



Installations in Federally Inspected Poultry Facilities

Site #1:

Challenge:

- Poultry Producer faced with meeting the demands of the Mega-reg requirements for *E. coli*
- Were not allowed to dose with chlorine above 30 ppm because of off-gassing

Solution:

- Process engineering changes were made to how chlorine was applied to the immersion chiller
- MIOX replaced existing chlorine system and dose rate increased to 50 ppm with no off-gassing

Results:

- Process engineering changes with MIOX allowed the Poultry producer to stay in compliance with the Mega-reg and receive support from USDA to dose at 50 ppm

Site #2:

Challenge:

- KFC Poultry producer out of compliance with *Listeria* and *Salmonella*
- Were not allowed to dose with chlorine above 30 ppm because of off-gassing

Solution:

- Process engineering changes were made to how chlorine was applied to the immersion chiller and multi-cut (8-piece cut-up)
- MIOX replaced existing chlorine and dose was increased to 50 ppm

Results:

- MIOX as a disinfectant reduced the incident level for *Listeria* to 0 %
- MIOX as a disinfectant reduced *E. coli* by 85% and *Salmonella* by 65%
- Poultry producer is now in compliance with KFC

Site #3:

Challenge:

- Poultry producer faced with chlorine gas leaks to the immersion chiller, stopped production on two different days, four personnel hospitalized

Solution:

- Chlorine gas was replaced with MIOX

Results:

- No hazards associated with using MIOX as replacement for chlorine gas
- Additional benefits:
 - *E. coli* results prior to MIOX: out of 80 samples using chlorine gas, 42 were less than 100 mg/L cfu, and 38 were greater than 100 mg/L cfu, with a total mean of 370 mg/L cfu
 - *E. coli* results after MIOX: out of 109 samples, all were less than 100 mg/L cfu with a mean of 22 mg/L cfu
 - Shelf life was increased by 2-3 days with MIOX

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