

LE DUONG CASHEW COMPANY LIMITED

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LE DUONG CASHEW'S PRODUCTS SPECIFICATION BASED ON AFI 2016 CASHEW GRADES

Source: AFI Cashew Grades | Effective date: 15/01/2025

Scope (coding):

- **WW** = White Wholes (peeled), AFI reference (Fancy). Grades: **WW160** (extension), **WW180**, **WW210**, **WW240**, **WW320**, **WW450**.
- **WS / LP** = White Splits / Large Pieces (AFI styles).
- **WA** = Raw skin-on (testa retained), unroasted, moisture $\leq 6\%$ → **WA160**, **WA170**, **WA180**, **WA210**, **WA240**, **WA320**.
- **A** = Roasted & salted skin-on (testa retained) → **A160**, **A170**, **A180**, **A210**, **A240**, **A320**.

1. GENERAL QUALITY – WHITE KERNELS (AFI REFERENCE)

- **Appearance:** White to pale ivory; clean; free from live insects/foreign matter; odor- and mold-free.
- **Moisture (white/peeled):** $\leq 5.0\%$ (AFI general 3–5%).
- **Maximum defects (Fancy – whole):** Total $\leq 8\%$, Serious damage $\leq 1\%$ (insect, mold, foreign matter, scorching, speckles, scrape marks, shriveling).
- **WS/LP note:** Max affected kernels $\leq 10\%$; clean surface; no mold; no severe scorching.
- **Chemical (white/raw):** FFA $\leq 1.0\%$ (as oleic); Peroxide Value ≤ 2 meq O₂/kg fat.
- **Microbiology (typical):** Salmonella Absent/25 g; E. coli < 10 CFU/g; TPC $\leq 1 \times 10^4$ CFU/g; YM $\leq 1 \times 10^2$ CFU/g.

2. AFI SIZE RANGES (COUNT PER KG) – WHITE WHOLES

Grade	AFI count/kg
WW180	266–395
WW210	395–465
WW240	485–530
WW320	660–706
WW450	880–990

WW160 (Extension): Not listed in AFI; larger than WW180.

Count/kg: TBA (To Be Agreed) in the PO/contract and printed on carton labels.

3. WHITE WHOLE GRADES – SPECIFICATIONS

- **WW160 (Extension):** Whole, peeled; **count/kg: TBA**; **Total $\leq 8\%$** (or under TBA), **Serious $\leq 1\%$** ; **Moisture $\leq 5.0\%$** .
- **WW180:** Whole, peeled; **266–395/kg**; same defect & moisture limits.
- **WW210:** Whole, peeled; **395–465/kg**; same limits.
- **WW240:** Whole, peeled; **485–530/kg**; same limits.
- **WW320:** Whole, peeled; **660–706/kg**; same limits.
- **WW450:** Whole, peeled; **880–990/kg**; same limits.

4) WS & LP – SPECIFICATIONS (AFI STYLES)

- **WS – White Splits:** $\geq 90\%$ halves; **affected $\leq 10\%$** ; **Moisture $\leq 5.0\%$** .
- **LP – Large Pieces:** typical particle **6–19 mm**; sieve reference **pass 5.9 mm**; **retain $> \text{No. 6.0}$** ; **affected $\leq 10\%$** ; **Moisture $\leq 5.0\%$** .

5) WA – RAW SKIN-ON (TESTA), UNROASTED (MOISTURE $\leq 6\%$)

- **Definition:** Whole kernels with **testa (skin)** retained; **unroasted, unsalted**.
- **Moisture:** $\leq 6.0\%$. **Chemical:** **FFA $\leq 1.0\%$** ; **PV $\leq 2 \text{ meq O}_2/\text{kg fat}$** .
- **Microbiology:** Salmonella Absent/25 g; E. coli $< 10 \text{ CFU/g}$.
- **Aflatoxins:** Comply with **applicable legal limits**; test scope as per **PO**.
- **Packaging:** 10 kg vacuum PE $\times 2/\text{carton}$ (or 11.34 kg $\times 2$); nitrogen flush optional; staple-free cartons.

Codes & mapping:

Code	Equivalent WW	Count/kg	Notes
WA160	WW160	TBA	Commercial extension, > WW180
WA170	WW170	TBA	Commercial extension
WA180	WW180	266–395	
WA210	WW210	395–465	
WA240	WW240	485–530	
WA320	WW320	660–706	

6) A – ROASTED & SALTED SKIN-ON (TESTA RETAINED)

- **Definition:** Whole kernels with **testa** retained; **roasted (dry or oil)** and **salted**.
- **Salt (NaCl):** $\leq 1\%$ (or per contract); even distribution; no caking.
- **Finished moisture:** $\leq 2.5\%$ (crispness & stability).
- **Roasting quality:** No rancid/oxidized odour; (**oil roast**) frying oil **PV** ≤ 5 meq **O₂/kg**, **FFA** $\leq 0.30\%$.
- **Microbiology:** Salmonella Absent/25 g; E. coli < 10 CFU/g; **TPC** $\leq 1 \times 10^4$; **YM** $\leq 1 \times 10^2$.
- **Shelf life:** **24 months** in intact vacuum packaging (≤ 20 °C; RH < 60%).
- **Packaging:** 10 kg **high-barrier** vacuum × 2/carton; **nitrogen flush** recommended; oxygen absorber optional.

Codes & mapping:

Code	Equivalent WW	Count/kg	Notes
A160	WW160	TBA	Commercial extension, > WW180
A170	WW170	TBA	Commercial extension
A180	WW180	266–395	
A210	WW210	395–465	
A240	WW240	485–530	
A320	WW320	660–706	

7) PACKAGING, STORAGE & LABELING (COMMON)

- **Standard packaging:** 10 kg vacuum × 2/carton (or 11.34 kg × 2); nitrogen flush optional; cartons ≥ **200-lb test**, clean, dry, staple-free.
- **Labelling:** Product name & **code** (WW/WS/LP/WA/A), Net WT, Lot/Batch, MFG/BBE, **Origin: Vietnam**, storage conditions, destination info if requested.
- **Storage:** ≤ 20 °C, RH < 60–65%; dry, away from sunlight/odors; reseal after opening.
- **Container hygiene:** Odor-free, pest-free, clean & dry; **no naphthalene, no methyl bromide**.
- **Fumigation:** Food-grade CO₂ only if required; residues must comply with applicable laws.

8) REGULATORY & TESTING (GLOBAL)

Products are manufactured under **GMP/HACCP**. **Residues and contaminants** (e.g., pesticides, aflatoxins, heavy metals) must comply with **applicable legal limits in the country of import**. **Testing scope, LOQs, and certificates** will be defined in the **Purchase Order (PO)**. Use of **ISO/IEC 17025-accredited** laboratories is recommended.

9) SAMPLING & AQL (ACCEPTANCE QUALITY LIMIT)

Sampling test, General Inspection Level II. **AQL: Critical 0, Major 1.5, Minor 4.0**. Composite samples ≥ **500 g**.

- Sampling based on **ANSI** (equivalent to ISO 2859-1). AQL thresholds (Critical 0.0; Major 1.5; Minor 4.0) are company policy within the Z1.4 framework. Composite sample ≥ 500 g is an internal operational requirement for cashew kernels.
- **Critical 0.0** (live insects, visible mold/fungal growth, glass/metal/plastic fragments, toxic/chemical contamination, foreign nut species.)
⇒ *Zero tolerance: If Critical ≥ 1 ⇒ Reject lot.*
- **Major 1.5** rancid/oxidized kernel; severe scorching/burn; deep insect damage; serious decay; **moisture non-conformity** (> 5.0% white; > 6.0% raw skin-on); internal mold.
⇒ *If Major defects > Ac (AQL 1.5) ⇒ Reject; else Accept.*
- And **Minor 4.0** slight scrape marks; light speckles; superficial blemishes; slight shriveling; minor color variance not affecting safety.
⇒ *If Minor defects > Ac (AQL 4.0) ⇒ Reject; else Accept..*

10) CONSOLIDATED SKU SUMMARY

Line	Code	Equivalent WW	Count/kg	Moisture	Key Note
WW	WW160	WW160	TBA	≤5.0%	AFI Fancy: Total ≤ 8%; Serious ≤1%
WW	WW180	WW180	266–395	≤5.0%	
WW	WW210	WW210	395–465	≤5.0%	
WW	WW240	WW240	485–530	≤5.0%	
WW	WW320	WW320	660–706	≤5.0%	
WW	WW450	WW450	880–990	≤5.0%	
WS	WS	—	N/A	≤5.0%	Splits ≥90%; affected ≤10%
LP	LP	—	N/A	≤5.0%	Pass 5.9 mm; retain > No.6.0; affected ≤10%
WA	WA160	WW160	TBA	≤6.0%	Skin-on raw
WA	WA170	WW170	TBA	≤6.0%	Skin-on raw
WA	WA180	WW180	266–395	≤6.0%	Skin-on raw
WA	WA210	WW210	395–465	≤6.0%	Skin-on raw
WA	WA240	WW240	485–530	≤6.0%	Skin-on raw
WA	WA320	WW320	660–706	≤6.0%	Skin-on raw
A	A160	WW160	TBA	≤2.5% (finished)	Skin-on roasted & salted
A	A170	WW170	TBA	≤2.5% (finished)	Skin-on roasted & salted
A	A180	WW180	266–395	≤2.5% (finished)	Skin-on roasted & salted
A	A210	WW210	395–465	≤2.5% (finished)	Skin-on roasted & salted
A	A240	WW240	485–530	≤2.5% (finished)	Skin-on roasted & salted
A	A320	WW320	660–706	≤2.5% (finished)	Skin-on roasted & salted

11) GLOSSARY (QUICK REFERENCE)

- **FFA (Free Fatty Acids):** hydrolytic rancidity indicator; % oleic acid; lower is fresher (typ. ≤ 1.0%).
- **PV (Peroxide Value):** early oxidative rancidity; meq O₂/kg fat; lower is fresher (typ. ≤ 2 for raw kernels).
- **TPC / YM:** Total Plate Count / Yeast & Mold; hygiene indicators.
- **TBA: To Be Agreed** — finalized in PO/contract (e.g., count/kg for WW160/WW170).
- **Testa (skin):** natural brown skin on the kernel. WA/A keep the testa; WW/WS/LP are peeled/white.