

**Appendix 10:**  
**ADDITIONAL RISK CHARACTERIZATION INFORMATION**

Table A10-1. Predicted Mean Number of Cases of Listeriosis per Serving for Each Food Category and Subpopulation

Food Category	Predicted Number of Cases of Listeriosis per Serving <sup>a</sup>											
	Intermediate-Age <sup>b</sup>			Elderly			Perinatal <sup>c</sup>			Total		
	Mean	Percentiles		Mean	Percentiles		Mean	Percentiles		Mean	Percentiles	
	5 <sup>th</sup>	95 <sup>th</sup>	5 <sup>th</sup>	95 <sup>th</sup>	95 <sup>th</sup>	5 <sup>th</sup>	95 <sup>th</sup>	95 <sup>th</sup>	5 <sup>th</sup>	95 <sup>th</sup>	95 <sup>th</sup>	
<b>SEAFOOD</b>												
Smoked Seafood	3.1x10 <sup>-8</sup>	8.8x10 <sup>-11</sup>	1.2x10 <sup>-7</sup>	2.6x10 <sup>-7</sup>	9.7x10 <sup>-10</sup>	1.0x10 <sup>-6</sup>	1.1x10 <sup>-5</sup>	4.3x10 <sup>-8</sup>	4.6x10 <sup>-5</sup>	8.4x10 <sup>-8</sup>	3.0x10 <sup>-10</sup>	3.3x10 <sup>-7</sup>
Raw Seafood	8.6x10 <sup>-11</sup>	1.1x10 <sup>-17</sup>	2.9x10 <sup>-10</sup>	8.9x10 <sup>-10</sup>	1.7x10 <sup>-14</sup>	2.9x10 <sup>-9</sup>	6.8x10 <sup>-8</sup>	7.4x10 <sup>-12</sup>	2.0x10 <sup>-7</sup>	1.4x10 <sup>-10</sup>	7.4x10 <sup>-15</sup>	4.6x10 <sup>-10</sup>
Preserved Fish	9.6x10 <sup>-10</sup>	5.5x10 <sup>-20</sup>	2.6x10 <sup>-9</sup>	8.2x10 <sup>-9</sup>	3.9x10 <sup>-17</sup>	2.2x10 <sup>-8</sup>	3.6x10 <sup>-7</sup>	2.1x10 <sup>-14</sup>	9.9x10 <sup>-7</sup>	2.7x10 <sup>-9</sup>	6.9x10 <sup>-17</sup>	7.5x10 <sup>-9</sup>
Cooked RTE Crustaceans	5.4x10 <sup>-9</sup>	2.5x10 <sup>-10</sup>	2.1x10 <sup>-8</sup>	4.2x10 <sup>-8</sup>	2.4x10 <sup>-9</sup>	1.6x10 <sup>-7</sup>	1.6x10 <sup>-6</sup>	9.7x10 <sup>-8</sup>	6.1x10 <sup>-6</sup>	1.2x10 <sup>-8</sup>	6.5x10 <sup>-10</sup>	4.6x10 <sup>-8</sup>
<b>PRODUCE</b>												
Vegetables	1.2x10 <sup>-11</sup>	1.5x10 <sup>-19</sup>	6.3x10 <sup>-11</sup>	1.1x10 <sup>-10</sup>	3.7x10 <sup>-16</sup>	5.7x10 <sup>-10</sup>	5.8x10 <sup>-9</sup>	1.4x10 <sup>-13</sup>	3.1x10 <sup>-8</sup>	3.6x10 <sup>-11</sup>	2.8x10 <sup>-16</sup>	1.9x10 <sup>-10</sup>
Fruits	1.3x10 <sup>-9</sup>	6.0x10 <sup>-20</sup>	9.6x10 <sup>-9</sup>	8.0x10 <sup>-9</sup>	5.3x10 <sup>-17</sup>	5.7x10 <sup>-8</sup>	4.3x10 <sup>-7</sup>	1.3x10 <sup>-14</sup>	3.0x10 <sup>-6</sup>	3.2x10 <sup>-9</sup>	4.5x10 <sup>-17</sup>	2.3x10 <sup>-8</sup>
<b>DAIRY</b>												
Fresh Soft Cheese	5.0x10 <sup>-10</sup>	4.6x10 <sup>-13</sup>	2.1x10 <sup>-9</sup>	4.1x10 <sup>-9</sup>	5.0x10 <sup>-12</sup>	1.7x10 <sup>-8</sup>	1.6x10 <sup>-7</sup>	2.6x10 <sup>-10</sup>	7.0x10 <sup>-7</sup>	6.9x10 <sup>-10</sup>	8.0x10 <sup>-13</sup>	2.9x10 <sup>-9</sup>
Soft Unripened Cheese	3.1x10 <sup>-9</sup>	8.4x10 <sup>-14</sup>	1.6x10 <sup>-8</sup>	2.5x10 <sup>-8</sup>	7.2x10 <sup>-13</sup>	1.2x10 <sup>-7</sup>	1.1x10 <sup>-6</sup>	4.8x10 <sup>-11</sup>	5.3x10 <sup>-6</sup>	8.9x10 <sup>-9</sup>	2.8x10 <sup>-13</sup>	4.4x10 <sup>-8</sup>
Soft Ripened Cheese	2.7x10 <sup>-10</sup>	1.8x10 <sup>-21</sup>	1.3x10 <sup>-9</sup>	2.4x10 <sup>-9</sup>	3.3x10 <sup>-18</sup>	1.1x10 <sup>-8</sup>	1.2x10 <sup>-7</sup>	3.5x10 <sup>-15</sup>	5.2x10 <sup>-7</sup>	5.6x10 <sup>-10</sup>	7.9x10 <sup>-18</sup>	2.6x10 <sup>-9</sup>
Semi-soft Cheese	1.3x10 <sup>-10</sup>	9.3x10 <sup>-17</sup>	2.9x10 <sup>-10</sup>	1.2x10 <sup>-9</sup>	5.5x10 <sup>-15</sup>	2.7x10 <sup>-9</sup>	6.3x10 <sup>-8</sup>	9.2x10 <sup>-13</sup>	1.4x10 <sup>-7</sup>	2.6x10 <sup>-10</sup>	2.5x10 <sup>-15</sup>	5.8x10 <sup>-10</sup>
Hard Cheese	1.2x10 <sup>-12</sup>	5.3x10 <sup>-47</sup>	1.9x10 <sup>-12</sup>	1.1x10 <sup>-11</sup>	5.8x10 <sup>-39</sup>	1.9x10 <sup>-11</sup>	8.9x10 <sup>-10</sup>	3.4x10 <sup>-32</sup>	1.3x10 <sup>-9</sup>	3.1x10 <sup>-12</sup>	2.5x10 <sup>-35</sup>	5.5x10 <sup>-12</sup>
Processed Cheese	5.2x10 <sup>-13</sup>	3.2x10 <sup>-30</sup>	2.3x10 <sup>-12</sup>	5.1x10 <sup>-12</sup>	8.8x10 <sup>-25</sup>	2.2x10 <sup>-11</sup>	4.8x10 <sup>-10</sup>	6.6x10 <sup>-20</sup>	1.4x10 <sup>-9</sup>	1.4x10 <sup>-12</sup>	5.4x10 <sup>-23</sup>	6.0x10 <sup>-12</sup>
Pasteurized Fluid Milk	1.2x10 <sup>-9</sup>	2.8x10 <sup>-11</sup>	5.7x10 <sup>-9</sup>	8.6x10 <sup>-9</sup>	2.5x10 <sup>-10</sup>	3.9x10 <sup>-8</sup>	3.8x10 <sup>-7</sup>	1.2x10 <sup>-8</sup>	1.7x10 <sup>-6</sup>	2.7x10 <sup>-9</sup>	7.5x10 <sup>-11</sup>	1.3x10 <sup>-8</sup>
Unpasteurized Fluid Milk	1.6x10 <sup>-8</sup>	3.5x10 <sup>-11</sup>	6.8x10 <sup>-8</sup>	1.2x10 <sup>-7</sup>	3.4x10 <sup>-10</sup>	5.1x10 <sup>-7</sup>	5.5x10 <sup>-6</sup>	1.7x10 <sup>-8</sup>	2.3x10 <sup>-5</sup>	3.8x10 <sup>-8</sup>	9.7x10 <sup>-11</sup>	1.6x10 <sup>-7</sup>
Ice Cream/Frozen Dairy Products	2.2x10 <sup>-12</sup>	2.7x10 <sup>-35</sup>	1.8x10 <sup>-12</sup>	1.7x10 <sup>-11</sup>	1.4x10 <sup>-28</sup>	1.9x10 <sup>-11</sup>	7.4x10 <sup>-10</sup>	2.7x10 <sup>-23</sup>	1.3x10 <sup>-9</sup>	5.7x10 <sup>-12</sup>	1.7x10 <sup>-26</sup>	6.3x10 <sup>-12</sup>
Cultured Milk Products	6.6x10 <sup>-12</sup>	2.4x10 <sup>-40</sup>	1.7x10 <sup>-11</sup>	6.4x10 <sup>-11</sup>	6.5x10 <sup>-33</sup>	1.7x10 <sup>-10</sup>	3.8x10 <sup>-9</sup>	5.1x10 <sup>-26</sup>	9.9x10 <sup>-9</sup>	1.8x10 <sup>-11</sup>	3.3x10 <sup>-29</sup>	4.9x10 <sup>-11</sup>
High Fat and Other Dairy Products	2.2x10 <sup>-9</sup>	1.0x10 <sup>-10</sup>	8.2x10 <sup>-9</sup>	1.6x10 <sup>-8</sup>	8.9x10 <sup>-10</sup>	5.7x10 <sup>-8</sup>	5.8x10 <sup>-7</sup>	3.7x10 <sup>-8</sup>	2.0x10 <sup>-6</sup>	5.3x10 <sup>-9</sup>	2.9x10 <sup>-10</sup>	1.9x10 <sup>-8</sup>
<b>MEATS</b>												
Frankfurters (reheated)	8.3x10 <sup>-11</sup>	4.2x10 <sup>-15</sup>	3.4x10 <sup>-10</sup>	8.5x10 <sup>-10</sup>	8.6x10 <sup>-13</sup>	3.4x10 <sup>-9</sup>	6.1x10 <sup>-8</sup>	2.1x10 <sup>-10</sup>	2.6x10 <sup>-7</sup>	2.0x10 <sup>-10</sup>	2.7x10 <sup>-13</sup>	8.0x10 <sup>-10</sup>
Frankfurters (not reheated)	7.1x10 <sup>-8</sup>	3.1x10 <sup>-9</sup>	2.8x10 <sup>-7</sup>	6.1x10 <sup>-7</sup>	3.2x10 <sup>-8</sup>	2.3x10 <sup>-6</sup>	2.2x10 <sup>-5</sup>	1.3x10 <sup>-6</sup>	8.3x10 <sup>-5</sup>	1.4x10 <sup>-7</sup>	7.1x10 <sup>-9</sup>	5.2x10 <sup>-7</sup>
Dry/Semi-Dry Fermented Sausages	5.7x10 <sup>-10</sup>	6.8x10 <sup>-20</sup>	2.7x10 <sup>-9</sup>	5.2x10 <sup>-9</sup>	2.0x10 <sup>-16</sup>	2.4x10 <sup>-8</sup>	2.5x10 <sup>-7</sup>	5.1x10 <sup>-14</sup>	1.1x10 <sup>-6</sup>	1.4x10 <sup>-9</sup>	1.5x10 <sup>-16</sup>	6.3x10 <sup>-9</sup>
Deli Meats	3.0x10 <sup>-8</sup>	6.8x10 <sup>-9</sup>	4.1x10 <sup>-8</sup>	2.7x10 <sup>-7</sup>	5.8x10 <sup>-8</sup>	3.9x10 <sup>-7</sup>	1.1x10 <sup>-5</sup>	3.2x10 <sup>-6</sup>	1.4x10 <sup>-5</sup>	7.0x10 <sup>-8</sup>	1.7x10 <sup>-8</sup>	9.9x10 <sup>-8</sup>
Pâté and Meat Spreads	3.9x10 <sup>-8</sup>	1.0x10 <sup>-9</sup>	1.4x10 <sup>-7</sup>	3.2x10 <sup>-7</sup>	1.1x10 <sup>-8</sup>	1.1x10 <sup>-6</sup>	1.3x10 <sup>-5</sup>	4.7x10 <sup>-7</sup>	4.5x10 <sup>-5</sup>	9.6x10 <sup>-8</sup>	3.1x10 <sup>-9</sup>	3.3x10 <sup>-7</sup>
<b>COMBINATION FOODS</b>												
Deli-type Salads	4.7x10 <sup>-11</sup>	1.8x10 <sup>-31</sup>	1.3x10 <sup>-10</sup>	3.5x10 <sup>-10</sup>	3.3x10 <sup>-25</sup>	1.2x10 <sup>-9</sup>	1.4x10 <sup>-8</sup>	9.3x10 <sup>-20</sup>	5.5x10 <sup>-8</sup>	1.3x10 <sup>-10</sup>	8.0x10 <sup>-23</sup>	4.1x10 <sup>-10</sup>

<sup>a</sup>This table provides estimates of the mean rate of listeriosis per serving and the confidence intervals about that estimate. <sup>b</sup>The Intermediate-age group includes susceptible populations not captured in the other groups. <sup>c</sup>The Perinatal population is a susceptible population that includes fetuses and neonates. Exposure occurs *in utero* from contaminated food eaten by the pregnant woman. The predicted cases are predominately neonatal, therefore to estimate the perinatal cases presented in this table, an exposure period of 10 days was used. The value of 10 approximately corresponds to the mean of the triangle distribution (1, 7, 30) used in the simulation.

Table A10-2. Predicted Mean Number of Cases of Listeriosis per Annum for Each Food Category and Subpopulation

Food Category	Predicted Number of Cases of Listeriosis per Annum <sup>a</sup>											
	Intermediate-Age <sup>b</sup>			Elderly			Perinatal <sup>c</sup>			Total		
	Mean	Percentiles 5 <sup>th</sup>	95 <sup>th</sup>	Mean	Percentiles 5 <sup>th</sup>	95 <sup>th</sup>	Mean	Percentiles 5 <sup>th</sup>	95 <sup>th</sup>	Mean	Percentiles 5 <sup>th</sup>	95 <sup>th</sup>
<b>SEAFOOD</b>												
Smoked Seafood	5.1	<0.1	19.4	10.6	<0.1	43.2	1.4	<0.1	5.8	17.2	0.1	68.1
Raw Seafood	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Preserved Fish	0.1	<0.1	0.2	0.2	<0.1	0.5	<0.1	<0.1	0.1	0.3	<0.1	0.8
Cooked Ready-to-Eat Crustaceans	2.5	0.1	10.0	3.5	0.2	13.2	0.6	<0.1	2.2	6.6	0.4	25.7
<b>PRODUCE</b>												
Vegetables	0.8	<0.1	4.3	1.9	<0.1	9.7	0.3	<0.1	1.6	3.0	<0.1	15.7
Fruits	47.3	<0.1	351.4	95.8	<0.1	680.4	12.2	<0.1	85.4	155.2	<0.1	1127.7
<b>DAIRY</b>												
Fresh Soft Cheese	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.2
Soft Unripened Cheese	10.5	<0.1	52.3	26.0	<0.1	128.8	2.8	<0.1	13.6	39.3	<0.1	193.5
Soft Ripened Cheese	0.5	<0.1	2.1	0.5	<0.1	2.1	0.2	<0.1	0.7	1.1	<0.1	4.9
Semi-soft Cheese	0.2	<0.1	0.5	0.2	<0.1	0.4	0.1	<0.1	0.2	0.5	<0.1	1.1
Hard Cheese	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Processed Cheese	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Pasteurized Fluid Milk	85.9	2.0	410.1	127.9	3.7	584.4	20.9	0.7	95.8	234.7	6.5	1084.6
Unpasteurized Fluid Milk	6.0	<0.1	24.7	9.1	<0.1	38.3	1.5	<0.1	6.5	16.6	<0.1	69.2
Ice Cream/Frozen Dairy Products	<0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1
Cultured Milk Products	<0.1	<0.1	0.1	0.1	<0.1	0.2	<0.1	<0.1	<0.1	0.1	<0.1	0.4
High Fat and Other Dairy Products	35.3	1.7	135.0	66.2	3.8	241.3	7.3	0.5	25.3	108.8	6.0	398.9
<b>MEATS</b>												
Frankfurters (reheated)	0.5	<0.1	1.9	0.5	<0.1	2.0	0.3	<0.1	1.1	1.2	<0.1	4.9
Frankfurters (not reheated)	29.9	1.3	119.4	27.0	1.4	103.0	7.3	0.4	26.9	64.2	3.3	245.4
Dry/Semi-Dry Fermented Sausages	0.9	<0.1	4.1	1.3	<0.1	6.0	0.3	<0.1	1.3	2.5	<0.1	11.2
Deli Meats	528.1	120.6	736.4	767.1	164.6	1106.2	146.6	44.5	197.0	1441.7	341.2	2038.2
Pâté and Meat Spreads	3.8	0.1	13.2	6.6	0.2	23.5	1.0	<0.1	3.4	11.4	0.4	39.5
<b>COMBINATION FOODS</b>												
Deli-type Salads	0.5	<0.1	1.3	1.1	<0.1	3.7	0.1	<0.1	0.4	1.7	<0.1	5.4

<sup>a</sup>This table provides estimates of the mean rate of listeriosis per annum and the confidence intervals about that estimate. <sup>b</sup>The intermediate-age group includes susceptible populations not captured in other groups, such as cancer, AIDS, and transplant patients, for whom there are insufficient data to consider as a separate population. <sup>c</sup>The Perinatal population is a susceptible population that includes fetuses and neonates. Exposure occurs *in utero* from contaminated food eaten by the pregnant woman.

**Table A10-3. Predicted Median Number of Deaths From Listeriosis per Serving Basis for Each Food Category and Subpopulation**

Food Category	Predicted Number of Deaths of Listeriosis per Serving <sup>a</sup>											
	Intermediate-Age <sup>b</sup> Percentiles			Elderly Percentiles			Perinatal <sup>c</sup> Percentiles			Total Percentiles		
	Median	5 <sup>th</sup>	95 <sup>th</sup>	Median	5 <sup>th</sup>	95 <sup>th</sup>	Median	5 <sup>th</sup>	95 <sup>th</sup>	Median	5 <sup>th</sup>	95 <sup>th</sup>
<b>SEAFOOD</b>												
Smoked Seafood	1.9x10 <sup>-10</sup>	7.8x10 <sup>-12</sup>	1.1x10 <sup>-08</sup>	5.2x10 <sup>-09</sup>	2.6x10 <sup>-10</sup>	2.8x10 <sup>-07</sup>	1.8x10 <sup>-08</sup>	9.5x10 <sup>-10</sup>	1.0x10 <sup>-06</sup>	1.3x10 <sup>-09</sup>	6.5x10 <sup>-11</sup>	7.0x10 <sup>-08</sup>
Raw Seafood	1.1x10 <sup>-12</sup>	9.7x10 <sup>-19</sup>	2.6x10 <sup>-11</sup>	3.5x10 <sup>-11</sup>	4.5x10 <sup>-15</sup>	7.8x10 <sup>-10</sup>	1.5x10 <sup>-10</sup>	1.6x10 <sup>-13</sup>	4.4x10 <sup>-09</sup>	2.5x10 <sup>-12</sup>	1.4x10 <sup>-15</sup>	6.0x10 <sup>-11</sup>
Preserved Fish	5.6x10 <sup>-13</sup>	4.9x10 <sup>-21</sup>	2.3x10 <sup>-10</sup>	1.8x10 <sup>-11</sup>	1.0x10 <sup>-17</sup>	6.0x10 <sup>-09</sup>	9.0x10 <sup>-11</sup>	4.6x10 <sup>-16</sup>	2.2x10 <sup>-08</sup>	5.0x10 <sup>-12</sup>	1.4x10 <sup>-17</sup>	1.6x10 <sup>-09</sup>
Cooked RTE Crustaceans	1.9x10 <sup>-10</sup>	2.2x10 <sup>-11</sup>	1.9x10 <sup>-09</sup>	5.0x10 <sup>-09</sup>	6.4x10 <sup>-10</sup>	4.4x10 <sup>-08</sup>	1.6x10 <sup>-08</sup>	2.1x10 <sup>-09</sup>	1.3x10 <sup>-07</sup>	1.0x10 <sup>-09</sup>	1.3x10 <sup>-10</sup>	8.8x10 <sup>-09</sup>
<b>PRODUCE</b>												
Vegetables	7.4x10 <sup>-14</sup>	1.4x10 <sup>-20</sup>	5.6x10 <sup>-12</sup>	2.2x10 <sup>-12</sup>	1.0x10 <sup>-16</sup>	1.5x10 <sup>-10</sup>	1.1x10 <sup>-11</sup>	3.1x10 <sup>-15</sup>	6.7x10 <sup>-10</sup>	5.8x10 <sup>-13</sup>	5.9x10 <sup>-17</sup>	3.9x10 <sup>-11</sup>
Fruits	4.4x10 <sup>-13</sup>	5.3x10 <sup>-21</sup>	8.5x10 <sup>-10</sup>	1.4x10 <sup>-11</sup>	1.4x10 <sup>-17</sup>	1.5x10 <sup>-08</sup>	6.2x10 <sup>-11</sup>	2.9x10 <sup>-16</sup>	6.7x10 <sup>-08</sup>	4.2x10 <sup>-12</sup>	9.6x10 <sup>-18</sup>	4.8x10 <sup>-09</sup>
<b>DAIRY</b>												
Fresh Soft Cheese	1.1x10 <sup>-11</sup>	4.0x10 <sup>-14</sup>	1.8x10 <sup>-10</sup>	2.8x10 <sup>-10</sup>	1.3x10 <sup>-12</sup>	4.6x10 <sup>-09</sup>	9.1x10 <sup>-10</sup>	5.7x10 <sup>-12</sup>	1.5x10 <sup>-08</sup>	2.2x10 <sup>-11</sup>	1.2x10 <sup>-13</sup>	3.7x10 <sup>-10</sup>
Soft Unripened Cheese	5.2x10 <sup>-11</sup>	7.5x10 <sup>-15</sup>	1.4x10 <sup>-09</sup>	1.3x10 <sup>-09</sup>	1.9x10 <sup>-13</sup>	3.3x10 <sup>-08</sup>	4.4x10 <sup>-09</sup>	1.0x10 <sup>-12</sup>	1.2x10 <sup>-07</sup>	3.7x10 <sup>-10</sup>	6.1x10 <sup>-14</sup>	9.5x10 <sup>-09</sup>
Soft Ripened Cheese	1.8x10 <sup>-13</sup>	1.6x10 <sup>-22</sup>	1.1x10 <sup>-10</sup>	5.9x10 <sup>-12</sup>	8.8x10 <sup>-19</sup>	3.1x10 <sup>-09</sup>	2.9x10 <sup>-11</sup>	7.7x10 <sup>-17</sup>	1.1x10 <sup>-08</sup>	9.5x10 <sup>-13</sup>	1.4x10 <sup>-18</sup>	4.7x10 <sup>-10</sup>
Semi-soft Cheese	2.6x10 <sup>-13</sup>	8.2x10 <sup>-18</sup>	2.6x10 <sup>-11</sup>	8.0x10 <sup>-12</sup>	1.5x10 <sup>-15</sup>	7.3x10 <sup>-10</sup>	3.4x10 <sup>-11</sup>	2.0x10 <sup>-14</sup>	3.2x10 <sup>-09</sup>	1.2x10 <sup>-12</sup>	4.0x10 <sup>-16</sup>	1.0x10 <sup>-10</sup>
Hard Cheese	3.0x10 <sup>-16</sup>	4.7x10 <sup>-48</sup>	1.7x10 <sup>-13</sup>	2.5x10 <sup>-15</sup>	1.5x10 <sup>-39</sup>	5.1x10 <sup>-12</sup>	1.8x10 <sup>-14</sup>	7.5x10 <sup>-34</sup>	2.8x10 <sup>-11</sup>	6.8x10 <sup>-16</sup>	5.0x10 <sup>-36</sup>	1.1x10 <sup>-12</sup>
Processed Cheese	1.3x10 <sup>-15</sup>	2.8x10 <sup>-31</sup>	2.1x10 <sup>-13</sup>	2.5x10 <sup>-14</sup>	2.4x10 <sup>-25</sup>	5.9x10 <sup>-12</sup>	1.5x10 <sup>-13</sup>	1.4x10 <sup>-21</sup>	3.1x10 <sup>-11</sup>	7.9x10 <sup>-15</sup>	1.2x10 <sup>-23</sup>	1.2x10 <sup>-12</sup>
Pasteurized Fluid Milk	3.9x10 <sup>-11</sup>	2.5x10 <sup>-12</sup>	5.1x10 <sup>-10</sup>	9.0x10 <sup>-10</sup>	6.6x10 <sup>-11</sup>	1.1x10 <sup>-08</sup>	3.2x10 <sup>-09</sup>	2.6x10 <sup>-10</sup>	3.8x10 <sup>-08</sup>	2.1x10 <sup>-10</sup>	1.5x10 <sup>-11</sup>	2.4x10 <sup>-09</sup>
Unpasteurized Fluid Milk	2.6x10 <sup>-10</sup>	3.1x10 <sup>-12</sup>	6.1x10 <sup>-09</sup>	6.0x10 <sup>-09</sup>	9.2x10 <sup>-11</sup>	1.4x10 <sup>-07</sup>	2.2x10 <sup>-08</sup>	3.8x10 <sup>-10</sup>	5.1x10 <sup>-07</sup>	1.4x10 <sup>-09</sup>	2.0x10 <sup>-11</sup>	3.2x10 <sup>-08</sup>
Ice Cream/Frozen Dairy Products	1.1x10 <sup>-15</sup>	2.4x10 <sup>-36</sup>	1.6x10 <sup>-13</sup>	2.5x10 <sup>-14</sup>	3.9x10 <sup>-29</sup>	5.1x10 <sup>-12</sup>	1.4x10 <sup>-13</sup>	6.0x10 <sup>-25</sup>	2.8x10 <sup>-11</sup>	1.0x10 <sup>-14</sup>	3.8x10 <sup>-27</sup>	1.3x10 <sup>-12</sup>
Cultured Milk Products	8.4x10 <sup>-16</sup>	2.1x10 <sup>-41</sup>	1.5x10 <sup>-12</sup>	1.5x10 <sup>-14</sup>	1.7x10 <sup>-33</sup>	4.5x10 <sup>-11</sup>	1.0x10 <sup>-13</sup>	1.1x10 <sup>-27</sup>	2.2x10 <sup>-10</sup>	6.6x10 <sup>-15</sup>	6.5x10 <sup>-30</sup>	9.9x10 <sup>-12</sup>
High Fat and Other Dairy Products	9.2x10 <sup>-11</sup>	9.1x10 <sup>-12</sup>	7.3x10 <sup>-10</sup>	2.2x10 <sup>-09</sup>	2.4x10 <sup>-10</sup>	1.5x10 <sup>-08</sup>	6.9x10 <sup>-09</sup>	8.2x10 <sup>-10</sup>	4.4x10 <sup>-08</sup>	5.7x10 <sup>-10</sup>	6.2x10 <sup>-11</sup>	4.0x10 <sup>-09</sup>
<b>MEATS</b>												
Frankfurters (reheated)	2.4x10 <sup>-12</sup>	3.7x10 <sup>-16</sup>	3.0x10 <sup>-11</sup>	7.1x10 <sup>-11</sup>	2.3x10 <sup>-13</sup>	9.1x10 <sup>-10</sup>	3.4x10 <sup>-10</sup>	4.5x10 <sup>-12</sup>	5.6x10 <sup>-09</sup>	1.1x10 <sup>-11</sup>	5.7x10 <sup>-14</sup>	1.5x10 <sup>-10</sup>
Frankfurters (not reheated)	2.9x10 <sup>-09</sup>	2.7x10 <sup>-10</sup>	2.5x10 <sup>-08</sup>	7.9x10 <sup>-08</sup>	8.6x10 <sup>-09</sup>	6.3x10 <sup>-07</sup>	2.4x10 <sup>-07</sup>	2.9x10 <sup>-08</sup>	1.8x10 <sup>-06</sup>	1.2x10 <sup>-08</sup>	1.3x10 <sup>-09</sup>	9.2x10 <sup>-08</sup>
Dry/Semi-Dry Fermented Sausages	5.3x10 <sup>-13</sup>	6.0x10 <sup>-21</sup>	2.4x10 <sup>-10</sup>	1.7x10 <sup>-11</sup>	5.3x10 <sup>-17</sup>	6.5x10 <sup>-09</sup>	8.1x10 <sup>-11</sup>	1.1x10 <sup>-15</sup>	2.4x10 <sup>-08</sup>	3.4x10 <sup>-12</sup>	2.8x10 <sup>-17</sup>	1.2x10 <sup>-09</sup>
Deli Meats	2.9x10 <sup>-09</sup>	6.0x10 <sup>-10</sup>	3.7x10 <sup>-09</sup>	8.0x10 <sup>-08</sup>	1.6x10 <sup>-08</sup>	1.0x10 <sup>-07</sup>	2.6x10 <sup>-07</sup>	7.1x10 <sup>-08</sup>	3.1x10 <sup>-07</sup>	1.5x10 <sup>-08</sup>	3.2x10 <sup>-09</sup>	1.9x10 <sup>-08</sup>
Pâté and Meat Spreads	1.1x10 <sup>-09</sup>	9.2x10 <sup>-11</sup>	1.2x10 <sup>-08</sup>	2.9x10 <sup>-08</sup>	2.9x10 <sup>-09</sup>	3.0x10 <sup>-07</sup>	9.8x10 <sup>-08</sup>	1.0x10 <sup>-08</sup>	9.9x10 <sup>-07</sup>	6.5x10 <sup>-09</sup>	6.5x10 <sup>-10</sup>	6.9x10 <sup>-08</sup>
<b>COMBINATION FOODS</b>												
Deli-type Salads	1.5x10 <sup>-14</sup>	1.6x10 <sup>-32</sup>	1.1x10 <sup>-11</sup>	3.8x10 <sup>-13</sup>	8.8x10 <sup>-26</sup>	3.2x10 <sup>-10</sup>	1.9x10 <sup>-12</sup>	2.0x10 <sup>-21</sup>	1.2x10 <sup>-09</sup>	1.2x10 <sup>-13</sup>	1.6x10 <sup>-23</sup>	9.1x10 <sup>-11</sup>

<sup>a</sup>This table provides estimates of the median rate of listeriosis per serving and the confidence intervals about that estimate. <sup>b</sup>The Intermediate-age group includes susceptible populations not captured in other groups, such as cancer, AIDS, and transplant patients, for whom there are insufficient data to consider as a separate population. <sup>c</sup>The Perinatal population is a susceptible population that includes fetuses and neonates. Exposure occurs *in utero* from contaminated food eaten by the pregnant woman. (Estimates for the perinatal group can be made by multiplying the neonatal values by 2.5.) To estimate the number of servings in each food category for the perinatal group, the number of servings for the intermediate-aged population was multiplied by 0.0174 (fraction of pregnant women) and 3/12 (for exposure during the last three months of pregnancy).

**Table A10-4. Predicted Median Number of Deaths From Listeriosis per Annum Basis for Each Food Category and Subpopulation**

Food Category	Predicted Number of Deaths of Listeriosis per Annum <sup>a</sup>											
	Intermediate-Age <sup>b</sup> Percentiles			Elderly Percentiles			Perinatal <sup>c</sup> Percentiles			Total Percentiles		
	Median	5 <sup>th</sup>	95 <sup>th</sup>	Median	5 <sup>th</sup>	95 <sup>th</sup>	Median	5 <sup>th</sup>	95 <sup>th</sup>	Median	5 <sup>th</sup>	95 <sup>th</sup>
<b>SEAFOOD</b>												
Smoked Seafood	<0.1	<0.1	1.7	0.2	<0.1	11.6	<0.1	<0.1	1.1	0.3	<0.1	14.4
Raw Seafood	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Preserved Fish	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2
Cooked RTE Crustaceans	0.1	<0.1	0.9	0.4	0.1	3.5	0.1	<0.1	0.4	0.6	0.1	4.9
<b>PRODUCE</b>												
Vegetables	<0.1	<0.1	0.4	<0.1	<0.1	2.6	<0.1	<0.1	0.3	<0.1	<0.1	3.3
Fruits	<0.1	<0.1	31.1	0.2	<0.1	182.4	<0.1	<0.1	16.9	0.2	<0.1	231.4
<b>DAIRY</b>												
Fresh Soft Cheese	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Soft Unripened Cheese	0.2	<0.1	4.6	1.4	<0.1	34.5	0.10	<0.1	2.7	1.7	<0.1	41.9
Soft Ripened Cheese	<0.1	<0.1	0.2	<0.1	<0.1	0.6	<0.1	<0.1	0.1	<0.1	<0.1	0.9
Semi-soft Cheese	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2
Hard Cheese	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Processed Cheese	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pasteurized Fluid Milk	2.8	0.2	36.3	13.4	1.0	156.7	1.6	0.1	18.9	18.1	1.3	208.7
Unpasteurized Fluid Milk	0.1	<0.1	2.2	0.5	<0.1	10.3	0.1	<0.1	1.3	0.6	<0.1	13.8
Ice Cream/Frozen Dairy Products	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cultured Milk Products	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
High Fat and Other Dairy Products	1.5	0.2	12.0	9.4	1.0	64.7	0.8	0.1	5.0	11.8	1.3	82.0
<b>MEATS</b>												
Frankfurters (reheated)	<0.1	<0.1	0.2	<0.1	<0.1	0.5	<0.1	<0.1	0.2	0.1	<0.1	0.9
Frankfurters (not reheated)	1.2	0.1	10.6	3.5	0.4	27.6	0.7	0.1	5.3	5.4	0.6	42.9
Dry/Semi-Dry Fermented Sausages	<0.1	<0.1	0.4	<0.1	<0.1	1.6	<0.1	<0.1	0.3	<0.1	<0.1	2.2
Deli Meats	52.1	10.7	65.2	227.8	44.1	296.6	31.8	8.8	38.9	311.6	65.5	400.4
Pâté and Meat Spreads	0.1	<0.1	1.2	0.6	0.1	6.3	0.1	<0.1	0.7	0.8	0.1	8.1
<b>COMBINATION FOODS</b>												
Deli-type Salads	<0.1	<0.1	0.1	<0.1	<0.1	1.0	<0.1	<0.1	0.1	<0.1	<0.1	1.2

<sup>a</sup>This table provides estimates of the median rate of listeriosis per annum and the confidence intervals about that estimate.

<sup>b</sup>The Intermediate-age group includes susceptible populations not captured in other groups, such as cancer, AIDS, and transplant patients, for whom there are insufficient data to consider as a separate population. <sup>c</sup>The perinatal population is a susceptible population that includes fetuses and neonates. Exposure occurs *in utero* from contaminated food eaten by the pregnant woman.