



# Worthwhile Operational Guidelines & Suggestions

BROILER PROCESSING TIMELY INFORMATION – NOVEMBER 2003

## Do you know your bugs?

Poultry has a very complex microflora, originating mostly from the gastrointestinal tract of birds, but also from the rearing and processing environments. Since microbial hazards must be controlled on raw and cooked products during processing, it is important to consider the growth characteristics of bacteria of concern to poultry. This information is critical to implementing effective control and/or critical control points (to eliminate, reduce, or bring to an acceptable level) for food-borne pathogens commonly associated with poultry and poultry products:

Organism	Oxygen Need	Growth Temp. Range (C)	Optimum Range (C)	pH (Min.)	Salt (Max.) %	A <sub>w</sub> <sup>1</sup>
<i>C. botulinum</i>	No	10-50	30-40	4.7	10-12	.94-.95
<i>C. perfringens</i>	No	6.5-50	43-45	5	8	.95
<i>S. aureus</i>	Yes/no	6.5-50	30-40	4.2	18-20	.86/.90*
<i>L. monocytogenes</i>	Yes/no	3-45	30-37	5	8-12	.97
<i>Salmonella spp.</i>	Yes/no	5-47	35-37	4.05	3.2-5.3	.945
<i>Campylobacter</i>	5%	30-48	42-45	4.9	2.5	.987
<i>E. coli</i>	Yes/no	10-45	37	3.6-4.7	7.5-8.0	.9

<sup>1</sup>Water activity (amount of water required for bacterial growth)

\* Growth at .86; toxin production at .90



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