MEAT INTERVENTION

Summary of Intervention Chemistry for Red Meat Production

TYPE	APPLICATION	TREATMENT TIMES & TEMP	USAGE	ESTIMATED COST PER HEAD	ESTIMATED LOG REDUCTION	ADVANTAGES	DISADVANTAGES	REGULATORY STATUS
Lactic Acid	Carcasses, primals, parts	Up to 130 °	2-5%	$0.24	1 - 3 logs	Applied as spray, Good efficacy	Cost, off flavor, Low pH corrosiveness, discoloration, deproteinization	USDA 21CFR 101.100
PAA (MP2)	Carsasses, primals	10-30 seconds Ambient	0.02% PAA 230 ppm H2O2 165 ppm 1oz./6gal.	$0.08	1.0 - 1.4	Low concentration, cost	Efficacy, effluent, irritant, discoloration, risidual in fat, low pH, less effective than lactic acid on aerobes and coliforms	21CFR 173.325 FCN
Acid Sodium Chlorite (Keeper)	Carcasses, primals, sub primal, parts	10-15 seconds Ambient	Up to 1200 ppm Normal usage rate is 800 ppm	$0.12	Up to 4 logs	FCN for pH 5.0 - 7.5 Reduces trim, not affected by organ-ics, continual efficacy	Needs to be gener-ated, less effective than lactoc acid on aerobes and colofirms	21 CFR 173.325 FCN
Hypobromous Acid	Carcasses, primals, parts,	10-15 seconds Ambient	Up to 900 ppm Normal usage rate is 200 - 300 ppm	$0.06	Unknown	Cost, efficacy, neutral pH applied by spray or immersion	Two part system, stability	FCN
Hot Water or Steam	Carcass, primals	10-15 seconds 167 - 185 °			1 - 3 logs	Can be used in combi-nation with chemicals	Discoloration, deprotienization	Approval needed for recirculation of water
Steam Vacuum	Carcasses	Seconds			1 - 3 logs	Directed by visual contamination	Labor costs, discoloration of meat	No restrictions

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