

Draft

Scheduled process

Tomato-based sauce with diced peppers & cheese, seasoned, acidified, hot fill

Product classification: acidified food

Product name: Patty's Perky Parmesan Pasta Sauce. Formula date: 11-Nov-2024

FDA food category (FDA Form 2541e Section B2): gravies/sauces (spaghetti sauce, mushroom gravy)

Pursuant to 21 CFR §108 (Emergency Permit Control), 21 CFR §114 (Acidified Foods), and 21 CFR §117 (Preventive Controls for Human Food).

Prepared for

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Processing at

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FCE Number: 39876

Acidulants (2541e Sec. E5)

Citric Acid

Fruit Juice(s)

Tomato Product(s)

Allergens

MILK

Date.....04-Feb-2026

Valid through.....31-Dec-2029

The "Valid through" date is intended as a best practice to be used as a means of change control and systems review.

Include this document with your Food Safety Plan.

Critical factors (in red) (must be documented)

Finished pH.....4.10 maximum

Measured at 70±10°F

Hot fill & hold

Fill temperature.....165 °F minimum

(Temperature at end of hold.....159 °F minimum)

Inversion hold.....1:22 minutes minimum

82 seconds minimum

CC: Cool containers in cartons or in ambient air without fans.

FC: Changes in formula proportions require a new process.

Batch scaling does not constitute a formula change.

PM: Preparation method changes require a new process.

Thermal process calculation factors

For safety

LSV for *Escherichia coli* O157:H7

F.....1.20 minutes

T_{ref}.....160.0 °F

z.....19.5 °F

Process reference:

Breidt F, Sandeep KP, Arntt FM. 2010. Use of Linear Models for Thermal Processing of Acidified Foods. Food Protection Trends 30 (5):268-272.

For spoilage control

maximum pH.....4.10

LSV.....1 minutes

T_{ref}.....200 °F

z.....16 °F

Process reference:

Modeled after Pfung UJ. 2010. Microbiology and Engineering of Sterilization Processes, 14th ed. Otterbein IN: Environmental Sterilization Laboratory. Table 15.24, p 15.71.

Other process factors

Equivalent cook time-temperature combinations for pH ≤ 4.10

Temp (°F)	Time (m:ss)	Temp (°F)	Time (m:ss)	Temp (°F)	Time (m:ss)
185	27:57	189	7:51	193	1:29
186	20:36	190	5:31	194	0:45
187	15:05	191	3:47	195	0:12
188	10:57	192	2:28	196	0:00

Metrics

pH of low-acid ingredients (estimated).....5.5

Finished equilibrium pH.....3.96

Template revised 03 Feb 2026 (1)

Scheduled process prepared by

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Food process authority with over 25 years of experience

Member: Institute for Thermal Processing Specialists, <https://www.itps.org/>

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Let us vark aard for you!



Batch formula 50 gallon batch
Estimated density: 8.46 lb/gal

Changes in formula proportions require
a new scheduled process letter.

Ingredient	Producer's base formula	Weight (lb)	Weight %	Weight % of acid or low-acid groupings
Tomatoes, crushed, concentrated, super-heavy, № 10 (105 oz avoird) can, RedGold 3-72940-11011-3 [tomatoes, salt, citric acid]	8 cans	244	57.732%	
Tomato paste, 111 oz avoird pouch, RedGold (3-72940-75064-3) [tomatoes, citric acid] or equivalent	1 pouch	32.3	7.629%	
Lemon juice concentrate, 400 gpl, aseptic	0.5 lb	2.33	0.550%	65.911%
Pepper fruit, sweet red, fresh, trimmed, without seeds or stems, diced	19.5 lb	90.8	21.443%	
Oil, olive, extra virgin	3.5 lb	16.3	3.849%	
Onion bulbs, fresh, peeled, trimmed, diced	3 lb	14.0	3.299%	
Parmesan cheese, grated	3 lb	14.0	3.299%	
Garlic cloves, fresh, peeled, trimmed, minced	1.5 lb	6.98	1.649%	
Basil leaves, fresh, chopped	0.5 lb	2.33	0.550%	34.089%
Total		423	100.000%	100.000%

Preparation method (changes require new scheduled process letter) Critical and operating limits

- Regarding temperature measuring devices (TMDs):
 - Use TMDs accurate to ±2°F or closer. Identify each TMD by a unique code.
 - Calibrate each TMD against a NIST-traceable standard at temperatures of use.
 - Calibrate bimetal (dial-type) TMDs daily.
 - Calibrate other TMDs regularly to assure reproducible results.
 - Maintain a calibration log for each TMD.

- Regarding pH meters:
 - Use pH meter accurate to 0.01 pH unit.
 - Use 2-point calibration with buffers at pH 4.01 and 7.00.
 - Calibrate pH meter daily and as needed to assure reproducible results.
 - Maintain pH calibration log that includes date, time, buffer lots, and measured pH values in buffer before correction.

- Document results of measurement of each critical factor.

- Wash containers and closures. Drain and keep inverted until use.

- Record types, sources, and quantities of all ingredients.

- Combine all ingredients, mixing thoroughly.

- Sauté onions in oil over low heat until caramelized.

- Add garlic. Cook until garlic is browned, but not burnt.

- Add tomatoes, tomato paste, & lemon juice concentrate. Blend until smooth.

- Add remaining ingredients.

- Cook 30 minutes over medium heat.

- Check product pH on a cooled homogenized sample. Record pH & temperature..... UL: pH 4.00 maximum at ambient temperature

As necessary, adjust pH with lemon juice. Record any additional amounts & resultant pH readings.

- Heat mixture to at least 196°F..... LL: Cook temperature: 196°F minimum

or use an equivalent temperature-time combination (table on right).

- Fill containers at 170°F minimum. Cap.

- Invert containers immediately.

LL: Fill temperature: 170°F minimum

- Measure temperature of last container filled..... LCL: Fill temperature: 165°F minimum

- Hold for 90 seconds (1:30 minutes) minimum before cooling..... LL: Hold time: 90 seconds (1:30 minutes) minimum

- Cool containers in cartons or in ambient air without fans..... LCL: Hold time: 82 seconds (1:22 minutes) minimum

- If cooling in cartons, assure that product temperature in central case is 110°F or less within 24 hours..... CL: Cool containers in cartons or in ambient air without fans.

- Measure product pH at ambient temperature. Record pH & temperature..... UL: pH 4.00 maximum at ambient temperature

Blend entire contents of container to a uniform paste before pH measurement.

UCL: pH 4.10 maximum at ambient temperature

- Label containers with a "refrigerate after opening" label.

Abbreviation key

Critical limits **MUST** be met

CL: Critical limit

LCL: Lower critical limit

UCL: Upper critical limit

Operating limits **should** be met

L: Operating limit

LL: Lower operating limit

UL: Upper operating limit

Product identifiers & container characteristics

Description	GTIN-12 (UPC)	SID
16 fl oz cylindrical glass jar with 70-450 CT metal closure (Ball 61000 or smaller)	1-23456-78901-2	2026-02-04/001
32 fl oz cylindrical glass jar with 70-450 CT metal closure (Ball 62000 or smaller)	1-23456-78902-9	2026-02-04/002

Dimensions (inches-16ths)

Diameter	Height
3-06	5-02
4-02	6-13