



Worthwhile Operational Guidelines & Suggestions

BROILER PROCESSING TIMELY INFORMATION - JANUARY 2002

CONTROLLING CHEMICAL HAZARDS

Meat and poultry products can not be adulterated or misbranded through the misuse of proprietary substances and nonfood compounds. The FSIS has discontinued the practice of approving various chemicals for food use and shifted this responsibility to each establishment. Now, plants must have the proper documentation for each chemical used (proof of registration with EPA or FDA; use labels and instructions; letters of guarantee as a food grade) as an evidence of acceptability and safety (FSIS Directive 11,000.1). This includes chemicals used in cleaners, laundry compounds, hand care products, water treatments, processing additives, lubricants, sanitizers and other anti-microbials, and pesticides. Known human carcinogens, mutagens, heavy metals, and compounds classified as extremely toxic, should not be allowed in the plants, unless they are exempted under the threshold regulation process (Title 21 CFR Section 170.39).

In most HACCP plans, residue analysis is a verification activity that allows monitoring of contaminants, both man-made and naturally occurring, that may be encountered during the production and processing of food products. Many chemicals can now be detected in extremely minute quantities (*see insert for a perspective*) and well below the established threshold danger levels (www.epa.gov) before problems may arise. Thus, a comprehensive chemical surveillance program may be the most effective way to prevent health risks and provide margin of safety from chemical hazards in poultry products.

One part per million:

- One inch in 16 miles
- One minute in two years
- One cent in \$10,000
- One oz salt in 31 tons of potato chips

One part per billion:

- One inch in 16,000 miles
- One second in 32 years
- One cent in \$10 million
- One pinch of salt in 10 tons of potato chips

One part per trillion:

- One postage stamp in an area the size of Dallas
- One inch in 16 million miles
- One second in 320 centuries
- One flea in 360 million elephants

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