果。

4.2.2 规格

榴莲鲜果按质量大小分成大、中、小 3 个规格，各规格的要求应符合表 1 的规定。

表 1 规格指标

单位为千克

规格	单果质量
大	≥ 3.0
中	1.5~3.0
小	≤ 1.5

4.2.3 质量等级

榴莲分为优质(A)、一等(B)、二等(C)，3 个等级，各等级及类别应符合表 2 的规定。

等级	优质级（A）	一等级（B）	二等级（C）
果形	圆润饱满	圆润饱满	个头偏小、甚至有畸形
果皮缺陷	单果果面缺陷大于 20cm ² 的果实不超过 2.5%	单果果面缺陷大于 20cm ² 的果实不超过 5%	单果果面缺陷大于 20cm ² 的果实不超过 10 %
可食率	≥35%	≥30%	≥20%
注：果皮缺陷面积包括虫果、病果、机械损伤等面积总和。			

4.2.4 容许度

每一包装件中的果实，容许有一定量的果实不符合该规格和等级：

——一优等品允许有 10%质量的榴莲不符合优质级品的要求，但应符合一等级的要求；

——一等级别允许有 10%质量的榴莲不符合一等品的要求，但应符合二等级的要求；

——二等级允许有 10%质量的榴莲不符合二等级的要求；

——允许有 10%质量榴莲的大小不符合该规格的要求，不符合要求的部分，应该在该大小类别所示的上下类别中。

4.2.5 卫生要求

卫生指标及相应的检测方法应符合表 3 的要求。

测定果肉，残留量计算时应记入果核的重量。

表 3 卫生指标及限量

单位为毫克每千克

检测项目	限量指标（MRL）	检测项目	限量指标（MRL）
无机砷(As)	≤0.05	氯唑磷	≤0.01
铅(Pb)	≤0.1	咪鲜胺和咪鲜胺锰盐	≤7
氟(F)	≤0.5	灭多威	≤0.2
百草枯	≤0.01	灭线磷	≤0.02
保棉磷	≤1	内吸磷	≤0.02
倍硫磷	≤0.05	氰戊菊酯	≤0.2
苯线磷	≤0.02	杀虫脒	≤0.01
草铵膦	≤0.1	杀螟硫磷	≤0.5

草甘膦	≤ 0.1	杀扑磷	≤ 0.05
敌百虫	≤ 0.2	水胺硫磷	≤ 0.05
敌敌畏	≤ 0.2	特丁硫磷	≤ 0.01
地虫硫磷	≤ 0.01	涕灭威	≤ 0.02
酞虫脒	≤ 2	辛硫磷	≤ 0.05
对硫磷	≤ 0.01	氧乐果	≤ 0.02
氟虫腈	≤ 0.02	乙酰甲胺磷	≤ 0.5
甲胺磷	≤ 0.05	蝇毒磷	≤ 0.05
甲拌磷	≤ 0.01	治螟磷	≤ 0.01
甲基对硫磷	≤ 0.02	艾氏剂	≤ 0.05
甲基硫环磷	≤ 0.03	滴滴涕 (DDT)	≤ 0.05
甲基异柳磷	≤ 0.01	狄氏剂	≤ 0.02
甲氰菊酯	≤ 5	毒杀芬	≤ 0.05
久效磷	≤ 0.03	六六六	≤ 0.05
克百威	≤ 0.02	氯丹	≤ 0.02
磷胺	≤ 0.05	灭蚊灵	≤ 0.01
硫环磷	≤ 0.03	七氯	≤ 0.01
硫线磷	≤ 0.02	异狄氏剂	≤ 0.05
氯菊酯	≤ 2		

4.3 冷冻榴莲果肉的要求

在满足 4.2.5 卫生指标的基础上，对微生物指标进行限定。

表 4 真菌毒素及微生物指标及限量

检测项目	限量指标 (MRL)
展青霉素 (ug/kg)	≤ 50
菌落总数 (CFU/g)	≤ 1500
大肠菌群 (CFU/g)	≤ 30
霉菌计数 (CFU/g)	≤ 100

沙门氏菌（CFU/g）	不得检出
金黄色葡萄球菌（CFU/g）	≤100
大肠埃希氏菌 0157: H7（CFU/g）	不得检出

5 榴莲鲜果试验方法

5.1 基本要求检验

将 5 个样品逐件铺放在检验台上,观察记录包装箱体内外有无虫体、霉菌及其他污染物;有无因环境的污染所造成的异味;有无腐烂和霉变;有无裂果。并记录结果。

5.2 果实质量

按由小到大的次序称量果实质量记录与类别要求不符的果的单个质量,单位为千克(kg),结果精确到小数点后一位。

5.3 果皮缺陷面积

将单个果实表面有大于 1 cm² 的果皮缺陷面积进行逐个测量,测得面积相加,按式(1)计算果皮缺陷,结果精确到小数点后一位。

$$X_1 = M_2/M_1 \times 100 \dots\dots\dots (1)$$

式中:

X₁—不合格果质量分数, %;

M₂—不合格果质量,单位为千克(kg);

M₁—抽取样品总果质量,单位为千克(kg)。

5.4 可食率

称取总果实质量、皮质量加果核的质量,计算可食率(样品应包含 4.2、4.3 项目检验检出的果)按式(2)计算可食率,结果精确到小数点后一位。

$$X_2 = (M_3 - M_4 - M_5) / M_3 \times 100 \dots\dots\dots (2)$$

式中:

X_2 —可食率质量分数，%；

M_5 —选取样品果皮（含果柄）质量，单位为千克（kg）；

M_4 —选取样品果核质质量，单位为千克（kg）；

M_3 —选取样品的果质量，单位为千克（kg）。

5.5 容许度

对抽检的每个包装分别计算容许度后，按抽检数综合计算的平均数确定该批样品的容许度。

5.6 卫生检验方法

5.6.1 无机砷

按 GB/T 5009.11 规定执行。

5.6.2 铅

按 GB/T 5009.12 规定执行。

5.6.3 氟

按 GB/T 5009.18 规定执行。

5.6.4 百草枯

按 SN/T 4698 规定执行。

5.6.5 特丁硫磷

按 NY/T 761 规定执行。

5.6.6 其他农药残留的检验

按 GB 2763 规定执行。

5.6.7 展青霉素的检验

按 GB 5009.185 规定执行。

5.6.8 菌落总数的检验

按 GB 4789.2 规定执行。

5.6.9 大肠菌群的检验

按 GB 4789.3 规定执行。

5.6.10 霉菌的检验

按 GB 4789.15 规定执行。

5.6.11 沙门氏菌的检验

按 GB 4789.4 规定执行。

5.6.12 金黄色葡萄球菌的检验

按 GB 4789.10 规定执行。

5.6.13 大肠埃希氏菌 0157：H7 的检验

按 GB 4789.36 规定执行。

6 检验规则

6.1 抽样

每一独立运输工具（如集装箱、车辆、船舶等），每一品种抽取件数和取样数量按表 4 规定执行，每批取样不少于 10 个。

表 4 样品抽取件数和取样数量

总数（件）	抽取数量（件）	取样量（kg）
≤500	10（不足 10 件的，全部检验）	5
501~1000	11~15	6~10
1001~3000	16~20	11~15
3001~5000	21~25	16~20
5001~50000	26~100	21~50
>50000	100	50

6.2 判定规则

6.2.1 经检验符合第 3 章要求的产品，该批产品判定为相应等级规格的合格产品。卫生指标或微生物检验中一项不合格则该批产品判定为不合格。

6.2.2 贸易双方对检验结果产生争议时，可增加抽样量，扩大检验范围，并以复检结果为准。复检以一次为限。卫生指标不合格产品，不予复检。

7 标识、包装及包装标志

7.1 马来西亚榴莲标识：

7.2 包装标签应标明品种、等级、产地、生产商、保存条件和时间、销售商（进口商）、符合的标准号等的规定。

7.3 包装标志应符合 GB/T 191 的规定。

7.4 溯源要求

溯源码可实现“一品一码”的要求，溯源信息应包含产品种植、采摘、生产、检测报告、运输、流通等信息。



8 贮存和运输

8.1 贮存场地要求：清洁、阴凉通风，有防晒、防雨设施，不应与有毒、有异味的物品混存。

8.2 应分种类、等级堆放，应批次分明，堆码整齐，层数不宜过多。堆放和装卸时要轻搬轻放。

8.3 运输工具应清洁，有防晒、防雨和通风设施或制冷设施。冷冻产品需在-18 摄氏度以下的条件下运输。

8.4 运输过程中不应与有毒物质、有害物质混运，小心装卸，严禁重压。

附录 A：榴莲果树品种要求




（资料性文件）

本附录中榴莲品种编号为马来西亚农业部对不同榴莲品种的注册编号。

1. 榴莲品种：D24 苏丹王榴莲

叶子	果实	果肉
叶子形状像独木舟、质地柔软、有凸起的叶脉。	果形大而圆，果皮为浅绿色，皮薄且好剥。	果肉厚实，为黄色，味甜，微苦。
		




2. 榴莲品种：D99 科普. 凯西尔榴莲

叶子	果实	果肉
叶子上有明显坚硬的叶纹和叶脉。	果实中等大小，呈圆形，果皮为古铜绿色，皮薄。	果肉光滑、中等厚度，呈黄色。味甜。
		

3. 榴莲品种：D123 查尼榴莲

叶子	果实	果肉
叶子小而圆。	果实大且长，果皮颜色为棕绿色，刺粗尖端为棕色，果柄短。	果肉为金黄色，味甜且浓厚。
		

4. 榴莲品种：D145 BESERAH

叶子	果实	果肉
叶子呈部分上翻状态。	果实大，为圆形，果皮呈绿色，厚度中等。	果肉质地细密，呈黄色，味甜。
		

5. 榴莲品种：D158 长柄榴莲

叶子	果实	果肉
叶子上端窄，中部到基部较宽。	果实为中大果，圆形，果皮为浅绿色，皮薄，果刺锋利。	果肉厚实，呈黄色，味甜，微苦。






6. 榴莲品种：D159 金枕头榴莲

叶子	果实	果肉
叶子边缘呈波浪形，长尖叶。	果实很大，呈长方形，果皮为褐绿色。	果肉厚实、呈黄色，味甜。
		

7. 榴莲品种：D168 哈斯玛（101）榴莲

叶子	果实	果肉
叶子厚且小，呈锥形。	果实形状大且圆，果皮为棕绿色，果皮易剥。	果肉厚实饱满，呈橙黄色，味甜微苦。
		

8. 榴莲品种：D169 托利托克榴莲

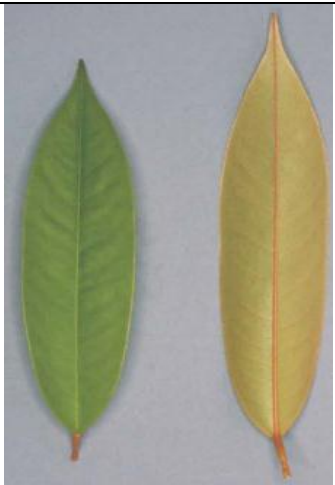


叶子	果实	果肉
叶子质地坚硬，表面呈波浪状。	果实中等大小，呈长方形，果皮为黄绿色，有长刺。	果肉厚实、柔软。呈黄色，味甜微苦。
		

9. 榴莲品种：D175 红虾榴莲



叶子	果实	果肉
叶子薄，表面光滑有光泽，叶脉浅。	果实中等大小，呈椭圆形，果皮为棕绿色，有短刺。	果肉粘稠、呈橘黄色，味甜。
		

10. 榴莲品种：D188 MDUR 78

叶子	果实	果肉
叶子形状像独木舟、质地柔软。	果实中等大，呈圆形或长圆形，果皮为浅绿黄色，皮厚。	果肉厚实，质地细腻，呈黄色，味甜。

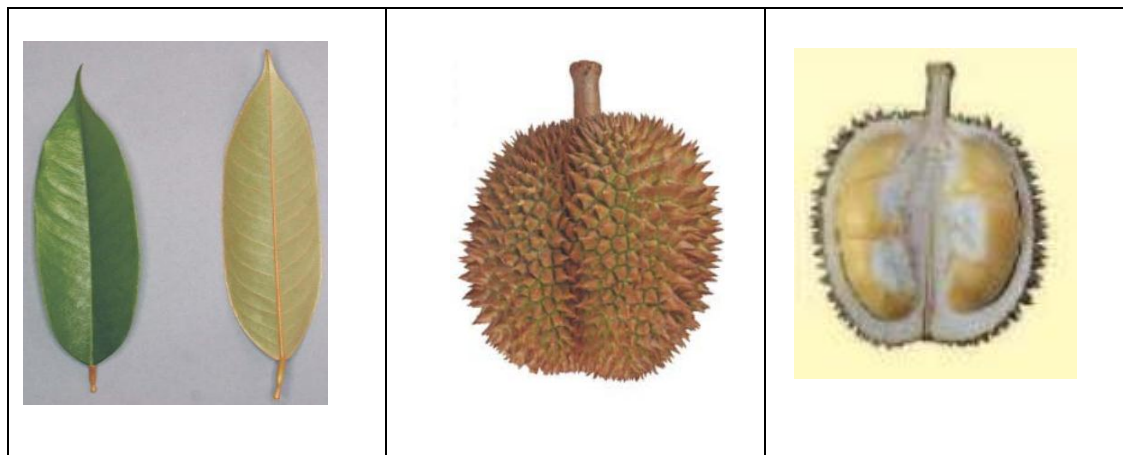
		
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11. 榴莲品种：D189 MDUR79




叶子	果实	果肉
叶子较硬，中间宽，两端窄。	果实中等大小。圆形或长圆形，果皮为暗绿色，皮厚。	果肉厚实，质地细密，呈橙黄色，味甜。
		

12. 榴莲品种：D190 MDUR88

叶子	果实	果肉
叶子中等硬度，形状像独木舟。	果实大，呈圆形，果皮为黄绿色。	果肉较厚，质地较硬，颜色呈金黄色，味甜。




13. 榴莲品种：D197 猫山王榴莲

叶子	果实	果肉
叶子为锥形，边缘呈波浪形。	果实中等大小，呈圆形或长圆形，果皮为浅绿色。	果肉呈黄色，果肉细腻，味甜苦。
		

14. 榴莲品种：D2 Datok nina 榴莲

叶子	果实	果肉
叶子叶脉不明显。	果实为中等大小，呈卵形，果皮为青铜色，皮薄。	果肉呈金黄色，粘稠，味甜苦。
		

15. 榴莲品种：D200 黑刺榴莲

叶子	果实	果肉
	果实为中等大小，呈圆形，果皮为褐绿色，皮中等厚度。	果肉厚实，呈橙黄色，口感绵滑，味甜。
		

16. 榴莲品种：D88 曼谷 8 号榴莲

叶子	果实	果肉
	果实较大，呈椭圆形，果壳为淡黄绿色。	果肉呈黄色，质地粘稠，味甜，纤维较多。
		

(English version)

World Traceable Quality Products, Malaysia Durian

1 Scope

This standard specifies the scope of protection, terms and definitions, grade of fresh fruit, requirements, test methods, test rules, signs, package, storage and transportation for Malaysia Musang King Durian.

This Standard applies to Malaysian durian in shell and frozen durian pulp.

2 Normative references

The provisions of the following documents constitute provisions of this Standard through reference in this Standard. For dated references, the subsequent amendments to (excluding corrections) or revisions of any of these references do not apply to this Standard. However, parties to agreements based on this Standard are encouraged to investigate application of the most recent editions of such documents. For undated references, the latest edition of the referenced document applies.

GB/T 191 Packaging- Pictorial Marking for Handling of Goods;

GB/T 5009.11 National Food Safety Standard- Determination of Total Arsenic and Inorganic Arsenic in Foods

GB/T 5009.12 National Food Safety Standard- Determination of Lead in Foods

GB/T 5009.18 Determination of Fluorine in Foods

SN/T 4698 Determination of Paraquat in Fruit and Vegetables- Raman Spectrometry

NY/T 761 Pesticide Multiresidue Screen Methods for Determination of Organophosphorus Pesticides, Organochlorine Pesticides, Pyrethroid Pesticides and Carbamate Pesticides in Vegetables and Fruits

GB 2763 National Food Safety Standard-Maximum Residue Limits for Pesticides in Food

GB 5009.185 National Food Safety Standard-- Detection of patulin in food

GB 4789.2 National Food Safety Standard: Microbiological examination of food hygiene--
Detection of aerobic bacterial count

GB 4789.3 National Food Safety Standard: Microbiological examination of food hygiene--
Enumeration of coliforms

GB 4789.15 National Food Safety Standard: Microbiological examination of food hygiene--
Enumeration of molds and yeasts

GB 4789.4 National Food Safety Standard: Microbiological examination of food hygiene--
Examination of Salmonella

GB 4789.10 National Food Safety Standard: Microbiological examination of food hygiene--
Examination of Staphylococcus aureus

GB 4789.36 National Food Safety Standard: Microbiological examination of food hygiene--
Examination of Escherichia coli O157:H7/NM

3 Scope of protection, terms and definitions

World traceable quality products Malaysia Durian: durian grown in Malaysia that meets the requirements of this Standard.

Fresh durian: fresh durian in shell picked directly from the tree and untreated.

Frozen durian in shell: durian after freezing fresh durian in shell with liquid nitrogen.

Frozen durian pulp: a product made by freezing the durian pulp taken from the shell.

4. Requirements

4.1 Requirements for durian varieties

Durian varieties are those registered in the Ministry of Agriculture (Malaysia). Detailed information is shown in Appendix A.

4.2 Requirements for fresh durian

4.2.1 Basic requirements

The durian fruit shall meet the following requirements:

- There is no insect, mildew or other dirt inside and outside the packaging box;
- There is no odor caused by environmental pollution;
- The fruit is free of decomposition or mildew;
- No dehiscent fruit is allowed.

4.2.2 Size class

The durian fruits can be divided into three size classes (large, medium and small) according to its mass, and the fruit of each size class shall meet the relevant requirements in Table 1.

Table 1 Indexes for size class		in the unit of kg
Size class	Mass of single fruit	
Large	≥ 3.0	
Medium	1.5- 3.0	
Small	≤ 1.5	

4.2.3 Quality grade

The durian fruits can be divided into three quality grades, i.e. premium grade (A), the first grade (B) and the second grade (C), and the fruit of each quality grade and category shall meet relevant requirements in Table 2.

Quality grade	Premium grade (A)	The first grade (B)	The second grade (C)
Fruit shape	Round and completely filled	Round and completely filled	With smaller size, or even deformity
Skin defects	The part with surface defect over 20cm ² of single fruit shall be no more than 2.5%.	The part with surface defect over 20cm ² of single fruit shall be no more than 5%.	The part with skin defect over 20cm ² of single fruit shall be no more than 10%.
Edible rate	$\geq 35\%$	$\geq 30\%$	$\geq 20\%$
Note: The area of skin defects is the total area of the attacked part, diseased part and mechanical damage.			

4.2.4 Tolerance

In each package, a certain amount of fruit is allowed to fail to meet the requirements on corresponding size class and quality grade:

- For the durians of premium grade, 10% of durians (by mass) in each package are allowed to fail to meet the requirements on premium grade, but these shall meet the requirements for the first grade;
- For the durians of the first grade, 10% of durians (by mass) in each package are allowed to fail to meet the requirements on the first grade, but these shall meet the requirements for the second grade;
- For the durians of the second grade, 10% of durians (by mass) in each package are allowed to fail to meet the requirements on the second grade;
- In each package, 10% of the durians (by mass) are allowed to fail to meet the requirements of the size class. But, these durians failing to meet such requirements shall be of the size of upper or lower class.

4.2.5 Hygienic requirements

The hygienic indexes and corresponding test methods shall meet the requirements in Table 3.

The weight of kernel shall be counted during determination of weight of fruit flesh and calculation of amount of residue.

Table 3 Hygienic indexes and corresponding test methods

in the unit of mg/kg

Test item	Maximal residue limit (MRL)	Test item	Maximal residue limit (MRL)
Inorganic arsenic	≤ 0.05	Isazofos	≤ 0.01
Lead (Pb)	≤ 0.1	Prochloraz and Prochloraz-manganese chloride complex	≤ 7
Fluorine (F)	≤ 0.5	Methomyl	≤ 0.2
Paraquat	≤ 0.01	Ethoprophos	≤ 0.02

Gusathion	≤1	Demeton	≤0.02
Fenthion	≤0.05	Fenvalerate	≤0.2
Fenamiphos	≤0.02	Chlordimeform	≤0.01
Glufosinate-ammonium	≤0.1	Fenitrothion	≤0.5
Glyphosate	≤0.1	Methidathion	≤0.05
Trichlorfon	≤0.2	Isocarbophos	≤0.05
Dichlorvos	≤0.2	Terbufos	≤0.01
Fonofos	≤0.01	Aldicarb	≤0.02
Acetamiprid	≤2	Phoxim	≤0.05
Parathion	≤0.01	Omethoate	≤0.02
Fipronil	≤0.02	Acephate	≤0.5
Methamidophos	≤0.05	Coumaphos	≤0.05
Phorate	≤0.01	Sulfotep	≤0.01
Parathion-methyl	≤0.02	Aldrin	≤0.05
Phosfolan-methyl	≤0.03	Dichloro-diphenyl-trichloroethane (DDT)	≤0.05
Isofenphos-methyl	≤0.01	Dieldrin	≤0.02
Fenpropathrin	≤5	Toxaphene	≤0.05
Monocrotophos	≤0.03	Benzene hexachloride	≤0.05
Carbofuran	≤0.02	Chlordane	≤0.02
Phosphamidon	≤0.05	Mirex	≤0.01
Phosfolan	≤0.03	Heptachlor	≤0.01
Cadusafos	≤0.02	Edrin	≤0.05
Permethrin	≤2		

4.3 Requirements for frozen durian pulp

The microbiological indicators are limited on the basis of meeting 4.2.5 Hygienic indicators.

Table 4. Mycotoxin and microbiological indicators and limits

Test Item	Limit (MRL)
Patulin (ug/kg)	≤50
Aerobic bacterial count (CFU/g)	≤1500
Coliform (CFU/g)	≤30
Enumeration of molds (CFU/g)	≤100
<i>Salmonella</i> (CFU/g)	Not Detected
<i>Staphylococcus aureus</i> (CFU/g)	≤100
<i>Escherichia coli</i> O157:H7 (CFU/g)	Not Detected

5 Test methods

5.1 Basic test

Place 5 samples on the inspection bench one by one, and observe whether there is insect, mildew and other pollutant inside and outside the packaging box; whether there is odor caused by environmental pollution; whether there is decomposition or mildew; whether there is dehiscent fruit. Record the observation results.

5.2 Fruit mass

Weigh the fruit by size and from small to large, and record the mass of single fruit that fails to meet the requirements of the category. The result shall be recorded in the unit of kilogram (kg), and shall be accurate to one decimal point.

5.3 Skin defect area

Measure the area of skin defects over 1 cm² on surface of single fruit one by one, and calculate the total area. Then calculate the skin defect by Formula (1), and the result shall be accurate to one decimal point.

$$X_1 = M_2/M_1 \times 100 \dots\dots\dots (1)$$

Where:

X₁—The mass fraction of unqualified fruit, %;

M₂—The mass of unqualified fruit, in the unit of kilogram (kg);

M₁—Total fruit mass of the sample, in the unit of kilogram (kg).

5.4 Edible rate

Weigh the total fruit mass, the mass of fruit skin and the mass of kernel, and then calculate the edible rate (the samples shall include the fruits passing the tests in Item 4.2 and 4.3) by Formula (2), and the result shall be accurate to one decimal point.

$$X_2 = (M_3 - M_4 - M_5) / M_3 \times 100 \dots\dots\dots (2)$$

Where:

X₂—The mass fraction of edible rate, %;

M₅—Mass of fruit skin (including stalk) of selected sample, in the unit of kilogram (kg);

M₄—Mass of kernel of selected sample, in the unit of kilogram (kg);

M₃—Total fruit mass of selected sample, in the unit of kilogram (kg).

5.5 Tolerance

Calculate the tolerance of each package that is sampled for test, and then determine the tolerance of this batch of samples by calculating the mean with number of samples.

5.6 Hygiene test methods

5.6.1 Inorganic arsenic

Perform the test as specified in GB/T 5009.11.

5.6.2 Lead

Perform the test as specified in GB/T 5009.12.

5.6.3 Fluorine

Perform the test as specified in GB/T 5009.18.

5.6.4 Paraquat

Perform the test as specified in SN/T 4698.

5.6.5 Terbufos

Perform the test as specified in NY/T 761.

5.6.6 Test of other pesticide residues

Perform the test as specified in GB 2763.

5.6.7 Patulin

Perform the test as specified in GB 5009.185.

5.6.8 Aerobic bacterial count

Perform the test as specified in GB 4789.2.

5.6.9 Enumeration of coliforms

Perform the test as specified in GB 4789.3.

5.6.10 Molds

Perform the test as specified in GB 4789.15

5.6.11 *Salmonella*

Perform the test as specified in GB 4789.4.

5.6.12 *Staphylococcus aureus*

Perform the test as specified in GB 4789.10.

5.6.13 *Escherichia coli* O157:H7/NM

Perform the test as specified in GB 4789.36.

6 Test rules

6.1 Sampling

The number of packages taken from and sample size of each variety in each independent transportation facility (such as container, vehicle and ship) shall meet the requirements in Table 4.

The number of samples taken from each batch shall be no less than 10.

Table 4 Number of sampled packages and sample size

Total number (package)	Number of packages taken (package)	Sample size (kg)
≤500	10 (all products shall be tested in case of less than 10 packages)	5

501- 1000	11- 15	6- 10
1001- 3000	16- 20	11- 15
3001- 5000	21- 25	16- 20
5001- 50000	26- 100	21- 50
>50000	100	50

6.2 Judgment rules

6.2.1 If the products are proven to comply with the requirements in Chapter 3 by the tests, this batch of products shall be determined as qualified products of corresponding grade and size class. If one of the hygienic indicators or microbiological examination items fails, the batch of products will be judged as unqualified.

6.2.2 In case of any dispute over test result between the trading parties, the sample size can be increased to expand the test range, and the result of retest shall be prevailing. The retest shall be performed only once, and is not allowed for the products failing to pass hygiene index test.

7 Identification, package and packing mark

7.1 Identifications of Malaysia Masung King Durian:

7.2 The package label shall indicate the variety, grade, place of production, manufacturer, storage conditions and time, retailer (importer), the satisfied standards (number) etc.

7.3 The packing mark shall meet the provisions in GB/T 191.

7.4 Requirements on traceability



马来西亚 Musang King 榴莲
—Malaysia Musang king Durian—

The traceability code shall meet the requirement of “one code for one product”, and the traceability information shall include the information about plantation, picking, production, test report, transportation and distribution of the product.

8 Storage and transportation

8.1 Requirements on storage site: It shall be clean, cool, well-ventilated, and be of installations protecting against sunshine and rain. It shall protect the products from mixing with poisonous or smelly products.

8.2 The products shall be stacked by variety and grade, and shall be stacked by batch and orderly. The products shall not be stacked in excessive layers. The products shall be moved and placed gently during stacking and handling.

8.3 The transportation facility shall be clean, and be provided with installations protecting against sunshine and rain, as well as ventilation or refrigeration installations.




8.4 The products shall not be mixed with poisonous or hazardous substances during transportation, and shall be handled carefully. Heavy load is strictly prohibited.

Appendix A: Requirements for varieties of durian trees

(Informative Document)

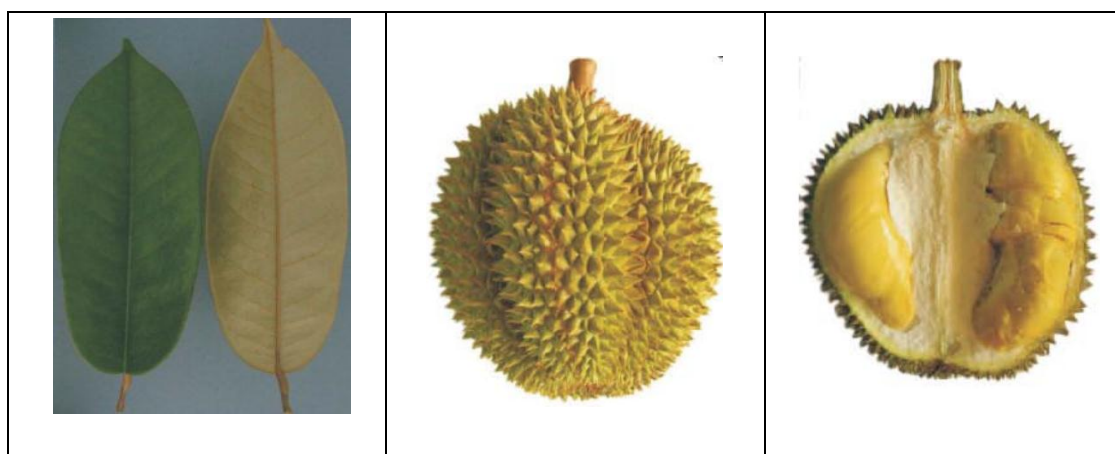
The durian variety numbers in the appendix are the registration numbers of different durian varieties by the Ministry of Agriculture (Malaysia).

1. Durian variety: D24 Sultan




Leaves	Fruit	Pulp
The leaves are canoe-shaped and soft, with bulged veins.	The fruit is large and round with a light green shell that is thin and easily peeled.	The pulp is thick and yellow, which tastes sweet and slightly bitter.
		

2. Durian variety: D99 Kop

Leaves	Fruit	Pulp
The leaves have distinct lines and veins.	The fruit is medium-sized and round, with a bronze-green and thin shell.	The pulp is smooth and yellow of medium thickness, which tastes sweet.






3. Durian variety: D123 Chanee




Leaves	Fruit	Pulp
The leaves are small and round.	The fruit is large and long, with a brown-green shell, brown-tipped thick thorns and a short stem.	The pulp is golden yellow, which tastes sweet and intense.
		

4. Durian variety: D145 BESERAH

Leaves	Fruit	Pulp
The leaves are partially upturned.	The fruit is large and round, with a green shell of medium thickness.	The pulp is close in texture and yellow, which tastes sweet.

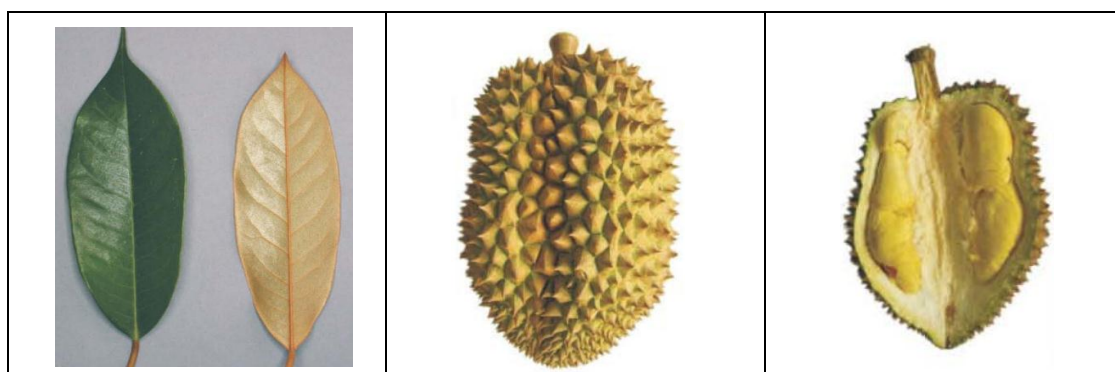
		
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5. Durian variety: D158 Kan Yao




Leaves	Fruit	Pulp
The leaves are narrow at the top and broad from the middle to the base.	The fruit is medium- to large-sized and round, with a light green and thin shell and sharp thorns.	The pulp is thick and yellow, which tastes sweet and slightly bitter.
		

6. Durian variety: D159 Mon Thong




Leaves	Fruit	Pulp
The leaves are long and pointy with wavy edges.	The fruit is large and rectangular, with a brown-green shell.	The pulp is thick and yellow, which tastes sweet.






7. Durian variety: D168 Hasma (101)

Leaves	Fruit	Pulp
The leaves are thick, small and tapered.	The fruit is large and round, with a brown-green shell that is easily peeled.	The pulp is thick, full and orange-yellow, which tastes sweet and slightly bitter.
		




8. Durian variety: D169 Water-drop

Leaves	Fruit	Pulp
The leaves are hard with a wavy surface.	The fruit is medium-sized and rectangular, with a yellow-green shell and long thorns.	The pulp is thick, soft and yellow, which tastes sweet and slightly bitter.
		

9. Durian variety: D175 Hong Har (Red Prawn)




Leaves	Fruit	Pulp
The leaves are thin, smooth and shiny, with shallow veins.	The fruit is medium-sized and elliptical, with a brown-green shell and short thorns.	The pulp is thick and orange-yellow, which tastes sweet.
		

10. Durian variety: D188 MDUR 78




Leaves	Fruit	Pulp
The leaves are canoe-shaped and soft.	The fruit is medium-sized and round or oval, with a light green-yellow and thick shell.	The pulp is thick, fine and yellow, which tastes sweet.
		

11. Durian variety: D189 MDUR79

Leaves	Fruit	Pulp
The leaves are hard, and broad in the middle and narrow at	The fruit is medium-sized and round or oval, with a dark	The pulp is thick, fine and orange-yellow, which tastes

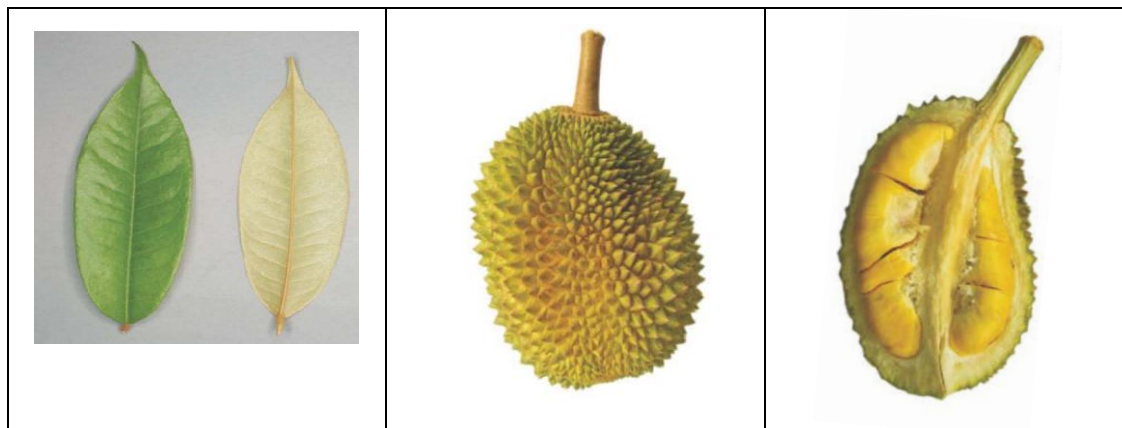
both ends.	green and thick shell.	sweet.
		

12. Durian variety: D190 MDUR88



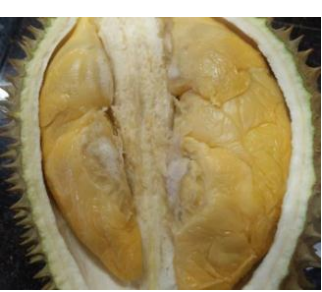
Leaves	Fruit	Pulp
The leaves are of medium hardness and canoe-shaped	The fruit is large and round with a yellow-green shell.	The pulp is thick, hard and yellow, which tastes sweet.
		

13. Durian variety: D197 Musang King

Leaves	Fruit	Pulp
The leaves are tapered with wavy edges.	The fruit is medium-sized and round or oval, with a light green shell.	The pulp is yellow and soft, which tastes sweet and slightly bitter.



14. Durian variety: D2 Datok nina

Leaves	Fruit	Pulp
The veins of the leaves are inconspicuous.	The fruit is medium-sized and oval, with a thin shell.	The pulp is golden yellow and intense, which tastes sweet and slightly bitter.
		

15. Durian variety: D200 Duri Hitam (Black Thorn)

Leaves	Fruit	Pulp
	The fruit is medium-sized and round, with a brown-green shell of medium thickness.	The pulp is thick and golden yellow, which tastes smooth and sweet.

		
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16. Durian variety: D88 Bangkok 8

Leaves	Fruit	Pulp
	The fruit is large and elliptical, with a light yellow-green shell.	The pulp is yellow and thick and is full of fiber, which tastes sweet.
	