



Finished Product Specification

A. PRODUCT INFORMATION

Product Formula and Process

Formula

- RS ND SP
- Reduced Sodium No Dairy Shortpaste
 - Flavour Pre-mix
 - Colour Pre-mix

Process Name

- Sweetened dough mixing
- Final pie shell makeup, 4" , guillotine

Packaging Process

- 144 count 4" sweet tart shell with aluminum pans, in a shipper with a polyliner and cardboard dividers

B. PRODUCT IDENTITY

1.

Customer:	N/A
Brand:	Apple Valley
Final English Name:	AV TART SHELL 4IN SWEET
Declared Unit Size:	144 X 35G / 5.0KG Case
UPC:	00 687415 80404 3
Base Product Code:	80404
Vendor Name:	Harlan Bakeries
Plant:	Edmonton, AB
Category:	Tart Shells
Product Line:	Tart Shells Frozen
Product Status:	Finished
Intended Use/Market:	General Population

2. Final Ingredient Declaration

Ingredients: Enriched wheat flour (wheat flour, niacin, iron, thiamin mononitrate, riboflavin, folic acid), vegetable oil shortening (canola, modified palm, and palm kernel), water, sugar, icing sugar, dextrose, sodium bicarbonate, salt, wheat starch, cornstarch, sodium acid pyrophosphate, soya lecithin, calcium sulphate, monocalcium phosphate, calcium propionate and sodium bisulphite (preservatives), citric acid, artificial flavour, ascorbic acid, beta-carotene colour, enzymes (amylase), soybean oil.

Contains: Wheat, Soya, Sulphites

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3. Storage and Display Conditions/Shelf Life in Days:

	Storage Conditioners (Temperature)	Shelf Life in Days
Storage	0°F (-18°C) or colder	372 Days
Product Distribution	0°F (-18°C) or colder	372 Days
Product Display	0°F (-18°C) or colder	372 Days
Other	0°F (-18°C) or colder	372 Days

4. **Current Certifications:** Kosher Pareve – COR 583

5. **Nutritional Claims on packaging:** N/A

6. **Country of Origin:** Canada

This product is manufactured in Canada from domestic and imported ingredients.

C. PRODUCT DEFINING ATTRIBUTES

Sensory Profile of Finished Product

Quality Attribute	As Packaged	As Prepared
Appearance	Uncooked pie shell. Free of folds, handling marks and cracks. Dough is centered in pan with no exposed tin. Uniform, well-defined crimp appearance. Light yellow colour.	Light flaky appearance
Flavour	No flavour, as not prepared	Fresh sweet flavour. No off flavours.
Texture	Uncooked dough texture	Light flaky appearance
Aroma	No off odour	Fresh odour. No off odour.
Colour	Uncooked dough colour	Golden brown colour with moderately brown edges.

Sampling Frequency: As per Product Sampling Program (listed under Test Baking)

Deviation and Corrective Action: As per Product Sampling Program (listed under Test Baking)

Preparation Description

Baking instructions:

Bake directly from cooling tunnel.

1. Preheat oven to 375 degrees F.
2. Place pie shells on cookie sheet.
3. Bake for 10-12 minutes.
4. Evaluate after 1 hour

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Analytical Parameters of Finished Product

Chemical Requirements

Test	Method	Target	Frequency
pH	External lab testing as part of shelf life testing	6.86 as distributed	Part of product design. Not tested on a set frequency.
Aw	External lab testing as part of shelf life testing	0.850 as distributed	Part of product design. Not tested on a set frequency.
Calcium Propionate	External lab testing	< 2,000 p.p.m.	**As needed basis
Sulphites	External lab testing	< 10 p.p.m. * < 500 p.p.m.	**As needed basis

Notes: Analytical and chemical testing is performed on finished product for Mandatory Nutrients, Optional Nutrients, salt, moisture, titratable, acidity, pH, % of fat, brix, viscosity etc.

Chemical limits are determined as per customer required specifications and Government Guidelines.

*As per FDR Division 16. We require <10 p.p.m. for Allergen Labeling Control.

**When formula or ingredients change significantly.

Physical Requirements

Test	Method	Target	Frequency
Weight Control	Operator CQP Weight Checks	WITH FOIL: Target Weight: 37.7	As per Product Sampling Program
	Quality Line Check Verification	Target Weight Range (34.2 – 41.1g)	As per production plan
	Test Baking		
	Diameter of Baked Product	Test Baking	≥3.5"

Deviation and Corrective Action: As per Product Sampling Program and CQP Weight Checks

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Defect Criteria

Harlan Bakeries does not package any product that is not 100% useable. There should be no discoloration or foreign material present. Product may become broken or cracked due to transport and storage. Mold issues may arise due to improper storage. Shortening chunks may be found due to imbalanced mixing which are acceptable as they are part of the ingredient composition of the product.

During the thawing phase, you may see what is known as "white spots". These come from the bleached flour and are considered acceptable as they are part of the ingredient composition of the product.

Description of Defect	Target	Tolerance
Bad Dough	None	
Off-center (Frozen)	Centered	1/8" off center
Shrinkage (Baked)	None (4")	≥3.5"
Off-center (Baked)	Centered	1/8" off center

D. FOOD SAFETY INFORMATION

Microbiological Testing

Potential for Pathogen Growth:

Frozen product does not support the growth of microorganisms.

Test	Standard
ACC (Standard Plate Count)	<50, 000 CFU/g
Total Coliforms	<50 CFU/g
<i>E. coli</i>	<1.8 CFU/g
Yeast and Mould	<500 CFU/g
<i>S. aureus</i>	<100 CFU/g
<i>Salmonella</i>	0 CFU/g

Microbiological Notes

Micro Testing is performed on both frozen and baked finished product for the tests listed above.

Max limits are set as per the Government of Canada Health Products and Food Branch - Standards and Guidelines for Microbiological Safety of Food. See plants Product Sampling Program for testing frequency.

Label Instructions Required for Food Safety:

Freeze for Quality
 Do not eat raw

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Ingredient and Material Management

Potential suppliers to Harlan Bakeries undergo a risk assessment by the QRO Department and SQF Team and an initial Harlan Bakeries audit (Physical or Paper) prior to being added as an approved supplier of an ingredient. Harlan Bakeries Ingredient and Material Management team approves suppliers by production line to ensure foundational quality programs are in place for each product produced for Harlan Bakeries. This strategy begins with a partnership of the Research and Development (R&D), Sourcing and Quality and Regulatory Operations (QRO) departments working together to ensure incoming ingredients are safe, unadulterated, and meet all regulatory requirements.

The R&D Department is responsible for the functionality of the ingredient. They work very closely with the suppliers of ingredients to make sure approved ingredients are a fit for the finished product that it goes into. Analytical and physical testing of ingredients is routinely done to insure our customers finished product requirements are met.

Key to our raw material program is our Sourcing Department's ability to verify all of our potential suppliers are good corporate citizens, have stable financing for longevity and that they have the capacity to meet the operational needs of our production facilities.

All suppliers of ingredients to Harlan Bakeries are audited for their food safety programs on a yearly basis. This audit may be by an approved third party. These comprehensive audits are focused on HACCP; GMP's; Sanitation; Allergens; Product Protection and the supplier's Quality programs. Emphasis is also placed in the area of Microbiological testing. These audits are considered confidential in order to maintain credibility between the parties involved. However, if a suppliers audit is not satisfactory Harlan Bakeries will take all necessary steps to protect our consumer's safety and the company's integrity. Audits are documented and kept in a confidential filing system for review should an issue arise.

Harlan Bakeries relies on a Microbiological Ingredient Control Program to identify key ingredients that could pose food safety concerns. All ingredients purchased and used by Harlan Bakeries have undergone a risk assessment to determine the appropriate pathogen risk. This effective Microbiological Program is a four prong approach that assures adequate ingredient supplier testing; sufficient testing of environmental control points to verify adequate sanitation; swabbing of equipment in the processing system to verify the routine sanitation program, and/or finished product testing to verify all other programs are working. Certificates of Analysis for micro results are required for those ingredients and suppliers that are considered to be in the higher risk categories.

Allergen awareness is required of all suppliers to Harlan Bakeries. We expect our suppliers to have Allergen Control Programs in place at their facilities. Programs include using dedication where possible, separation of allergens by the use of scheduling and sanitation, and accurate labels and label information. We expect cleaning programs to be validated and verified on an ongoing basis using a documented changeover procedure.

Product Protection is a key element in reducing foreign material from entering the Harlan Bakeries processing systems from incoming ingredients. All ingredients purchased and used by Harlan Bakeries are subjected to a risk evaluation. Suppliers of raw materials are expected to have the capability to detect and identify contaminants at strategic points within the production system; to identify contaminant sources and establish corrective action to eliminate the source of the contamination; and to have pre-established accept/reject rules governing production and finished product when contaminants are detected.

Packaging Management

Potential packaging suppliers to Harlan Bakeries undergo an initial Harlan Bakeries audit and complete risk assessment by the Quality and Regulatory Operations (QRO) Packaging Department prior to being added as an

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approved supplier of a packaging material. Our strategy to ensure incoming packaging materials are safe, properly labeled, meet quality standards and all regulatory requirements relies on a partnership consisting of QRO, Research and Development (R&D) and the Sourcing Department.

R&D Packaging is responsible for the functionality of the packaging material. They work closely with the suppliers to make sure approved packaging materials are selected for the product they contain, will properly run on Harlan Bakeries packaging equipment and will perform through the processing and distribution environments they endure. During the development phase, each packaging material is tested to ensure the manufacturing process does not result in unacceptable levels of specific residual volatile compounds. Special attention is paid to ensure the supplier has the capabilities to deliver packaging materials that meet our specifications.

Prior to accepting each food contact packaging material for use, Harlan Bakeries requires each supplier sign a Packaging Material Continuing Guaranty letter. These comprehensive documents state that the packaging material in question is in full compliance with applicable federal regulations and laws and that they are fully suitable for their intended use.

Key to our packaging material program is our Sourcing Department's ability to verify all of our potential suppliers as having stable financing for longevity, the capacity to meet the operational needs of our production facilities and that they conduct business in a professional and ethical manner.

Our food contact packaging material suppliers participate in internal and/or third-party audits by one or more nationally-recognized auditing organizations. As part of our auditing process, we are able to review the observations of the third-party agent as well as the corrective actions employed by the supplier. This activity provides an additional level of assurance in the supplier management process.

Product traceability is a requirement for all ingredient and packaging programs. Suppliers to Harlan Bakeries must have an effective recall program in place to qualify as an approved supplier. Mock recalls are typically reviewed during supplier audits to ensure our suppliers' procedures are capable of recalling substandard product from the supply chain in an efficient and timely manner. Harlan Bakeries also has a recall policy which starts with our internal ingredient specifications and packaging specifications that are filed and documented in our SQF (Safe Quality Food) system. This system allows us to document ingredients and packaging through finished product, so that if a recall should be required, we have instantaneous data available for an orderly, accurate recall process.

Supplier conformance is tracked through the supplier conformance system. Plants enter nonconformance issues into the system resulting in a performance score for each supplier. These scores are regularly reviewed by the QRO Manager who then addresses issues or trends with the supplier. Each fiscal year all categories of ingredients and packaging are assessed using the Supplier Performance System to determine the effectiveness of the SQF team strategy and to set objectives for the new fiscal year.

E. OVERALL PROCESS FLOW DIAGRAM

See HACCP Form 3

F. PRODUCT FORMULA & PROCESSING

Refer to Formula - Shortpaste Rad 1, Rad 2, Rijkaart in Formula Binder
Also refer to Formula – Colour and Formula – Flavour in the Formula Binder

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G. PACKAGING FORMULA AND INFORMATION

Refer to Case Pack Standard 80404 in Case Pack Standard Binder, HACCP Plan Form 3, and Packaging Specifications

Unit description:

- 36 units stacked.
- Shipper lined with polyliner.
- Cardboard divider between each stack

Number of units/shipper: 4 stacks per case

H. PRODUCT CODING DETAILS

Shipper

- i) Code type used on shipper: Both the Production date and a Best before Date are printed on the shipper.
- ii) Method of Application: Ink Jet
- iii) Location of code on shipper: Side panel
- iv) Example of code used on shipper: see example.
- v) Explanation of how to interpret code: see example.

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Spec #: 80404
AV TART SHELL 4IN SWEET
Tart Shells Frozen
4"
Canada
Edmonton AB Plant



Base Product Code: 00 687415 80404 3
35 GR Shells/5.0 KG Case
144 shells/case
Released, 04-28-2014
Approved By: Carmel Smith

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SS1 FORMAT: SHIPPER DATE CODE AND EXPLANATION



DATE CODE EXAMPLE:

BEST BEFORE/MEILLEUR AVANT: YYYY-MM-DD 2013-02-28
13:54 21FEB2EN

BEST BEFORE/MEILLEUR AVANT: YYYY-MM-DD 2013-02-28

BEST BEFORE ENGLISH/BEST BEFORE FRENCH:

YYYY-MM-DD

2013 BEST BEFORE YEAR

02 BEST BEFORE MONTH

28 BEST BEFORE DAY

13:54 21FEB2EN

13:54 TIME PRODUCED

21 DAY PRODUCED

FEB MONTH PRODUCED

2 YEAR PRODUCED (2012)

EN PLANT PRODUCTION CODE EDMONTON

NOTE: 372 DAY SHELF LIFE

I. LABEL INFORMATION

See artwork in Label binder

All labels comply with the Consumer Packaging and Labeling Act and Regulations

J. REVISION CHANGE LOG

See Finished Product Specifications Change Log

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