

BACON, BEEF, BRINE CURE

Average Values

Section 1 of 4

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | |
|-----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|--|--|
| | | | | | | | A | B | | |
| Meat block | | | | | | | | | | |
| Beef | | | | | | | | | | |
| Plate | 41 | 40 | 18 | 42 | 16 | 25 | 100 | 100 | | |
| Dry Ingredients | | | | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 8.5 | 8.5 | | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | 2.0 | 1.5 | | |
| Moist Ingredients | | | | | | | | | | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 42.5 | 42.5 | | |
| Calculated composition 10% shrink | | | | | | | | | | |
| % Pump | | | | | | | 10 | 10 | | |
| Moisture | | | | | | | 38.4 | 38.5 | | |
| Fat | | | | | | | 40.0 | 40.4 | | |
| Protein | | | | | | | 18.2 | 18.2 | | |

Average Values

Section 2 of 4

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | |
|--------------------|--------------------------------------|-------------|---------------------------------|--|---|--|--|
| | | | | 1 | 2 | | |
| Curing Ingredients | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 1 | 1 | | |
| Na or K Nitrate | 0.1 | 0 | 0 | 1 | | | |

BACON, BEEF, BRINE CURE

Section 3 of 4

Processing Procedures

A.

1. Mix brine
2. Place plates in brine, 4 days
3. Rotate meat, return to same brine, 4 days
4. Shower
5. 135°F smokehouse, dampers open until dry
6. 135°F, dampers 1/4 open, smoke
7. 150°F, dampers closed, no smoke, to internal temperature of 135°F
8. Leave in smokehouse 1 hour, no heat
9. Chill, 18 hr., 38°F
10. Slice

B.

1. Pump, 10%
2. Dry, 135°F
3. Smoke
4. Cook to internal temperature of 135°F
5. Cool, in room temperature to internal temperature 100°F
6. Chill, 36°F

Cooking Form

Section 4 of 4

1. Bacon comb

BACON, BEEF, DRY CURE

Average Values

Section 1 of 4

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | | |
|-----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|--|--|--|--|--|--|
| | | | | | | | A | B | | | | | | |
| Meat block | | | | | | | | | | | | | | |
| Beef | | | | | | | | | | | | | | |
| Plate | 41 | 40 | 18 | 42 | 16 | 25 | 100 | 100 | | | | | | |
| Dry Ingredients | | | | | | | | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 3.5 | 3.25 | | | | | | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | 1.1 | 1.25 | | | | | | |
| Calculated composition 15% shrink | | | | | | | | | | | | | | |
| Moisture | | | | | | | 28.5 | 28.5 | | | | | | |
| Fat | | | | | | | 45.0 | 45.0 | | | | | | |
| Protein | | | | | | | 20.2 | 20.3 | | | | | | |

Average Values

Section 2 of 4

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | | | | | |
|--------------------|--------------------------------------|-------------|---------------------------------|--|------|--|--|--|--|--|--|--|--|--|
| | | | | 1 | 2 | | | | | | | | | |
| Curing Ingredients | | | | | | | | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 0.8 | 0.68 | | | | | | | | | |
| Na or K Nitrate | 0.1 | 0 | 0 | 0.8 | | | | | | | | | | |

BACON, BEEF, DRY CURE

Section 3 of 4

Processing Procedures

A.

1. Mix dry ingredients
2. Chill meat, 38°F
3. Rub plates, meat side up, place in box
4. Stack tightly
5. In 2 days meat is covered with a natural brine
If this is not the case use brine to cover

brine
0.90 lbs. salt
0.19 oz. nitrite
0.35 lbs. sugar
1 gal. water

6. Cure, 7 days
7. Shower
8. Smokehouse, 135°F, damper open, until dry
9. Smokehouse, 135°F, smoke, damper 1/4 open, heat to an internal temperature of 128°F
10. Smokehouse, 120°F, smoke to desired color
11. Chill 36°F for 18 hrs.
12. Slice

B.

1. Mix dry ingredients
2. Chill meat to 27°F
3. Rub with curing mix
4. Cure 4-5 days, 38°F
5. Shower
6. Dry
7. Smoke
8. Cook to internal temperature of 135°F
9. Room temperature, to internal temperature of 100°F
10. Chill, 34°F

Cooking Form

Section 4 of 4

1. Bacon comb

BACON, BRINE CURE

Average Values

Section 1 of 4

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | | |
|-----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|--|--|--|--|--|--|
| | | | | | | | A | B | | | | | | |
| Meat block | | | | | | | | | | | | | | |
| Pork | | | | | | | | | | | | | | |
| Belly | 29 | 61 | 9 | 86 | 0 | 3 | 100 | 100 | | | | | | |
| Dry Ingredients | | | | | | | | | | | | | | |
| Phosphate | 1 | 0 | 0 | 0 | 40 | 0 | 1.0 | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 9.0 | 8.5 | | | | | | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | 1 | 2 | | | | | | |
| Moist Ingredients | | | | | | | | | | | | | | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 42.5 | 42.5 | | | | | | |
| Calculated composition 10% shrink | | | | | | | | | | | | | | |
| % Pump | | | | | | | 10 | 10 | | | | | | |
| Moisture | | | | | | | 26.2 | 26.3 | | | | | | |
| Fat | | | | | | | 61.6 | 61.6 | | | | | | |
| Protein | | | | | | | 9.1 | 9.1 | | | | | | |

Average Values

Section 2 of 4

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | | |
|--------------------|--------------------------------------|-------------|---------------------------------|--|---|--|--|--|--|--|--|
| | | | | 1 | 2 | | | | | | |
| Curing Ingredients | | | | | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 1 | 1 | | | | | | |
| Na or K Nitrate | 0.1 | 0 | 0 | 1 | | | | | | | |

BACON, BRINE CURE

Section 3 of 4

Processing Procedures

A.

1. 38°F pork
2. Dissolve ingredients in water and pump meat with 8% brine, 75° salinometer
3. Place in container, meat side up, open container drain
4. Cover with paper, cure 5 days, 38°F
5. Hot water shower
6. Smokehouse 135°F, damper open until meat is dry
7. Dampers 1/4 open, smoke, 135°F to internal temperature of 128°F
8. Reduce temperature to 120°F, hold in smoke for desired color
9. Chill 38°F, 18 hrs
10. Slice

B.

1. 27°F pork
2. Pump meat, 10% with brine
3. Cure, 4 days, 40°F
4. Shower
5. Dry
6. Cook and smoke to internal temperature of 120°F
7. Chill to 27°F
8. Form
9. Slice, spray with 5% ascorbic acid
10. Package

Cooking Form

Section 4 of 4

1. Bacon comb

BACON, DRY CURE

Average Values

Section 1 of 4

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | | |
|-----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|--|--|--|--|--|--|
| | | | | | | | A | B | | | | | | |
| Meat block | | | | | | | | | | | | | | |
| Pork | | | | | | | | | | | | | | |
| Belly | 29 | 61 | 9 | 86 | 0 | 3 | 100 | 100 | | | | | | |
| Dry Ingredients | | | | | | | | | | | | | | |
| Phosphate | 1 | 0 | 0 | 0 | 40 | 0 | 0.3 | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 3.25 | 3.5 | | | | | | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | 1.25 | 1.1 | | | | | | |
| Calculated composition 15% shrink | | | | | | | | | | | | | | |
| Moisture | | | | | | | 15.0 | 15.0 | | | | | | |
| Fat | | | | | | | 68.5 | 68.6 | | | | | | |
| Protein | | | | | | | 10.1 | 10.1 | | | | | | |

Average Values

Section 2 of 4

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | | | | | |
|--------------------|--------------------------------------|-------------|---------------------------------|--|------|--|--|--|--|--|--|--|--|--|
| | | | | 1 | 2 | | | | | | | | | |
| Curing Ingredients | | | | | | | | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 0.8 | 0.68 | | | | | | | | | |
| Na or K Nitrate | 0.1 | 0 | 0 | 0.8 | | | | | | | | | | |

BACON, DRY CURE

Section 3 of 4

Processing Procedure

- A.
1. Mix dry ingredients
 2. Chill pork 38°F
 3. Rub ingredients on bellies, stack tightly in a box
 4. In 2 days if not covered with natural brine add the following brine:
brine
0.9 lbs. salt
0.19 oz. nitrite
0.35 lbs. salt
1 gal water
 5. Cure 1 day/lb
 6. Shower
 7. 135°F, smokehouse, damper open until dry
 8. 135°F, smoke, damper 1/4 open to an internal temperature of 128°F
 9. 120°F and smoke to desired color
 10. Chill 36°F, 18 hrs.
 11. Slice
- B.
1. Chill pork 27°F
 2. Mix dry ingredients
 3. Rub with curing mix
 4. Cure, 5 days, 38°F
 5. Shower
 6. Dry
 7. Smoke
 8. Cook to internal temperature of 120°F
 9. Room temperature to internal temperature of 100°F
 10. Chill, 34°F

Cooking Form

Section 4 of 4

1. Bacon comb

BARBECUE, BEEF OR PORK

Average Values

Section 1 of 6

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | | |
|-----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|------|------|------|------|------|---|
| | | | | | | | A | B | C | D | E | F | G | |
| Meat block | | | | | | | | | | | | | | |
| Beef | | | | | | | | | | | | | | |
| Ribs, bone in | 45 | 28 | 14 | — | — | — | 100 | | | | | | | |
| Trim 90 (lean) | 71 | 11 | 18 | 28 | 27 | 43 | | 100 | | | | | | |
| Pork | | | | | | | | | | | | | | |
| Ribs, bone in | 32 | 20 | 9 | — | — | — | | | 100 | | | | | |
| Trim 80 (lean) | 60 | 23 | 16 | 25 | 16 | 25 | | | | 100 | 100 | 100 | 100 | |
| Dry Ingredients | | | | | | | | | | | | | | |
| Corn starch | 12 | 1 | 0 | 0 | 20 | 0 | 1.5 | | 2 | | | | | |
| Hydrolyzed Veg. Protein (HVP) | 10 | 0 | 31 | 0 | 20 | 0 | 0.25 | | | | | | | |
| MSG | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0.13 | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 0.5 | 0.2 | 0.2 | 0.4 | 0.4 | 0.2 | 0.2 | |
| Starch | 12 | 1 | 0 | 0 | 30 | 0 | 2 | | | | | | | |
| Sugar, brown | 2 | 0 | 0 | 0 | 0 | 0 | | 0.5 | | | | 1.2 | 0.2 | |
| (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | 2 | | 2 | 0.2 | | | | |
| Wet Ingredients | | | | | | | | | | | | | | |
| butter or oil | 15 | 81 | 1 | 0 | 0 | 1 | | 5 | | 4 | 2 | 5 | 5 | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 4 | | 4.5 | 5 | 4 | |
| Worcestershire sauce | 62 | 1 | 6 | 0 | 0 | 90 | | 5 | 0.25 | | | 0.6 | 0.3 | |
| Fruit & Vegetables | | | | | | | | | | | | | | |
| Catsup | 69 | 1 | 2 | 0 | 0 | 80 | | 2 | | | | | | 6 |
| Garlic, fresh | 61 | 0 | 6 | 0 | 0 | 0 | | | | | 0.06 | | | |
| Lemon juice | 91 | 0 | 1 | 0 | 0 | 0 | | | | 0.7 | 0.7 | 4 | | |
| Olive | 78 | 13 | 1 | 0 | 0 | 0 | | | | | 1.2 | | | |
| Onion | 89 | 0 | 1 | 0 | 0 | 0 | | 2 | | | | | | |
| Tomato paste | 75 | 1 | 3 | 0 | 0 | 90 | 16 | | 12 | | | | | |
| Calculated composition 15% shrink | | | | | | | | | | | | | | |
| Moisture | | | | | | | 38.6 | 63.9 | 26.7 | 50.7 | 54.1 | 53.1 | 52.6 | |
| Fat | | | | | | | 26.7 | 14.9 | 19.7 | 29.3 | 26.8 | 27.4 | 27.6 | |
| Protein | | | | | | | 13.8 | 18.1 | 9.2 | 17.9 | 17.3 | 16.4 | 16.5 | |

BARBECUE, BEEF OR PORK

Average Values

Section 2 of 6

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | | | |
|-----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|--|--|--|--|--|--|--|
| | | | | | | | H | I | | | | | | | |
| Meat block | | | | | | | | | | | | | | | |
| Pork | | | | | | | | | | | | | | | |
| Trim 80 (lean) | 60 | 23 | 16 | 25 | 16 | 25 | 100 | 100 | | | | | | | |
| Dry Ingredients | | | | | | | | | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 0.2 | | | | | | | | |
| Sugar, brown | 2 | 0 | 0 | 0 | 0 | 0 | | 0.6 | | | | | | | |
| Moist Ingredients | | | | | | | | | | | | | | | |
| Butter or oil | 15 | 81 | 1 | 0 | 0 | 1 | 2 | | | | | | | | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | | | | | | | |
| Worcestershire sauce | 62 | 1 | 6 | 0 | 0 | 90 | 1 | 0.6 | | | | | | | |
| Fruit & Vegetables | | | | | | | | | | | | | | | |
| Catsup | 69 | 1 | 2 | 0 | 0 | 80 | | 5 | | | | | | | |
| Onion | 89 | 0 | 1 | 0 | 0 | 0 | 0.5 | 2.5 | | | | | | | |
| Calculated composition 15% shrink | | | | | | | | | | | | | | | |
| Moisture | | | | | | | 53.3 | 55.1 | | | | | | | |
| Fat | | | | | | | 27.2 | 24.3 | | | | | | | |
| Protein | | | | | | | 17.7 | 17.0 | | | | | | | |

BARBECUE, BEEF OR PORK

Average Values

Section 3 of 6

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | | | |
|-------------------|--------------------------------------|-------------|---------------------------------|--|----|---|----|-----|-----|----|-----|-----|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| Spices | | | | | | | | | | | | |
| Basil | 6 | 4 | 14 | 0.5 | | | | | | | | |
| Caramel color | 0 | 0 | 0 | | 4 | 1 | | | | | | |
| Celery seed | 6 | 25 | 18 | | | | 1 | | | | | |
| Chili powder | 8 | 12 | 14 | | | | | 4.8 | 3.2 | | | |
| Chili sauce | 94 | 0 | 1 | | | | | | | | 8 | |
| Garlic, Powder | 6 | 1 | 17 | | | 2 | | | 0.2 | | | |
| Liquid smoke | 80 | 0 | 0 | | 4 | | | | | | | |
| Maple flavor | 35 | 0 | 0 | 0.5 | | | | | | | | |
| Marjoram | 4 | 7 | 11 | 0.5 | | | | | | | | |
| Mustard, prepared | 80 | 4 | 5 | | | | 5 | 10 | | | 1 | |
| Onion powder | 5 | 1 | 10 | | | 4 | | | | | | |
| Paprika | 10 | 13 | 15 | 1 | | | | 1 | | | | 1 |
| Pepper black | 11 | 8.5 | 12 | | | 1 | | | | | 0.5 | 0.5 |
| Pepper, red | 8 | 17 | 12 | | | | | | | | | 0.2 |
| Tarragon | 8 | 7 | 23 | 2 | | | | | | | | |
| Vinegar | 94 | 0 | 0 | 5 | 24 | | 16 | 11 | 3 | 32 | 64 | |

Average Values

Section 4 of 6

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | | | |
|--------------|--------------------------------------|-------------|---------------------------------|--|--|--|--|--|--|--|--|--|
| | | | | 9 | | | | | | | | |
| Spices | | | | | | | | | | | | |
| Pepper black | 11 | 8.5 | 12 | 1 | | | | | | | | |
| Thyme | 8 | 7 | 9 | 1 | | | | | | | | |

BARBECUE, BEEF OR PORK

Section 5 of 6

Processing Procedure

A.

1. Boil meat in salt water
2. Cool
3. Dip meat in sauce
4. Cook, 200°F, 1 hr
5. Chill, 34°F

Cooking Form

Section 6 of 6

1. Kettle

BARBECUE, LOAF

Average Values

Section 1 of 4

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | |
|----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|------|------|-------|----|--|
| | | | | | | | A | B | C | D | E | | |
| Meat block | | | | | | | | | | | | | |
| Beef | | | | | | | | | | | | | |
| Cooked beef | 63 | 5 | 31 | 34 | 16 | 42 | 100 | | | | | | |
| Cooking broth beef | 99 | 0 | 1 | 0 | 0 | 0 | | 20 | | | | | |
| Cured beef | 58 | 30 | 12 | 30 | 18 | 30 | | | 100 | | | | |
| Trim 90 (lean) | 71 | 11 | 18 | 28 | 27 | 43 | | 100 | | | | | |
| Trim 70 | 55 | 30 | 15 | 39 | 20 | 31 | | | | 20 | | | |
| Pork | | | | | | | | | | | | | |
| Cheek meat | 67 | 15 | 17 | 72 | 9 | 29 | | | | | 80 | | |
| Heart | 73 | 10 | 15 | 27 | 6 | 32 | | | | | | 10 | |
| Liver | 73 | 7 | 19 | 24 | 2 | 49 | | | | | | 10 | |
| Trim 80 (lean) | 60 | 23 | 16 | 25 | 16 | 25 | | | | 80 | | | |
| Dry Ingredients | | | | | | | | | | | | | |
| Caseinate | 10 | 0 | 90 | 0 | 40 | 0 | | | | 5 | | | |
| Gelatin | 13 | 0 | 85 | 0 | 20 | 0 | | 2.7 | 2 | | 3.5 | | |
| Non-fat dry milk | 3 | 1 | 38 | 0 | 25 | 0 | | | 3 | | 12 | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 1.5 | 1.4 | 2 | 2.75 | 2.5 | | |
| Sugar, brown | 2 | 0 | 0 | 0 | 0 | 0 | 5 | | | | | | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | | 1.4 | | | | | |
| Textured veg. protein | 8 | 1 | 50 | 0 | 35 | 0 | 17 | | | | | | |
| Moist Ingredients | | | | | | | | | | | | | |
| Oil | 0 | 100 | 0 | 0 | 0 | 0 | 3 | | | | | | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 34 | | | 20 | | | |
| Worcestershire sauce | 62 | 1 | 6 | 0 | 0 | 90 | | 0.1 | 2.75 | | | | |
| Fruit & Vegetables | | | | | | | | | | | | | |
| Catsup | 69 | 1 | 2 | 0 | 0 | 80 | 64 | | 2 | | 18.7 | | |
| Celery, fresh ground | 94 | 0 | 1 | 0 | 0 | 0 | 22 | | | | | | |
| Onion | 89 | 0 | 1 | 0 | 0 | 0 | 8.5 | | 0.15 | | | | |
| Tomato paste | 75 | 1 | 3 | 0 | 0 | 90 | | 3.5 | | | | | |
| Calculated composition 4% shrink | | | | | | | | | | | | | |
| Moisture | | | | | | | 65.6 | 71.5 | 53.1 | 60.7 | 58.3 | | |
| Fat | | | | | | | 3.6 | 8.9 | 27.9 | 19.9 | 10.7 | | |
| Protein | | | | | | | 16.8 | 16.6 | 14.0 | 16.6 | 19.0 | | |
| Properties | | | | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | 25.6 | 24.5 | 23.9 | 21.5 | *42.7 | | |
| Bind Points (Min. 1.8) | | | | | | | 3.2 | 4.3 | 2.6 | 3.6 | 2.4 | | |
| Color Points (Min. 2) | | | | | | | 5.7 | 6.3 | 3.5 | 3.4 | 4.3 | | |

BARBECUE, LOAF

Average Values

Section 2 of 4

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | |
|---------------------------|--------------------------------------|-------------|---------------------------------|--|------|-----|---|
| | | | | 1 | 2 | 3 | 4 |
| Curing Ingredients | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 0.25 | | | |
| Na Ascorbate | 0.1 | 0 | 0 | | 0.87 | | |
| Na Erythorbate | 0.1 | 0 | 0 | 0.87 | | | |
| Spices | | | | | | | |
| Celery seed | 6 | 25 | 18 | | 0.1 | | |
| Cinnamon | 10 | 3 | 4 | | 0.1 | | |
| Cloves | 7 | 22 | 6 | | 0.1 | | |
| Garlic, Powder | 6 | 1 | 17 | | 0.05 | | |
| Ginger | 9 | 4 | 8.5 | | 0.1 | | |
| Mace | 8 | 30 | 7 | | 0.05 | | |
| Mustard, prepared | 80 | 4 | 5 | | | 11 | |
| Onion powder | 5 | 1 | 10 | | 0.7 | | |
| Pepper, red | 8 | 17 | 12 | 3 | 0.7 | | 3 |
| Pepper, white | 11 | 8.5 | 1.3 | | | | 3 |
| Vinegar | 94 | 0 | 0 | | 4.8 | 112 | |

BARBECUE, LOAF

Section 3 of 4

Processing Procedures

A.

1. Grind pork, 1/2" plate
2. Chop beef and water
3. Mix all ingredients for 15 minutes
4. Stuff into molds and cook to 155°F internal temperature
5. Chill to 40°F
6. Remove from molds
7. Paint outside with water and paprika paste

B.

1. Cube
2. Water cook
3. Grind, 1-1/2"
4. Mix with cooking stock

Cooking Form

Section 4 of 4

1. Molds

BEEF, DRIED

Average Values

Section 1 of 4

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | |
|------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|--|--|--|
| | | | | | | | A | B | | | |
| Meat block | | | | | | | | | | | |
| Beef | | | | | | | | | | | |
| Round | 73 | 5 | 21 | 20 | 27 | 45 | 100 | 100 | | | |
| Dry Ingredients | | | | | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 9.2 | 3 | | | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | 2 | 1 | | | |
| Moist Ingredients | | | | | | | | | | | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 38 | 3 | | | |
| Calculated composition | 30% shrink | | | | | | | | | | |
| % Pump | | | | | | | 15 | dry | | | |
| Moisture | | | | | | | 63.4 | 58.6 | | | |
| Fat | | | | | | | 4.8 | 6.7 | | | |
| Protein | | | | | | | 20.1 | 28.0 | | | |

Average Values

Section 2 of 4

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | |
|--------------------|--------------------------------------|-------------|---------------------------------|--|------|--|--|
| | | | | 1 | 2 | | |
| Curing Ingredients | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 1 | 0.25 | | |
| Na or K Nitrate | 0.1 | 0 | 0 | 1 | 1 | | |
| Na Erythorbate | 0.1 | 0 | 0 | | 0.87 | | |

BEEF, DRIED

Section 3 of 4

Processing Procedures

- A.
 1. Section round into inside, outside and knuckle
 2. Chill meat, 38°F
 3. Submerge, 7 day/pound in brine
 4. Soak
 5. Dry
 6. Smoke, 130°F
 7. Cook, 120°F, to 65% of cured weight
 8. Cool
 9. Thin slice

- B.
 1. Grind 10%, 1/4"
 2. Mix 3% ice
 3. Re grind, 1/16"
 4. Grind 90%, 1-1/2"
 5. Mix
 6. Cure, 4 days, 36°F
 7. Mix
 8. Stuff
 9. Flatten
 10. Water cook, to internal temperature of 150°F
 11. Smoke
 12. Chill

Cooking Form

Section 4 of 4

1. Fibrous casing

BEEF LOAF

Average Values

Section 1 of 5

| Meat block | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | | | |
|--|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|------|------|------|------|--|------|--|
| | | | | | | | A | B | C | D | E | F | | | |
| Beef | | | | | | | | | | | | | | | |
| Cheek meat | 70 | 20 | 18 | 59 | 14 | 48 | | | | | | | | | |
| Chuck | 66 | 16 | 18 | 30 | 24 | 38 | 100 | | | | | | | | |
| Cooking broth beef | 99 | 0 | 1 | 0 | 0 | 0 | | 50 | | | | | | | |
| Plate | 41 | 40 | 18 | 42 | 16 | 25 | | 25 | | | | | | | |
| Round | 73 | 5 | 21 | 20 | 27 | 45 | | | 100 | | | | | | |
| Trim 85 | 66 | 15 | 18 | 28 | 26 | 41 | | 75 | | 100 | 100 | 100 | | | |
| Other Meats or Mixtures or Undesignated | | | | | | | | | | | | | | | |
| Bouillon cube | 1 | 3 | 20 | 0 | 0 | 20 | 0.87 | | | | | | | | |
| Dry Ingredients | | | | | | | | | | | | | | | |
| Gelatin | 13 | 0 | 85 | 0 | 20 | 0 | 5 | | 3 | 2 | 2 | | | | |
| MSG | 0 | 0 | 0 | 0 | 0 | 0 | 0.12 | | 0.12 | | | | | 0.12 | |
| Non-fat dry milk | 3 | 1 | 38 | 0 | 25 | 0 | | 12 | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 2 | 3 | 1.5 | 2.5 | 2 | 3.25 | | | |
| Sugar, brown | 2 | 0 | 0 | 0 | 0 | 0 | | | | 1 | 0.75 | 1 | | | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | | | 0.25 | | | | | | |
| Moist Ingredients | | | | | | | | | | | | | | | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 50 | | 25 | | | | | | |
| Worcestershire sauce | 62 | 1 | 6 | 0 | 0 | 90 | | 0.2 | | | | | | | |
| Fruit & Vegetables | | | | | | | | | | | | | | | |
| Catsup | 69 | 1 | 2 | 0 | 0 | 80 | | 10 | | | | | | | |
| Onion | 89 | 0 | 1 | 0 | 0 | 0 | | 2 | | | | | | | |
| Calculated composition 5% shrink | | | | | | | | | | | | | | | |
| Moisture | | | | | | | *72.5 | 65.1 | 74.5 | 60.9 | 61.3 | 61.3 | | | |
| Fat | | | | | | | 10.7 | 12.8 | 4.1 | 15.0 | 15.1 | 15.1 | | | |
| Protein | | | | | | | 14.9 | 13.8 | 19.1 | 19.7 | 19.8 | 18.2 | | | |
| Properties | | | | | | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | 24.1 | 24.4 | 17.8 | 25.5 | 25.6 | 27.9 | | | |
| Bind Points (Min. 1.8) | | | | | | | 3.4 | 3.2 | 5.0 | 5.0 | 5.0 | 4.7 | | | |
| Color Points (Min. 2) | | | | | | | 4.6 | 4.1 | 7.7 | 7.4 | 7.4 | 7.4 | | | |

BEEF LOAF

Average Values

Section 2 of 5

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | |
|---------------------------|--------------------------------------|-------------|---------------------------------|--|------|---|---|---|---|--|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | |
| Curing Ingredients | | | | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 0.25 | 0.25 | | | | | |
| Na Erythorbate | 0.1 | 0 | 0 | 0.87 | | | | | | |
| Spices | | | | | | | | | | |
| Bay leaves | 5 | 8 | 8 | | | 2 | | | | |
| Celery seed, ground | 6 | 25 | 18 | | 2 | | 2 | 2 | | |
| Onion powder | 5 | 1 | 10 | | | | 4 | | | |
| Pepper black | 11 | 8.5 | 12 | 6 | | | | 8 | 4 | |
| Pepper, white | 11 | 8.5 | 1.3 | | 4 | 8 | 3 | | | |

Processing Procedures

Section 3 of 5

1. Cube meat
 2. Add broth to cover
 3. Add seasoning
 4. Cook till tender
 5. Mix
 6. Chill
 7. Coat with fat
 8. Stuff
- B.
1. Bone beef in 5 lbs. pieces
 2. Sprinkle with MSG, salt, pepper
 3. Roast 375°F for 3 hrs.
 4. Cool
 5. Cube
 6. Dissolve bouillon and gelatin, 160°F
 7. Mix
 8. Stuff
 9. Cool

BEEF LOAF

Section 4 of 5

Processing Procedures

- C.
1. Grind meat, 1/2"
 2. Cover with water
 3. Boil
 4. Drain
 5. Mix other ingredients with 25 pounds of broth
 6. Mix
 7. Boil, 4 min.
 8. Place in pans
 9. Chill, 18 hrs, 34°F
- D.
1. Cook beef until tender
 2. Cube beef
 3. Mix
 4. Mold
- E.
1. Grind 90 pounds beef, 1" plate
 2. Grind 10 pounds beef 3/16" plate
 3. Mix all ingredients
 4. Stuff
 5. Cook to an internal temperature of 155°F
 6. Chill to 28°F
 7. Slice
- F.
1. Cube beef
 2. Soak with H₂O and nitrite, 2 hours
 3. Cook at 175°F
 4. Add seasoning
 5. When tender add gelatin
 6. Mix
 7. Cool
 8. Coat with fat
 9. Stuff

Cooking Form

Section 5 of 5

1. Loaf pan
2. Mold

MEAT PATTY

Average Values

Section 1 of 3

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | |
|----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|--|--|--|--|--|
| | | | | | | | A | B | | | | | |
| Meat block | | | | | | | | | | | | | |
| Beef | | | | | | | | | | | | | |
| Trim 85 | 66 | 15 | 18 | 28 | 26 | 41 | 50 | 37 | | | | | |
| Trim 50 | 38 | 50 | 11 | 42 | 12 | 19 | | 38 | | | | | |
| Trim 40 | 27 | 65 | 7 | 36 | 8 | 14 | 50 | | | | | | |
| Dry Ingredients | | | | | | | | | | | | | |
| Dextrose | .06 | 0 | 0 | 0 | 10 | 0 | 0.5 | 0.7 | | | | | |
| Hydrolyzed Veg. | | | | | | | | | | | | | |
| Protein (HVP) | 10 | 0 | 31 | 0 | 20 | 0 | 0.25 | 0.5 | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 0.5 | 0.8 | | | | | |
| Textured veg. protein | 8 | 1 | 50 | 0 | 35 | 0 | | 10 | | | | | |
| Moist Ingredients | | | | | | | | | | | | | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 3 | 15 | | | | | |
| Calculated composition 1% shrink | | | | | | | | | | | | | |
| Moisture | | | | | | | 47.0 | 53.2 | | | | | |
| Fat | | | | | | | *38.8 | 24.4 | | | | | |
| Protein | | | | | | | 12.2 | 15.8 | | | | | |
| Properties | | | | | | | | | | | | | |
| Collagen (Max. 35) | | | | | | | 30.0 | 22.7 | | | | | |
| Color Points (Min. 1.8) | | | | | | | 2.6 | 4.0 | | | | | |
| Moisture Points (Min. 2) | | | | | | | 4.1 | 3.5 | | | | | |

BEEF PATTY

Average Values

Section 2 of 3

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | | | |
|-------------------------------|--------------------------------------|-------------|---------------------------------|--|---|--|--|--|--|--|--|--|
| | | | | 1 | 2 | | | | | | | |
| | | | | | | | | | | | | |
| Spices | | | | | | | | | | | | |
| Celery seed, ground | 6 | 25 | 18 | 0.25 | | | | | | | | |
| Nutmeg | 8 | 33 | 7 | 0.25 | | | | | | | | |
| Onion chips | 4 | 1 | 9 | 2.5 | 1 | | | | | | | |
| Onion powder | 5 | 1 | 10 | 1.5 | | | | | | | | |
| Pepper, black decorticated | 11 | 9 | 1 | 3.5 | | | | | | | | |
| Pepper, white | 11 | 8.5 | 1.3 | | 2 | | | | | | | |

Cooking Form

Section 3 of 3

1. Formed

BEEF SAUSAGE

Average Values

Section 1 of 3

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | |
|----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|-------|----|--|--|--|
| | | | | | | | A | B | C | | | | |
| Meat block | | | | | | | | | | | | | |
| Beef | | | | | | | | | | | | | |
| Brisket | 65 | 15 | 18 | 40 | 12 | 19 | 25 | | | | | | |
| Chuck | 66 | 16 | 18 | 30 | 24 | 38 | 75 | 75 | | | | | |
| Flank | 43 | 42 | 13 | 24 | 12 | 20 | | | | 35 | | | |
| Navels | 40 | 50 | 10 | 42 | 14 | 21 | | | | 30 | | | |
| Plate | 41 | 40 | 18 | 42 | 16 | 25 | | | | 35 | | | |
| Trim 50 | 38 | 50 | 11 | 42 | 12 | 19 | | 25 | | | | | |
| Dry Ingredients | | | | | | | | | | | | | |
| Dextrose | .06 | 0 | 0 | 0 | 10 | 0 | 0.5 | 0.5 | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 3 | 3 | 2.5 | | | | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | | | 1 | | | | |
| Moist Ingredients | | | | | | | | | | | | | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | | | | 5 | | | |
| Fruit & Vegetables | | | | | | | | | | | | | |
| Garlic, fresh | 61 | 0 | 6 | 0 | 0 | 0 | 0.12 | 0.12 | | | | | |
| Calculated composition 1% shrink | | | | | | | | | | | | | |
| Moisture | | | | | | | 63.2 | 56.6 | 42.2 | | | | |
| Fat | | | | | | | 15.4 | 23.9 | *40.7 | | | | |
| Protein | | | | | | | 17.6 | 15.8 | 12.9 | | | | |
| erties | | | | | | | | | | | | | |
| ½ Collagen (Max. 35) | | | | | | | 32.4 | 32.1 | *36.1 | | | | |
| Bind Points (Min. 1.8) | | | | | | | 3.7 | 3.5 | 1.8 | | | | |
| Color Points (Min. 2) | | | | | | | 5.8 | 5.5 | 2.9 | | | | |

BEEF SAUSAGE

Average Values

Section 2 of 3

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | |
|---------------------------|--------------------------------------|-------------|---------------------------------|--|------|---|--|--|--|
| | | | | 1 | 2 | 3 | | | |
| <u>Curing Ingredients</u> | | | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 0.25 | 0.25 | | | | |
| Na or K Nitrate | 0.1 | 0 | 0 | 0.5 | 0.5 | | | | |
| <u>Spices</u> | | | | | | | | | |
| Coriander | 5 | 18 | 15 | 1.5 | | | | | |
| Ginger | 9 | 4 | 8.5 | | | 1 | | | |
| Nutmeg | 8 | 33 | 7 | | 2 | 1 | | | |
| Paprika | 10 | 13 | 15 | 3 | 10 | | | | |
| Pepper, white | 11 | 8.5 | 13 | 6 | 6 | 4 | | | |
| Sage, rubbed | 8 | 13 | 11 | | | 1 | | | |
| Thyme | 8 | 7 | 9 | | | 1 | | | |

Processing Procedure

Section 3 of 3

A.

1. Chill beef, 28°F
2. Grind 3/8" plate
3. Mix
4. Re grind 1/8" plate
5. Stuff
6. Chill

Cooking Forms

1. Collagen casing
2. Natural casing
3. Formed

BERLINER

Average Values

Section 1 of 4

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | |
|----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|------|------|
| | | | | | | | A | B | C | D |
| Meat block | | | | | | | | | | |
| Beef | | | | | | | | | | |
| Chuck | 66 | 16 | 18 | 30 | 24 | 38 | 20 | | | |
| Cured beef | 58 | 30 | 12 | 30 | 18 | 30 | | 25 | | |
| Trim 65 | 50 | 35 | 14 | 39 | 18 | 28 | | | 15 | 15 |
| Veal | | | | | | | | | | |
| Lean | 69 | 10 | 19 | 27 | 26 | 30 | 20 | | | |
| Pork | | | | | | | | | | |
| Cheek meat | 67 | 15 | 17 | 72 | 9 | 29 | 30 | | | |
| Cured | 57 | 28 | 13 | 31 | 14 | 20 | | 75 | 85 | |
| Trim 80 (lean) | 60 | 23 | 16 | 25 | 16 | 25 | 30 | | | 85 |
| Dry Ingredients | | | | | | | | | | |
| Dextrose | .06 | 0 | 0 | 0 | 10 | 0 | | 0.5 | 0.5 | |
| Non-fat dry milk | 3 | 1 | 38 | 0 | 25 | 0 | 4 | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 3 | 2.5 | 2.5 | 2.5 |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | | | | 0.25 |
| Moist Ingredients | | | | | | | | | | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 8 | | | |
| Fruit & Vegetables | | | | | | | | | | |
| Garlic, fresh | 61 | 0 | 6 | 0 | 0 | 0 | | 0.06 | | |
| Onion | 89 | 0 | 1 | 0 | 0 | 0 | | 1.5 | | |
| Calculated composition 5% shrink | | | | | | | | | | |
| Moisture | | | | | | | 61.8 | 53.8 | 51.9 | 54.7 |
| Fat | | | | | | | 15.2 | 28.7 | 29.7 | 25.4 |
| Protein | | | | | | | 17.2 | 12.9 | 13.4 | 16.1 |
| Properties | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | *36.9 | 30.6 | 32.4 | 26.8 |
| Bind Points (Min. 1.8) | | | | | | | 2.3 | 1.9 | 2.0 | 2.6 |
| Color Points (Min. 2) | | | | | | | 4.7 | 2.9 | 2.9 | 4.1 |

BERLINER

Average Values

Section 2 of 4

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | |
|---------------------------|--------------------------------------|-------------|---------------------------------|--|-------|------|--|--|--|--|
| | | | | 1 | 2 | 3 | | | | |
| <u>Curing Ingredients</u> | | | | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 0.125 | 0.125 | | | | | |
| Na or K Nitrate | 0.1 | 0 | 0 | 3 | 1 | | | | | |
| <u>Spices</u> | | | | | | | | | | |
| Cinnamon | 10 | 3 | 4 | | | 0.5 | | | | |
| Cloves | 7 | 22 | 6 | | | 0.75 | | | | |
| Maple flavor | 35 | 0 | 0 | | 2 | 2.5 | | | | |
| Pepper black | 11 | 8.5 | 12 | | | 6 | | | | |
| Pepper, white | 11 | 8.5 | 1.3 | | 7 | | | | | |

Processing Procedures

Section 3 of 4

- A.
1. Pork, coarse grind
 2. Beef, fine grind
- B.
1. Coarse grind
 2. Mix
 3. Stuff
 4. 18 hours at 36°F
 5. Room temperature, 2 hrs
 6. Scalding water shower
 7. Smoke at 120°F, 1 hour
 8. Smoke at 145°F, for 3 hours
 9. Cook 160°F water, 4-6 hrs.
- C.
1. Grind pork trim, 1/4"
 2. Grind rest, 1/8"
 3. Mix
 4. Cure, 36°F, 48 hrs.
 5. Hold, 70°F, 3 hrs
 6. Smoke
 7. Cook to internal temperature of 155°F
 8. Shower

Cooking Forms

Section 4 of 4

1. Extra wide beef middles
2. Cellulose casing
3. Fibrous casing

BILTONG (Dried Meat)

Average Values

Section 1 of 4

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | |
|-----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|--|--|--|
| | | | | | | | A | B | | | |
| Meat block | | | | | | | | | | | |
| Beef | | | | | | | | | | | |
| Bull F.C. | 70 | 10 | 20 | 20 | 30 | 47 | 100 | | | | |
| Cow F.C. | 68 | 14 | 18 | 21 | 24 | 39 | | 100 | | | |
| Dry Ingredients | | | | | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 4 | 4 | | | |
| Calculated composition 40% shrink | | | | | | | | | | | |
| Moisture | | | | | | | 45.5 | 42.3 | | | |
| Fat | | | | | | | 16.0 | 22.4 | | | |
| Protein | | | | | | | 32.1 | 28.8 | | | |

Average Values

Section 2 of 4

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | | | |
|--------------------|--------------------------------------|-------------|---------------------------------|--|--|--|--|--|--|--|--|--|
| | | | | 1 | | | | | | | | |
| Curing Ingredients | | | | | | | | | | | | |
| Na or K Nitrate | 0.1 | 0 | 0 | 1 | | | | | | | | |
| Spices | | | | | | | | | | | | |
| Chilies | 10 | 17 | 12 | 2 | | | | | | | | |
| Pepper black | 11 | 8.5 | 12 | 6 | | | | | | | | |

BILTONG (Dried Meat)

Section 3 of 4

Processing Procedure

A.

1. Chill meat
2. Cut into strips, maximum 1/2"
3. Rub salt onto strips and cure 18 hours
4. Pepper, chillies, saltpeter are often added to salt
5. Dry in a dry atmosphere
6. Reverse hanging ends daily
7. Dry to a uniform structure
8. Smoke increases resistance to insects
9. Protect from insects and moisture
10. Soak when ready to use or it may be consumed dry and raw

Cooking Form

Section 4 of 4

1. Bacon comb
2. Meat hooks

BLOOD AND TONGUE SAUSAGE

Average Values

Section 1 of 4

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | |
|--|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|-------|-------|-------|-------|-------|
| | | | | | | | A | B | C | D | E | F |
| Meat block | | | | | | | | | | | | |
| Beef | | | | | | | | | | | | |
| Trim 65 | 50 | 35 | 14 | 39 | 18 | 28 | 11.3 | | | | | |
| Pork | | | | | | | | | | | | |
| Backfat, cubed | 5 | 93 | 1 | 95 | 0 | 0 | 26.3 | 45 | 13 | 10 | 9 | 5 |
| Heart | 73 | 10 | 15 | 27 | 6 | 32 | 11.3 | | | | | |
| Skin, 0.75 grind | 40 | 32 | 28 | 99 | 6 | 1 | 11.3 | 15 | | 15 | 10 | -7.1 |
| Snout | 45 | 40 | 14 | 80 | 2 | 1 | | | | 30 | | 59.3 |
| Tongue | 63 | 19 | 17 | 66 | 8 | 36 | | 30 | | | | |
| Tongue, cured (or beef) | 65 | 17 | 16 | 58 | 8 | 45 | 22.6 | | 75 | 30 | 70 | 21.4 |
| Trim Reg | 34 | 58 | 8 | 36 | 10 | 8 | 11.3 | | | | | |
| Other Meats or Mixtures or Undesignated | | | | | | | | | | | | |
| Blood, cured | 81 | 1 | 18 | 0 | 15 | 180 | 6 | 10 | 12 | 15 | 11 | 7.1 |
| Dry Ingredients | | | | | | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 2.5 | 2.2 | 0.5 | 2.25 | 0.5 | 2.5 |
| Fruit & Vegetables | | | | | | | | | | | | |
| Onion | 89 | 0 | 1 | 0 | 0 | 0 | | | 0.06 | | | |
| Calculated composition 6% shrink | | | | | | | | | | | | |
| Moisture | | | | | | | 38.3 | 30.3 | 56.2 | 47.4 | 55.9 | 44.9 |
| Fat | | | | | | | *45.2 | *54.6 | 26.4 | *32.6 | 25.0 | *35.7 |
| Protein | | | | | | | 12.8 | 12.0 | 15.1 | 16.6 | 17.0 | 15.6 |
| Properties | | | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | *55.7 | *69.0 | *49.6 | *65.2 | *58.2 | *70.9 |
| Bind Points (Min. 1.8) | | | | | | | *1.2 | *1.0 | *1.4 | *1.2 | *1.4 | *0.78 |
| Color Points (Min. 2) | | | | | | | 4.8 | 5.3 | 9.8 | 7.4 | 9.1 | 4.1 |

BLOOD AND TONGUE SAUSAGE

Average Values

Section 2 of 4

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | |
|--------------------|--------------------------------------|-------------|---------------------------------|--|------|------|------|---|-----|--|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | |
| Curing Ingredients | | | | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 0.25 | 0.25 | | | | | |
| Na or K Nitrate | 0.1 | 0 | 0 | | | 0.7 | 0.7 | | | |
| Spices | | | | | | | | | | |
| Allspice | 8.5 | 8.7 | 6 | | | | | 2 | 1 | |
| Cloves | 7 | 22 | 6 | 1 | 0.5 | | | | 0.5 | |
| Ginger | 9 | 4 | 8.5 | | | | | 1 | | |
| Mace | 8 | 30 | 7 | | 0.5 | 1.5 | 1.5 | 2 | | |
| Marjoram | 4 | 7 | 11 | 3 | 1 | 0.75 | 0.75 | | | |
| Onion powder | 5 | 1 | 10 | 1 | | 1 | | | | |
| Pepper black | 11 | 8.5 | 12 | | 5 | 2 | 2 | 6 | | |
| Pepper, red | 8 | 17 | 12 | 1 | | | | | | |
| Pepper, white | 11 | 8.5 | 13 | 6 | | | | | 4 | |
| Thyme | 8 | 7 | 9 | | 0.5 | | | 1 | | |

BLOOD AND TONGUE SAUSAGE

Section 3 of 4

Processing Procedure

- A.
1. Wash and cut tongue into strips
 2. Mix
 3. Stuff
 4. Cook to 150°F internal temperature
 5. Chill in ice water to 40°F internal temperature
- B.
1. Cook tongue and snout, cool, 2 hrs
 2. Grind, 1/2" plate
 3. Grind, skins 1/8" plate
 4. Dice, pork fat 1/4"
 5. Scald, pork fat 5 sec.
 6. Mix
 7. Stuff into bungs
 8. Cook, 195°F in water to internal temperature of 152°F
 9. Cool, in ice water to 110°F
 10. Chill, 18 hours, 36°F
- C.
1. Cube fat, scald 30 seconds.
 2. Cook meat till tender, cube
 3. Cook rinds till tender, grind
 4. Mix
 5. Place tongue in casing and stuff around it
 6. Cook, 3 hrs at 180°F
 7. Cool
 8. Cold smoke
- D.
1. Cure tongues
 2. Place 2 or 3 per casing
- E.
1. Dice back fat and scald
 2. Cook pork rinds and mince
 3. Cook and dice tongues
 4. Cook blood
 5. Mix hot
 6. Stuff
 7. Water cook
 9. Chill

Cooking Forms

Section 4 of 4

1. Pork bung
2. Synthetic casing
3. Beef bungs

BLOOD HEAD CHEESE

Average Values

Section 1 of 4

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | | |
|--|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|--|--|--|--|--|--|--|
| | | | | | | | A | | | | | | | |
| Meat block | | | | | | | | | | | | | | |
| Pork | | | | | | | | | | | | | | |
| Cheekmeat, cured | 67 | 15 | 17 | 72 | 7 | 25 | 28 | | | | | | | |
| Rind, pickled | 40 | 32 | 28 | 99 | 6 | 1 | 12 | | | | | | | |
| Snout, pickled | 45 | 40 | 14 | 80 | 2 | 1 | 60 | | | | | | | |
| Other Meats or Mixtures or Undesignated | | | | | | | | | | | | | | |
| Blood, cured | 81 | 1 | 18 | 0 | 15 | 180 | 10 | | | | | | | |
| Cooking broth | 99 | 0 | 1 | 0 | 0 | 5 | 7 | | | | | | | |
| Dry Ingredients | | | | | | | | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 1.25 | | | | | | | |
| Calculated composition 8% shrink | | | | | | | | | | | | | | |
| Moisture | | | | | | | 51.6 | | | | | | | |
| Fat | | | | | | | 29.5 | | | | | | | |
| Protein | | | | | | | 16.9 | | | | | | | |
| Properties | | | | | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | *73.3 | | | | | | | |
| Bind Points (Min. 1.8) | | | | | | | *0.9 | | | | | | | |
| Color Points (Min. 2) | | | | | | | 4.2 | | | | | | | |

Average Values

Section 2 of 4

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | | | | | |
|--------------|--------------------------------------|-------------|---------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| | | | | 1 | | | | | | | | | | |
| Spices | | | | | | | | | | | | | | |
| Allspice | 8.5 | 8.7 | 6 | 1 | | | | | | | | | | |
| Cloves | 7 | 22 | 6 | 0.25 | | | | | | | | | | |
| Onion powder | 5 | 1 | 10 | 3.5 | | | | | | | | | | |
| Pepper black | 11 | 8.5 | 12 | 4 | | | | | | | | | | |

BLOOD HEAD CHEESE

Section 3 of 4

Processing Procedure

A.

1. Cook till tender in 165°F water
2. Wash
3. Cut, grind rinds
4. Mix hot
5. Stuff
6. Cook, 2 hrs at 165°F
7. Chill

Cooking Forms

Section 4 of 4

1. Cellulose casing
2. Natural casing
3. Mold

BLOOD SAUSAGE

BLOOD S

Average Values

Section 1 of 7

| Meat block | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | | | | | |
|----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|-------|-------|-------|-------|-------|-------|--|--|--|--|
| | | | | | | | A | B | C | D | E | F | G | | | | |
| | | | | | | | Beef | | | | | | | | | | |
| Blood, strained | 90 | 1 | 7 | 0 | 15 | 15 | 66.7 | 28.6 | 20 | 20 | 20 | 16.7 | 15 | | | | |
| Lip, cured | 66 | 17 | 17 | 90 | 0 | 1 | | | 12 | | | | | | | | |
| Shank | 71 | 7 | 21 | 48 | 28 | 46 | | | | 25 | | | | | | | |
| Trim 65 | 50 | 35 | 14 | 39 | 18 | 28 | | 35.7 | | | | | | | | | |
| Pork | | | | | | | | | | | | | | | | | |
| Backfat, cubed | 5 | 93 | 1 | 95 | 0 | 0 | 33.3 | | 10 | | | 41.7 | 35 | | | | |
| Cheek meat | 67 | 15 | 17 | 72 | 9 | 29 | | | | | | | 10 | | | | |
| Heart | 73 | 10 | 15 | 27 | 6 | 32 | | | | | | | 15 | | | | |
| Jowl, skinned | 24 | 71 | 5 | 43 | 5 | 2 | | | | 20 | 20 | | | | | | |
| Lips | 71 | 14 | 15 | 90 | 1 | 1 | | | | | | | 5 | | | | |
| Skin | 40 | 32 | 28 | 99 | 6 | 1 | | | 10 | 15 | 20 | | 25 | | | | |
| Snout | 45 | 40 | 14 | 80 | 2 | 1 | | | 35 | 20 | | | | | | | |
| Tongue | 63 | 19 | 17 | 66 | 8 | 36 | | | | | 40 | | | | | | |
| Trim 80 (lean) | 60 | 23 | 16 | 25 | 16 | 25 | | | | | | 41.7 | | | | | |
| Trim 50 | 36 | 52 | 10 | 34 | 12 | 9 | | 35.7 | | | | | | | | | |
| Tripe | 74 | 15 | 10 | 100 | 0 | 0 | | | 12 | | | | | | | | |
| Dry Ingredients | | | | | | | | | | | | | | | | | |
| Barley | 11 | 1 | 9 | 0 | 12 | 0 | | 2.8 | | | | | | | | | |
| MSG | 0 | 0 | 0 | 0 | 0 | 0 | | | 0.25 | | | 0.25 | | | | | |
| Non-fat dry milk | 3 | 1 | 38 | 0 | 25 | 0 | | | 3.5 | | | | | | | | |
| Rye flour | 11 | 2 | 12 | 0 | 16 | 0 | 50 | | | | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 3.3 | 2 | 3 | 2 | 3 | 3 | 2.0 | | | | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | | | | | | | 0.5 | | | | |
| Moist Ingredients | | | | | | | | | | | | | | | | | |
| Molasses | 24 | 0 | 0 | 0 | 18 | 20 | 3 | | | | | | | | | | |
| Fruit & Vegetables | | | | | | | | | | | | | | | | | |
| Onion | 89 | 0 | 1 | 0 | 0 | 0 | | 1 | | | | | 0.2 | | | | |
| Calculated composition 8% shrink | | | | | | | | | | | | | | | | | |
| Moisture | | | | | | | 38.5 | 50.5 | 48.0 | 50.5 | 50.4 | 35.6 | 38.4 | | | | |
| Fat | | | | | | | 22.7 | *32.2 | *31.4 | *30.9 | 30.0 | *51.0 | *44.8 | | | | |
| Protein | | | | | | | 7.7 | 11.1 | 14.2 | 15.6 | 15.6 | 8.7 | 13.2 | | | | |
| Properties | | | | | | | | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | 2.9 | 29.3 | *71.1 | *63.9 | *70.8 | 24.9 | *74.7 | | | | |
| Bind Points (Min. 1.8) | | | | | | | *1.2 | *1.7 | *0.8 | 2.2 | *1.2 | *1.3 | *0.9 | | | | |
| Color Points (Min. 2) | | | | | | | *0.49 | 2.1 | *0.3 | 2.9 | 2.9 | *1.9 | *1.5 | | | | |

| |
|------------------|
| Meat block |
| Beef |
| Blood, strained |
| Trim 75 |
| Pork |
| Backfat, cubed |
| Bacon, raw |
| Heart |
| Jowl, skinned |
| Skin |
| Snout |
| Tongue |
| Trim 50, cured |
| Other Meats or M |
| or Undesignate |
| Rework |
| Dry Ingredients |
| Barley |
| Buckwheat, gr |
| Salt |
| Calculated compo |
| Moisture |
| Fat |
| Protein |
| Properties |
| % Collagen (A |
| Bind Points (A |
| Color Points (|

BLOOD SAUSAGE

Average Values

Section 2 of 7

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | |
|--|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|-------|-------|-------|-------|-------|-------|
| | | | | | | | H | I | J | K | L | M | N |
| Meat block | | | | | | | | | | | | | |
| Beef | | | | | | | | | | | | | |
| Blood, strained | 90 | 1 | 7 | 0 | 15 | 15 | 15 | 15 | 10 | 9.1 | 9.1 | 9.1 | 8 |
| Trim 75 | 58 | 25 | 16 | 38 | 22 | 34 | | | | | | | 15 |
| Pork | | | | | | | | | | | | | |
| Backfat, cubed | 5 | 93 | 1 | 95 | 0 | 0 | 10 | | | | | | 35 |
| Bacon, raw | 35 | 55 | 8 | 86 | 0 | 3 | | 70 | | | | | |
| Heart | 73 | 10 | 15 | 27 | 6 | 32 | | | | | | | 15 |
| Jowl, skinned | 24 | 71 | 5 | 43 | 5 | 2 | | | 20 | | | | |
| Skin | 40 | 32 | 28 | 99 | 6 | 1 | 15 | 15 | 25 | 11.4 | 11.4 | 11.4 | 15 |
| Snout | 45 | 40 | 14 | 80 | 2 | 1 | 30 | | 25 | 56.8 | 56.8 | 56.8 | |
| Tongue | 63 | 19 | 17 | 66 | 8 | 36 | 30 | | 20 | 22.7 | 22.7 | 22.7 | |
| Trim 50, cured | 36 | 52 | 10 | 34 | 10 | 7 | | | | | | | 20 |
| Other Meats or Mixtures or Undesignated | | | | | | | | | | | | | |
| Rework | 56 | 30 | 12 | 31 | 8 | 20 | | | | 5 | | | |
| Dry Ingredients | | | | | | | | | | | | | |
| Barley | 11 | 1 | 9 | 0 | 12 | 0 | | | | | 20 | | |
| Buckwheat, groat | 11 | 2 | 12 | 0 | 10 | 0 | | | | 20 | | 20 | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 3.0 | 1.0 | 3.0 | 2.5 | 2.5 | 2.5 | 3.5 |
| Calculated composition 8% shrink | | | | | | | | | | | | | |
| Moisture | | | | | | | 46.6 | 38.7 | 41.6 | 40.4 | 39.9 | 39.9 | 28.6 |
| Fat | | | | | | | *33.7 | *46.8 | *38.1 | 27.9 | 27.5 | 27.7 | *51.7 |
| Protein | | | | | | | 15.5 | 11.7 | 16.5 | 15.9 | 15.5 | 16.0 | 11.5 |
| Properties | | | | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | *74.7 | *82.5 | *79.3 | *65.7 | *69.1 | *66.9 | *56.7 |
| Bind Points (Min. 1.8) | | | | | | | *1.0 | *0.4 | *1.0 | *0.89 | *0.86 | *0.88 | *1.1 |
| Color Points (Min. 2) | | | | | | | 2.2 | *0.4 | *1.5 | *1.5 | *1.4 | *1.4 | *1.8 |

BLOOD SAUSAGE

Average Values

Section 3 of 7

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | | |
|---------------------------|--------------------------------------|-------------|---------------------------------|--|------|------|------|---|------|-----|------|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Curing Ingredients | | | | | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 0.25 | 0.2 | 0.1 | | | | | |
| Na or K Nitrate | 0.1 | 0 | 0 | | | 0.5 | 2 | | | | |
| Na Erythorbate | 0.1 | 0 | 0 | | 0.87 | 0.87 | | | | | |
| Spices | | | | | | | | | | | |
| Allspice | 8.5 | 8.7 | 6 | 1.5 | | | 1 | 3 | 1 | 1 | 1 |
| Caraway seeds | 10 | 15 | 20 | | | 0.2 | | | | | |
| Celery seed, ground | 6 | 25 | 18 | | | | | 1 | | | |
| Cinnamon | 10 | 3 | 4 | | 4 | | | 3 | | | |
| Cloves | 7 | 22 | 6 | | | 0.5 | | | 1.5 | 0.5 | 0.25 |
| Mace | 8 | 30 | 7 | | 1 | 0.5 | | | | | |
| Marjoram | 4 | 7 | 11 | 2 | 4 | 1.5 | 0.75 | | 0.75 | | |
| Onion, granulated | 4 | 1 | 9 | | 16 | | | | | | |
| Onion powder | 5 | 1 | 10 | 5 | | | | 1 | | | |
| Pepper black | 11 | 8.5 | 12 | | 4 | 2.5 | | | | | 4 |
| Pepper, white | 11 | 8.5 | 1.3 | | | | 6 | 4 | 6 | 3 | |
| Sage | 3 | 14 | 8.5 | | 4 | | | | | | |
| Savory | 9 | 6 | 7 | | | | | | | 1.5 | |
| Thyme | 8 | 7 | 9 | | | 0.5 | | | | | |

Average Values

Section 4 of 7

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | | |
|---------------|--------------------------------------|-------------|---------------------------------|--|--|--|--|--|--|--|--|
| | | | | 9 | | | | | | | |
| Spices | | | | | | | | | | | |
| Mace | 8 | 30 | 7 | 0.5 | | | | | | | |
| Onion powder | 5 | 1 | 10 | 6.5 | | | | | | | |
| Pepper, white | 11 | 8.5 | 1.3 | 3 | | | | | | | |
| Thyme | 8 | 7 | 9 | 0.5 | | | | | | | |

BLOOD SAUSAGE

Section 5 of 7

Processing Procedures

- A.
1. Cook all meat 2 hrs and cool
 2. Grind 3/16" plate
 3. Cook groats or barley in water 2 hrs until volume is doubled, cool
 4. Mix
 5. Stuff into beef bungs or middles
 6. Cook in 160°F water until internal temperature of 152°F
 7. Shower to internal temperature of 110°F
 8. Chill 24 hours at 36 - 38°F

- B.
1. Cook meat at 165°F until tender
 2. Cube and scald fat for 30 seconds
 3. Grind meat
 4. Mix
 5. Stuff
 6. Cook

- C.
1. Cook meat at 165°F in nets until tender
 2. Grind meat
 3. Cube fat
 4. Strain blood
 5. Mix
 6. Stuff
 7. Cook 3 hours at 160°F
 8. Cool

1. Grind
2. Mix
3. Roll into balls
4. Boil in saltwater to internal temperature of 160°F
5. Cool, room temperature, 3 hours
6. Chill, 36°F

BLOOD SAUSAGE

Section 6 of 7

Processing Procedures

- E.
1. Cure all meat items
 2. Grind meat and onions, 1/4"
 3. Grind skin, 1/8"
 4. Chop
 5. Stuff
 6. Water cook to internal temperature of 170°F
 7. Chill, cold water
 8. Chill, 36°F
 9. Smoked, cold
 10. Refrigerate
- F.
1. Blanch backfat, 60 sec.
 2. Strain blood and mix with nitrate
 3. Cook, cheeks, lips, heart and grind
 4. Cook skin until tender and grind (save 2 gal of broth and add to mixture)
 5. Mix
 6. Stuff
 7. Water cook to internal temperature of 150°F
- G.
1. Cook meat, 165°F until tender
 2. Cube and scald fat, 30 seconds.
 3. Grind meat
 4. Mix
 5. Stuff
 6. Cook, 1 hour at 180°F
 7. Chill
 8. Cold smoke

Cooking Forms

Section 7 of 7

1. Beef round
2. Beef bung
3. Polyethylene lined molds
4. Beef middles

BOCKWURST (White Sausage)

Average Values

Section 1 of 6

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | |
|-----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|------|------|------|-------|-------|
| | | | | | | | A | B | C | D | E | F | G |
| Meat block | | | | | | | | | | | | | |
| Beef | | | | | | | | | | | | | |
| Trim 90 (lean) | 71 | 11 | 18 | 28 | 27 | 43 | 60 | 60 | | | | | |
| Trim 85 | 66 | 15 | 18 | 28 | 26 | 41 | | | 25 | | | | |
| Veal | | | | | | | | | | | | | |
| Lean | 69 | 10 | 19 | 27 | 26 | 30 | | | 40 | 60 | 60 | 30 | |
| Lean 65% | 50 | 35 | 14 | 38 | 30 | 20 | | | | | | 50 | |
| Pork | | | | | | | | | | | | | |
| Backfat | 5 | 93 | 1 | 95 | 0 | 0 | | | | | | 20 | |
| Trim 80 (lean) | 60 | 23 | 16 | 25 | 16 | 25 | | | 15 | | | 50 | |
| Trim Reg | 34 | 58 | 8 | 36 | 10 | 8 | 40 | 40 | 20 | 40 | 40 | 50 | |
| Dry Ingredients | | | | | | | | | | | | | |
| Dextrose | .06 | 0 | 0 | 0 | 10 | 0 | 2 | | 0.5 | 2 | | 0.5 | |
| MSG | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | 0.4 | |
| Non-fat dry milk | 3 | 1 | 38 | 0 | 25 | 0 | 3.5 | 3.5 | 4.7 | 3.5 | 3.5 | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 2.5 | 2.5 | 1 | 2.5 | 2.5 | 1 | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | | | | | | 3.2 | |
| Moist Ingredients | | | | | | | | | | | | | |
| Corn syrup | 20 | 0 | 0 | 0 | 5 | 0 | | 2 | | | 2 | | |
| Egg | 74 | 12 | 13 | 0 | 0 | 1 | 4 | 4 | 3.2 | 4 | 4 | 3.2 | |
| Milk | 87 | 3 | 4 | 0 | 0 | 0 | | | 8.3 | | | 8 | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 25 | 25 | | 25 | 25 | | |
| Fruit & Vegetables | | | | | | | | | | | | | |
| Celery, fresh ground | 94 | 0 | 1 | 0 | 0 | 0 | | | | | | 0.1 | |
| Onion | 89 | 0 | 1 | 0 | 0 | 0 | | | | | | 4 | |
| Parsley, chopped | 85 | 1 | 4 | 0 | 0 | 0 | | | | 0.75 | | 2 | |
| Calculated composition 10% shrink | | | | | | | | | | | | | |
| Moisture | | | | | | | 57.2 | 57.6 | 54.6 | 56.4 | 56.6 | 44.8 | 40.9 |
| Fat | | | | | | | 24.6 | 24.6 | 22.2 | 24.0 | 24.1 | *34.6 | *44.8 |
| Protein | | | | | | | 12.9 | 12.9 | 17.6 | 13.3 | 13.3 | 14.8 | 11.0 |
| Properties | | | | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | 26.3 | 26.3 | 24.1 | 25.0 | 25.1 | 26.1 | *35.7 |
| Bind Points (Min. 1.8) | | | | | | | 2.9 | 2.9 | 3.9 | *0.5 | *0.5 | 2.9 | *0.4 |
| Color Points (Min. 2) | | | | | | | 4.0 | 4.0 | 4.6 | 3.0 | 3.0 | 3.8 | *1.6 |

BOCKWURST (White Sausage)

Average Values

Section 2 of 6

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | |
|-----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|-------|-------|-------|-------|
| | | | | | | | H | I | J | K | L |
| Meat block | | | | | | | | | | | |
| Beef | | | | | | | | | | | |
| Veal | | | | | | | | | | | |
| Lean 65% | 50 | 35 | 14 | 38 | 30 | 20 | 50 | 50 | 50 | 35 | 30 |
| Pork | | | | | | | | | | | |
| Backfat | 5 | 93 | 1 | 95 | 0 | 0 | | | | | 20 |
| Trim 80 (lean) | 60 | 23 | 16 | 25 | 16 | 25 | | | | | 50 |
| Trim 50 | 36 | 52 | 10 | 34 | 12 | 9 | | | | 65 | |
| Trim Reg. | 34 | 58 | 8 | 36 | 10 | 8 | 50 | 50 | 50 | | |
| Dry Ingredients | | | | | | | | | | | |
| Dextrose | .06 | 0 | 0 | 0 | 10 | 0 | 0.5 | | | 0.25 | |
| Non-fat dry milk | 3 | 1 | 38 | 0 | 25 | 0 | 3 | 4 | | 3 | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 1 | 1 | 2.25 | 1 | 2.25 |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | | | 0.5 | | 0.5 |
| Moist Ingredients | | | | | | | | | | | |
| Egg | 74 | 12 | 13 | 0 | 0 | 1 | | 1.25 | | 1.25 | |
| Milk | 87 | 3 | 4 | 0 | 0 | 0 | | | 8 | | 8 |
| Fruit & Vegetables | | | | | | | | | | | |
| Celery, fresh ground | 94 | 0 | 1 | 0 | 0 | 0 | 0.1 | 0.5 | 0.7 | | 0.1 |
| Leeks | 85 | 0 | 2 | 0 | 0 | 0 | | 0.5 | | | |
| Lemon peel | 82 | 0 | 1 | 0 | 0 | 1 | 0.06 | | 0.12 | 0.06 | |
| Onion | 89 | 0 | 1 | 0 | 0 | 0 | | 0.75 | 1 | | |
| Parsley, chopped | 85 | 1 | 4 | 0 | 0 | 0 | 0.06 | 0.2 | | | 0.06 |
| Calculated composition 10% shrink | | | | | | | | | | | |
| Moisture | | | | | | | 33.8 | 34.9 | 38.8 | 33.1 | 42.1 |
| Fat | | | | | | | *49.4 | *47.9 | *46.1 | *48.7 | *40.9 |
| Protein | | | | | | | 12.9 | 13.1 | 11.2 | 13.4 | 12.7 |
| Properties | | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | 33.7 | 32.1 | *36.1 | 31.9 | 29.9 |
| Bind Points (Min. 1.8) | | | | | | | *0.7 | 3.0 | *0.4 | 2.7 | *1.3 |
| Color Points (Min. 2) | | | | | | | *1.8 | *1.8 | *1.7 | *1.6 | 2.8 |

BOCKWURST (White Sausage)

Average Values

Section 3 of 6

| | M o i s t u r e | F a t | P r o t e i n | Oz. unless indicated otherwise per 100 lbs. of meat | | | | | | |
|---------------------------|--------------------------------------|-------------|---------------------------------|--|------|---|------|-----|---|---|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Curing Ingredients | | | | | | | | | | |
| Na or K Nitrite | 0.1 | 0 | 0 | 0.25 | | | | | | |
| Na or K Nitrate | 0.1 | 0 | 0 | 2.7 | | | | | | |
| Na Erythorbate | 0.1 | 0 | 0 | | 0.87 | | | | | |
| Spices | | | | | | | | | | |
| Allspice, soluble | 0 | 0 | 0 | | | 1 | | | | |
| Bitters | 3 | 14 | 8 | 1 | | | | | | |
| Cardamon | 8 | 3.5 | 9 | | | | 0.5 | | | |
| Cardamon, soluble | 0 | 0 | 0 | | | 1 | | | | |
| Chives | 91 | 0 | 2 | | | 8 | | 8 | 8 | |
| Cinnamon | 10 | 3 | 4 | | | 1 | | | | |
| Cloves | 7 | 22 | 6 | | | | | 1 | | |
| Garlic, Powder | 6 | 1 | 17 | | | 2 | | | | |
| Lemon Extract | 20 | 5 | 0 | | | | | 0.2 | | |
| Mace | 8 | 30 | 7 | | 0.5 | | | 1.5 | 1 | 1 |
| Onion powder | 5 | 1 | 10 | | 0.3 | | | | 4 | 4 |
| Pepper, white | 11 | 8.5 | 1.3 | 7 | 1 | 6 | 7 | 6 | 4 | 5 |
| Sage | 3 | 14 | 8.5 | 1 | | | 0.75 | | | |
| Thyme | 8 | 7 | 9 | | | | 0.75 | | | |

Processing Procedures

Section 4 of 6

A.

1. Grind meat, 1/8" plate
2. Chop meat, spices, eggs, 50°F
3. Add NFD, green vegetables, chop 55°F
4. Stuff
5. Steam cook at 160°F to internal temperature of 142°F
6. Chill, 40°F
7. Very perishable

BOCKWURST (White Sausage)

Section 5 of 6

Processing Procedures

- B.
1. Grind meat, 1/8" plate
 2. Mix
 3. Stuff, 24-26 mm casing, link 6"
 4. Water cook to internal temperature of 152°F
 5. Shower to 110°F
 6. Chill, 18 hrs, 38°F
 7. Can be frozen and cooked as needed
- C.
1. Store at 28.5°F
 2. Sell fresh
- D.
1. Chill meat to 34°F
 2. Grind meat, 1/8"
 3. Mix
 4. Chill, 34°F, 18 hrs
 5. Chop
 6. Stuff
 7. Shower
 8. Chill, 26°F
 9. Package

Cooking Forms

Section 6 of 6

1. Hog casing, 4 inch link
2. Sheep casing
3. A 1 lb. cellulose casing
4. A 24-26 mm casing, 4 inch link

BOHEMIAN SAUSAGE

Average Values

Section 1 of 1

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | | |
|----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|--|--|--|--|--|--|--|
| | | | | | | | A | | | | | | | |
| Meat block | | | | | | | | | | | | | | |
| Pork | | | | | | | | | | | | | | |
| Cheek meat | 67 | 15 | 17 | 72 | 9 | 29 | 15 | | | | | | | |
| Trim 80 (lean) | 60 | 23 | 16 | 25 | 16 | 25 | 75 | | | | | | | |
| Trim 15 (fat) | 11 | 85 | 3 | 60 | 3 | 1 | 10 | | | | | | | |
| Dry Ingredients | | | | | | | | | | | | | | |
| Dextrose | .06 | 0 | 0 | 0 | 10 | 0 | 0.4 | | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 2.25 | | | | | | | |
| Fruit & Vegetables | | | | | | | | | | | | | | |
| Garlic, fresh | 61 | 0 | 6 | 0 | 0 | 0 | 0.25 | | | | | | | |
| Calculated composition 7% shrink | | | | | | | | | | | | | | |
| Moisture | | | | | | | 51.3 | | | | | | | |
| Fat | | | | | | | 29.3 | | | | | | | |
| Protein | | | | | | | 15.5 | | | | | | | |
| Properties | | | | | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | 33.8 | | | | | | | |
| Bind Points (Min. 1.8) | | | | | | | 2.3 | | | | | | | |
| Color Points (Min. 2) | | | | | | | 3.9 | | | | | | | |

BOLOGNA

BOLOGNA

Average Values

Section 1 of 16

| | M o i s t u r e | F a t | P r o t e i n | % C o l l a g e n | B i n d | C o l o r | Pounds for Various Formulations | | | | | | | |
|----------------------------------|--------------------------------------|-------------|---------------------------------|---|------------------|-----------------------|---------------------------------|------|------|------|------|-------|-------|----|
| | | | | | | | A | B | C | D | E | F | G | |
| Meat block | | | | | | | | | | | | | | |
| Beef | | | | | | | | | | | | | | |
| Brisket | 65 | 15 | 18 | 40 | 12 | 19 | 35 | | | | | | | |
| Bull F.C. | 70 | 10 | 20 | 20 | 30 | 47 | 40 | 70 | 60 | 60 | 60 | 60 | 60 | |
| Heart | 70 | 13 | 17 | 27 | 6 | 40 | | | 20 | | | | | |
| Trim 40 | 27 | 65 | 7 | 36 | 8 | 14 | | 30 | | | | | | |
| Veal | | | | | | | | | | | | | | |
| Lean | 69 | 10 | 19 | 27 | 26 | 30 | 25 | | | | | | | |
| Pork | | | | | | | | | | | | | | |
| Cheek meat | 67 | 15 | 17 | 72 | 9 | 29 | | | | 20 | | | | |
| Heart | 73 | 10 | 15 | 27 | 6 | 32 | | | | | 20 | | | |
| Snout | 45 | 40 | 14 | 80 | 2 | 1 | | | 20 | | 20 | | | |
| Trim 50 cured | 36 | 52 | 10 | 34 | 10 | 7 | | | | | | | 40 | |
| Trim Reg | 34 | 58 | 8 | 36 | 10 | 8 | | | | | | | | 40 |
| Trim 15 (fat) | 11 | 85 | 3 | 60 | 3 | 1 | | | | 20 | | | | |
| Dry Ingredients | | | | | | | | | | | | | | |
| Corn syrup solids | 3.5 | 0 | 0 | 0 | 5 | 0 | | | | | | | 2 | |
| MSG | 0 | 0 | 0 | 0 | 0 | 0 | | 0.25 | | | | | | |
| Non-fat dry milk | 3 | 1 | 38 | 0 | 25 | 0 | 5 | | 3.5 | | 3.5 | | | |
| Plant protein hydrolysate | 8 | 0 | 30 | 0 | 20 | 0 | | 0.1 | | | | | | |
| Salt | .01 | 0 | 0 | 0 | 40 | 0 | 3 | 2.75 | 3 | 2.75 | 3 | 3 | 3 | 3 |
| Soy protein concentrate | 8 | 0 | 75 | 0 | 45 | 0 | | | | 3.5 | | | | |
| Sugar (sucrose) | .06 | 0 | 0 | 0 | 10 | 0 | 0.5 | | | | | | | 1 |
| Moist Ingredients | | | | | | | | | | | | | | |
| Water or ice | 100 | 0 | 0 | 0 | 0 | 0 | 25 | 10 | 10 | 10 | 10 | 30 | 40 | |
| Fruit & Vegetables | | | | | | | | | | | | | | |
| Garlic, fresh | 61 | 0 | 6 | 0 | 0 | 0 | | | | 0.12 | | | | |
| Onion | 89 | 0 | 1 | 0 | 0 | 0 | | | | 2 | | | | |
| Calculated composition 4% shrink | | | | | | | | | | | | | | |
| Moisture | | | | | | | 68.5 | 57.6 | 63.0 | 57.2 | 63.5 | *62.6 | *65.0 | |
| Fat | | | | | | | 9.2 | 24.4 | 14.9 | 22.8 | 14.3 | 20.7 | 21.1 | |
| Protein | | | | | | | 16.3 | 14.9 | 17.5 | 16.4 | 17.1 | 12.3 | 11.0 | |
| Properties | | | | | | | | | | | | | | |
| % Collagen (Max. 35) | | | | | | | 25.9 | 22.0 | 28.4 | 27.9 | 28.5 | 23.6 | 23.4 | |
| Bind Points (Min. 1.8) | | | | | | | 3.8 | 4.0 | 3.7 | 4.5 | 3.7 | 3.1 | 2.8 | |
| Color Points (Min. 2) | | | | | | | 5.0 | 6.3 | 6.3 | 5.8 | 5.9 | 4.6 | 4.3 | |

| |
|--------------------|
| Meat block |
| Beef |
| Bull F.C. |
| Cheek meat |
| Trim 50 |
| Trim 40 |
| Pork |
| Cheek meat |
| Heart |
| Trim 80 (lean) |
| Trim Reg |
| Trim 15 (fat) |
| Dry Ingredients |
| Corn syrup solids |
| Non-fat dry milk |
| Salt |
| Soy protein conc. |
| Sugar (sucrose) |
| Moist Ingredients |
| Water or ice |
| Fruit & Vegetable |
| Garlic, fresh |
| Onion |
| Calculated composi |
| Moisture |
| Fat |
| Protein |
| Properties |
| % Collagen (Max) |
| Bind Points (Min) |
| Color Points (Min) |