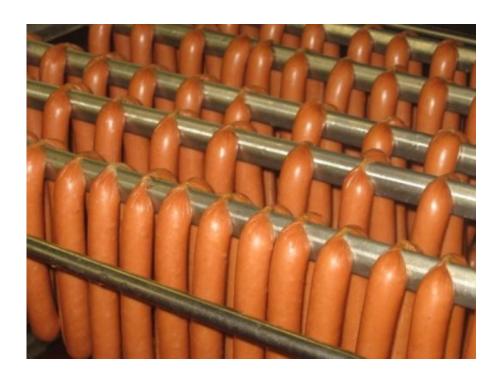


NutraCasing

EDIBLE VEGETABLE-BASED CASINGS













NutraCasing

EDIBLE VEGETABLE-BASED SAUSAGE CASINGS THIS UNIQUE NEW MATERIAL HAS A VARIETY OF PROPERTIES AND ADVANTAGES...

- Edible casing composed of natural water-soluble polysaccharides; ingredients are renewable and abundantly available
- Excellent appearance and texture
- Mainly used for fresh sausages (exp. Breakfast or Italian sausages); can be used for cooked, smoked & cooked, or dry cured providing proper cook cycles are used (ideal processing parameters can be provided by request)
- Currently available in 17, 20, 22, 23 mm, shirred format; processed on conventional stuffing machinery
- Can supply larger diameter casings up to 34 mm in a shirred format, pending sufficient usage volumes
- Kosher Certified ideal for use in Kosher or Halal sausage products
- Casing partially dissolves during cooking making it an ideal replacement for skinless sausage products
- All components are non-allergenic and non-GMO
- Composed entirely of non-animal based polymers no cross-species labelling concerns
- Being a vegetable based casing there is no concern over the potential spread of animal based illnesses



SPECIFICATION SHEET

NutraCasing

i. PRODUCT INFORMATION:

PRODUCT NAME: NUTRACASING

PRODUCT CODE: NCF2012

DESCRIPTION: Edible casing composed of natural polysaccharides and water.

All components meet Food Chemical Codex requirements and are of

Generally Recognized as Safe (GRAS) status

COUNTRY OF ORIGIN: USA

PACKAGING: 50 x 15 meters (49.2 feet) (Total: 750 meters, 2460feet)

ii. PRODUCT SAFETY:

ALLERGENS: Free from all known allergens

GMO STATUS: Non-GMO

STORAGE INSTRUCTIONS: Product should be stored in sealed bags at ambient temperature between 45

to 60% relative humidity. Recommended shelf life is 1 year.

iii. MECHANICAL DATA:

APPEARANCE: White, slightly-opaque tubular casing

LENGTH: 15 meters per slug

CALIBER: 20 mm MOISTURE (%): (WKI-144) 18 - 20THICKNESS: 2.3 - 2.6 mils(WKI-143) 1" WET TRANS: (WKI-183) > 150 grams 1" DRY LONG: (WKI-140) > 800 grams DRY ELONGATION: (WKI-140) > 50 WET ELONGATION: (WKI-183) > 2

iv. BACTERIOLOGICAL DATA:

TOTAL PLATE COUNT	< 3000	/GRAM	(CMMEF 4.15)
COLIFORM, VRB	< 20	COL/GRAM	(AOAC 991.14)
YEAST	< 200	COL/GRAM	(AOAC 997.02)
STAPH. AUREUS	< 20	/GRAM	(SMEWW 9213B5)
SALMONELLA	NEG	/GRAM	(AOAC 998.09)
LISTERIA	NEG	/GRAM	(AAOAC 995.22)
MOLD	<200	COL	

DATE ISSUED MARCH 23, 2009



SUGGESTED COOK PROCESSES

SMOKED & COOKED SAUSAGE

Stuff out sausage using 11 mm horn on a linking

Step I) DRY – 40 minutes at 60 degrees C, 15%
 Relative humidity

system (exp. Handtmann, Vemag, etc.)

- Step 2) SMOKE liquid or natural smoke (depending on customer – if using liquid somke, 30 minute dwell cycle and 20 minute dry cycle required)
- Step 3) COOK 75 degrees C at 80% Relative humidity until internal temperature of 70 deg C.
- Remove from smokehouse, let cool for 10 minutes, shower for 2 minutes; refrigerate to cool prior to packaging.

FRESH SAUSAGE

- Stuff out using 11 mm horn
- Sausages can be linked or run through
 Z-linker for portioning
- Fresh sausages (breakfast, Italian, etc.)
 can be pan fried with light oil, grilled,
 or deep fried Sausages stuffed in
 NutraCasing CANNOT be
 boiled in water to cook



*Being a vegetable-based casing, NutraCasing should be handled differently from collagen, natural, or cellulose casings. In order for NutraCasing to function as intended the suggested cook processes above should be followed in order to obtain excellent results

*NutraCasing should not be soaked or exposed to excessive moisture before stuffing

*Sausages stuffed in NutraCasing should not be boiled to cook

** NEVER shower sausages stuffed in NutraCasing immediately after cook



NUTRACASING APPLICATION DETAILS				
CUSTOMER NAME / CONTACT				
TYPES OF SAUSACES PRODUCED		ADDITIONAL BE	ODDUCT DETAILS	
TYPES OF SAUSAGES PRODUCED		ADDITIONAL PR	RODUCT DETAILS:	
FRESH COOKED SMOKED DRY-CURED				
TYPE OF STUFFING EQUIPMENT USED		TYPE OF LINKING		
HANDTMANN VEMAG TOWNSEND				
SAUSAGE DIAMETERS PRODUCED		CURRENT CASING TYPE BEING USED		
CURRENT CASING USAGE (PER WEEK)				
CASING SIZE	VOLUME		PRICE POINT	
PRODUCT REQUIREMENTS		REASON FOR ALTERNATIVE	INTEREST IN NUTRACASING	
KOSHER HALAAL VEGETABLE-BASED		ALILINATIVE		

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