

Supplementary Table S1. Interaction significance in mean pathogen concentrations over 30 minutes between storage type, shaker incubation temperature and pathogen species factors.

Factor	Levels	Marginal Means (Error)
Storage type		
F(3.3, 34.9) = 24.9	Insulated box with ice brick	4.15 (.005)
p < 0.001	Insulated box no ice brick	4.19 (.005)
$\eta^2 = .70$	No insulated box	4.21 (.005)
Shaker incubation temperature		
F(3.3, 34.9) = 8.0	20 °C	4.17 (.005)
p < 0.001	30 °C	4.18 (.005)
$\eta^2 = .43$	40 °C	4.20 (.005)
Pathogen species		
F(1.7, 34.9) = 27.6	<i>E. coli</i> O157:H7	4.17 (.004)
p < 0.001	<i>L. monocytogenes</i>	4.19 (.004)
$\eta^2 = .57$		
Storage type * Shaker incubation temperature		
F(6.6, 34.9) = 3.9		
p = 0.03	Insulated box with ice brick (20 °C)	4.15 (.008)
$\eta^2 = .4$	Insulated box with ice brick (30 °C)	4.15 (.008)
	Insulated box with ice brick (40 °C)	4.15 (.008)
	Insulated box no ice brick (20 °C)	4.17 (.008)
	Insulated box no ice brick (30 °C)	4.19 (.008)
	Insulated box no ice brick (40 °C)	4.20 (.008)
	No insulated box (20 °C)	4.18 (.008)
	No insulated box (30 °C)	4.20 (.008)
	No insulated box (40 °C)	4.24 (.008)

Supplementary Table S2. Interaction significance in mean pathogen concentrations over 5 days between refrigeration temperature and pathogen species factors.

Factor	Levels	Marginal Means (Error)
Refrigeration temperature		
F(2.8, 85.0) = 22.8	4 °C	4.38 (.089)
p < 0.001	8 °C	4.70 (.096)
$\eta^2 = .43$	15 °C	5.69 (.100)
Pathogen species		
F(1.5, 85.0) = 0.3	<i>E. coli</i> O157:H7	5.02 (.310)
p > 0.05	<i>L. monocytogenes</i>	4.87 (.508)
$\eta^2 = .01$		
Refrigeration temperature * Pathogen species		
F(2.8, 85.0) = 3.9		
p = 0.009	4 °C (<i>E. coli</i> O157:H7)	4.15 (.090)
$\eta^2 = .12$	4 °C (<i>L. monocytogenes</i>)	4.61 (.153)
	8 °C (<i>E. coli</i> O157:H7)	4.59 (.095)
	8 °C (<i>L. monocytogenes</i>)	4.81 (.169)
	15 °C (<i>E. coli</i> O157:H7)	5.88 (.107)
	15 °C (<i>L. monocytogenes</i>)	5.49 (.169)

Supplementary Table S3. Interaction significance in mean pathogen concentrations at ambient temperature (22 °C) storage over 10 days between pathogen species and pathogen inoculum level factors.

Factor	Levels	Marginal Means (Error)
Pathogen species		
F(1.3, 33.1) = 6.6	<i>E. coli</i> O157:H7	6.31 (.105)
p = 0.009	<i>L. monocytogenes</i>	5.68 (.145)
$\eta^2 = .21$		
Pathogen inoculum level		
F(1.3, 33.1) = 1.4	10 ² CFU/mL	3.89 (.125)
p > 0.05	10 ⁶ CFU/mL	8.11 (.128)
$\eta^2 = .05$		

Pathogen species * Pathogen inoculum level		
F(1.3, 33.1) = 6.1		
p = 0.012		
$\eta^2 = .20$		
	10 ² CFU/mL (<i>E. coli</i> O157:H7)	4.26 (.145)
	10 ² CFU/mL (<i>L. monocytogenes</i>)	3.52 (.205)
	10 ⁶ CFU/mL (<i>E. coli</i> O157:H7)	8.36 (.153)
	10 ⁶ CFU/mL (<i>L. monocytogenes</i>)	7.85 (.205)

Supplementary Table S4. Interaction significance in mean pathogen concentrations after freeze/thaw effects between pathogen species and days of frozen storage, controlling for baseline pathogen concentration.

Factor	Levels	Marginal Means (Error)
Pathogen species		
F(1.0, 38.0) = 5.7		
p = 0.022		
$\eta^2 = .13$		
	<i>E. coli</i> O157:H7	2.99 (.146)
	<i>L. monocytogenes</i>	3.41 (.111)
Days frozen		
F(5.0, 38.0) = 49.9		
p < 0.001		
$\eta^2 = .87$		
	7 days	4.32 (.175)
	14 days	4.10 (.180)
	30 days	3.76 (.170)
	60 days	3.61 (.189)
	90 days	3.41 (.313)
	365 days	0.01 (.247)
Pathogen species * Days frozen		
F(5.0, 38.0) = 2.8		
p = 0.032		
$\eta^2 = .27$		
	7 days (<i>E. coli</i> O157:H7)	4.20 (0.241)
	7 days (<i>L. monocytogenes</i>)	4.44 (0.250)
	14 days (<i>E. coli</i> O157:H7)	4.11 (0.235)
	14 days (<i>L. monocytogenes</i>)	4.08 (0.272)
	30 days (<i>E. coli</i> O157:H7)	3.66 (.199)
	30 days (<i>L. monocytogenes</i>)	3.85 (.280)
	60 days (<i>E. coli</i> O157:H7)	3.51 (.263)
	60 days (<i>L. monocytogenes</i>)	3.71 (.259)
	90 days (<i>E. coli</i> O157:H7)	3.48 (.560)
	90 days (<i>L. monocytogenes</i>)	3.34 (.286)
	365 days (<i>E. coli</i> O157:H7)	-1.01 (.411)
	365 days (<i>L. monocytogenes</i>)	1.03 (.277)