



Your Partner in Food Safety  
**FOOD SAFETY NEWSLETTER - July/August 08**



## Legislation and Standards

### New Legislation/Standards Published

- **No. R. 512, 09 May 2008**  
**FOODSTUFFS, COSMETICS AND DISINFECTANTS ACT, 1972 (ACT No. 54 OF 1972)**  
**REGULATIONS GOVERNING TOLERANCES FOR FUNGUS-PRODUCED TOXINS IN FOODSTUFFS:**  
**DRAFT AMENDMENT:** The following regulation is substituted for regulation 2(d) "2(d) wheat, rye, barley and oats which contain more than 0.05% (m/m) of Ergot sclerotia."
- **No. R. 549, 28 May 2008**  
**FOODSTUFFS, COSMETICS AND DISINFECTANTS ACT, 1972 (ACT No. 54 OF 1972)**  
**REGULATIONS RELATING TO METALS IN FOODSTUFFS: AMENDMENT:** Amendment to the levels of Cadmium in Fruit and Vegetables

For free download of legislation, visit [www.gov.za](http://www.gov.za)

## Training Scheduled for August - September 2008

Course	Cape Town Envirochem Training Centre, Bellville	Johannesburg Woodmead Office Park, Johannesburg	Durban Municipal Offices Durban
Good Hygiene Practices	Any time on site. Conditions apply Special Offer for large groups: Basic Fee R3000,00 per session plus R20,00 per delegate, irrespective of numbers		
Foundation HACCP Course	23/06/07	09/06/08	23/06/08
Food Safety and HACCP (Development and Implementation)	17- 18/09/08 (Subsidized)	23-24/09/08 (Subsidized)	17-18/09/08
Internal Auditing (Training and Certification conducted by CMI Africa)	22/08/08	17/10/08	-
BRC Global Standard Food (Issue 5) (Training and Certification conducted by CMI Africa, a BRC Approved Training Provider )	17/08/08	13/10/08	-

## Systems Certification

HACCP Academy wishes to congratulate the following clients in terms of progress made towards certification

Bole Mushrooms - HACCP

Sapuma Egg Packers - HACCP

African Orange - HACCP

Envirochem - ISO 22000

## Nitrates and Nitrites in Meat Products

Nitrates and nitrites are used widely in the meat industry to cure. They are usually mixed with meat binders and cure ingredients and are added to dry sausages, semi-dry sausages, preserved meat and preserved meat by-products such as ham and salami. They can be added in the form of sodium and potassium salts (eg: sodium nitrate, sodium nitrite, potassium nitrate and potassium nitrite).

### Use

Nitrates and nitrites are used to:

- control the growth of spores
- provide cured meat flavour and colour
- extend the shelf life of meat products

### Control the growth of spores

Nitrates/nitrites control the growth of spores, particularly from *Clostridium botulinum*. These spores are a real concern in the food industry, because they can survive normal heat processing. Under the right conditions, they can produce vegetative cells, which can create a lethal toxin.

### Influence on colour

Nitrites cause a colour reaction in the meat and add an appealing pink colour to cooked products. Meat products without nitrates/nitrites are brown or gray coloured.

Nitrates undergo a chemical reaction and are converted to nitrites. Then, nitrites react with the protein of the meat (myoglobin), and are converted to nitrosomyoglobin (bright red). When cooked, nitrosomyoglobin is converted to nitrosohemochrome (pink pigment). This bright pink colour is normally associated with cured meat such as wieners, bologna and ham.

### Why are nitrates/nitrites regulated in South Africa?

The use of nitrates or nitrites is restricted because high levels can be hazardous to humans. Excess nitrates can react with amino acids in proteins during processing and form carcinogenic nitrosamines. Processors should have their systems checked during formulation to ensure the right levels are used.

### How much nitrate/nitrite can be used?

In South Africa the levels of nitrites/nitrate levels are regulated in terms of Regulation R965 of 1977, as amended, promulgated in terms of the Foodstuffs, Cosmetics and Disinfectants Act, Act 54 of 1972.

### How to comply with regulations?

To comply with the regulations regarding the nitrate/nitrite levels in your products, you need to know the precise concentration of nitrates/nitrites in your recipes. Your supplier should be able to tell you what they

are in your cure mix or meat binder. Use this information to calculate the amount of nitrates/nitrites in your formulation, based on your recipe.

You can also test your raw products for the total concentration of nitrates/nitrites at an external laboratory. To comply with the regulations, the sum of nitrates and nitrites should not exceed the maximum level

## WHY IMPLEMENT HACCP?

New food production and processing practices, emerging food-borne pathogens, and changing eating habits and demographics have contributed to a higher awareness of food-borne illness in recent years. Increasingly, prevention has become the focus. HACCP systems control food safety hazards through prevention, elimination and reduction. To address food safety concerns, market forces are driving HACCP implementation throughout the food sector.

When a food illness outbreak occurs, many points in the food continuum suffer, including the retail sector. In response, many retailers and grocers have begun to insist that their suppliers have effective food safety systems, including HACCP, implemented in their facilities. This action drives the adoption of HACCP by many processors to retain their current market and customer base or, in fact, expand it.

### Common Benefits of HACCP

Although the adoption of HACCP systems worldwide is due primarily to the added food safety protection provided to the consumer, a number of other benefits to the food industry, including your company, can be realized by implementing a successful HACCP system.

Increased Focus and Ownership of Food Safety

Increased Buyer and Consumer Confidence

Maintaining or Increasing Market Access

Business Liability Protection

Reduced Operational Costs

Efficient Oversight

Improved Product Quality and Consistency

Reduced Wastage

For more information, please visit [www.haccpacademy.co.za](http://www.haccpacademy.co.za)

## Contract Cleaners servicing HACCP Certified premises

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Make sure the cleaning staff have knowledge of their clients documented cleaning procedures for cleaning.

This would include the following:

- Master Cleaning Schedule listing all areas, equipment, walls, floors, windows, drains and ancillary structures that needs to be cleaned.
- Work instructions for the cleaning of each room, or group of rooms, or each production area and for the exterior of the plant and outside structures, equipment, etc.. The work instruction will state the frequency with which each item (or group of items) of equipment will be cleaned, and the contact time, temperature and strength of cleaning solutions. It will also state the method of cleaning.

The contract cleaner must maintain the following:

- An approved chemical list of approved chemicals used on the site
- All cleaning must be recorded as evidence that the cleaning program is being adhered to
- MSDS for all chemicals used on site
- Records of swabbing of surfaces for microbiological analysis to determine the efficiency of cleaning
- Training records of staff involved in the cleaning process

These documents must be made available to the client for inclusion in their HACCP Manual for documentation purposes. This will be required for the auditing of their HACCP System

Further to this, the following is required:

- Detergents and disinfectants must be stored in an area that is separate from food and must be clearly labelled or marked. The client would indicate the storage area on a floor plan.
- Since most detergents and disinfectants are hazardous, personnel handling these materials must be informed of this fact and of the appropriate treatment in the event of an accident. Where required to ensure safety, safety goggles or face shields and gloves shall be available and used when handling hazardous detergents and disinfectants.
- All brooms and hand brushes used to clean in the production area shall be made of material other than wood, shall have nylon bristles, which should, ideally, be coloured to enable detection of detached bristles, shall be kept clean and in good condition and, when not in use, shall be hung up with bristles facing downwards, to aid drying. Brushes used for floors shall not be used on equipment surfaces.
- Cleaning equipment shall be so marked, by colour-coding or other means, that the equipment used for specific purposes can be easily identified, for example, cleaning equipment for toilet and ablution facilities shall bear different identification marking from that used for food processing appliances.

**Training:** It is not sufficient to train cleaning staff in the use of chemicals, and methods of cleaning only. The auditor will always ask staff questions to determine the level of awareness in terms of good hygiene practices and personal hygiene. Although the cleaning staff are not handling food directly, they need to be trained in hygiene awareness. This deficiency often leads to findings against the client.

## Equipment Calibration

Adequate equipment calibration plays an important role in food safety when food is handled and produced. Calibration ensures that equipment monitors a food process accurately and consistently, and controls physical, chemical or biological hazards in the food operation.

### Measuring & Monitoring Devices

All measuring and monitoring devices used in a food processing plant should be:

- calibrated at scheduled intervals
- identified with an approved identification record/mark after calibration
- protected from adjustments that may invalidate the calibration
- used and calibrated under suitable environmental conditions
- handled and stored cautiously to protect against deterioration
- calibrated by trained employees, using manufacturer's specifications to ensure accuracy

When a measuring or monitoring device is outside specification, appropriate corrective action should be taken and records of calibration must be kept. Digital instruments also require calibration; their analogue circuitry performance can change over time.

### Equipment Requiring Calibration

Equipment that requires calibration includes devices for measuring: temperature of thermal processes,

quantities of food ingredients, and equipment measuring safety and quality-related product characteristics. The type of equipment that is used in a food plant depends on the product that is processed.

**Services offered by HACCP Academy**

**Training**

**Food Safety Systems Development**

Food Safety Plans: HACCP, BRC, Globalgap

Management Systems: ISO 9001, ISO 22000

**Auditing services:**

Hygiene Audits

GAP Audits

Supplier Audits

For further details please visit our website:

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