Using, Training and Implementing
PAS 96:2014

PAS 96:2014
Guide to protecting and defending food and drink from deliberate attack

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HACCP used and accepted globally as a system to prevent accidental contamination of food. HACCP not generally used to detect or mitigate deliberate contamination or fraud. Deliberate contamination requires human intervention.

The purpose of PAS96:2014 is to guide food businesses managers through approaches and procedures to improve the resilience of supply chains to fraud or other forms of attack.
Thinking Like Criminals

PAS 96:2014 = HACCP + TACCP

PAS 96:2014 describes Threat Assessment Critical Control Point (TACCP) which aligns with HACCP but has a different focus. This focus is PEOPLE and therefore needs the inputs from non-food safety specialists, especially HR.

TACCP takes a business into the mind set of an attacker, anticipating their motivation & capability
PAS 96:2014

Implementing and Using PAS

My ‘tool kit’ for:-
• Training
• Appreciation
• Risk Assessing
• Due Diligence

To ensure:-

Compliance that is:
• Reasonable and proportionate
In Food Defence we talk about **Threats**

**TACCP**

Threat Assessment Critical Control Point

To ensure a safe and robust supply chain consider:

**Temptation Assessment Critical Control Point**

Identify where in the value chain there is a temptation for fraudulent activity, where most value can be added, what the benefits are and the potential for detection.

Consider **Economic Temptation**
PAS 96: 2014 Broad Guidelines

• Intentionally non-specific
• Every business is different
• Does not seek to aid criminals
• Proportionality
• Risk is different for different businesses and product categories Differing Risk Assessments will lead to different action plans Assessments may conclude 'no action required'
• THINKING LIKE CRIMINALS
Stop being a Food Technologist / Safety Specialist, Quality Manager, Supply Chain Specialist and

Think like a criminal

What do you buy a lot of and could be subject to ‘bulking’ or ‘diluting’ to a degree that will not impact on the safety, sensory qualities of the product, not change it visually or physically, is expensive and untested?
Threat and Temptation

TACCP

The size of threat depends on key features:
• Motivation and capability of an attacker or group
• Vulnerability of the target Impact Assessment

Intentional contamination requires human intervention
The factors, which comprise the three points of the so-called fraud triangle, are:

- A perceived pressure facing the person / business
- A perceived opportunity to commit fraud
- The business / person(s) integrity
Food as a vehicle for Terrorist Acts

In 1984, members of a religious sect contaminated salad bars in the USA with *Salmonella typhimurium* causing 751 cases of *salmonellosis*. The attack appeared to be a trial run for a more extensive attack intended to disrupt local elections.
Worst case Scenario.................

**Biological agents** (bacteria, toxins, viruses, parasites, etc.) can be delivered in the form of liquids, aerosols, or solids

**Chemical agents** can be delivered as airborne droplets (nerve, blister, blood, and choking agents) and toxic chemicals (e.g., pesticides, rodenticides, lubricants, cleaning chemicals and heavy metals) Battlefield Chemical Weapons!

**Radioactive agents** are radioactive elements that can be delivered in liquid or solid form

**Physical agents** are materials that could cause adverse health effects if eaten (e.g. bone slivers, glass fragments, and metal filings)
Threats and Threat Levels

PAS identifies three generic threats:

1. Contamination with toxic material
2. Sabotage of the supply chain
3. Misuse for terrorist or criminal activity. Threats could be carried out by individuals or groups with no connection to the organisation, no contractual relationships or by alienated or disaffected staff

MAD, BAD and SAD

Business Response Levels (Threat Levels):

- Normal
- Heightened
- Exceptional
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Makes the assumption that Managers are aware of:

- HACCP or
- Similar Risk Management Procedures
- Crisis Management
- Business Continuity Management
PAS 96: 2014

Recommends a team approach and integration into existing protocols.
Not an external audit tool but suppliers are likely (increasingly so) to ask if you are familiar with PAS 96:2014

- Provides a framework of guidance
- Should be practical and proportionate
- Help businesses deter potential attackers.
What are we Defending?

Raw Materials, Ingredients, Finished Products, Customers, Staff and Consumers

Assets  Equipment, Building, Vehicles,

People  Employees, Visitors, Contractors,

Brand  How much is this worth?
Building the TACCP Team

- Food Defense Coordinator (Security)
- Factory / Plant / Facility Manager
- Human Resources Manager
- Production Manager
- Quality Manager
- I.T. Manager
- Front Line Employees, loyal, long serving
- CEO / Director / Company Secretary
Food Defence Teams

- Who are the critical people that should be on the Food Defense Team or “FDT”? Why is the team approach better than the individual approach?
- What should the requirements be for being a member of the team?
- What are the responsibility of team members / deputies?
- Why are signed Non-Disclosure Agreements or Confidentiality Agreements imperative to be on the team?
- How to assess and evaluate the progress of the team?
Who are we Protecting from?

Rogue or disgruntled employees
Terrorists, ideologically motivated individuals or Groups
Criminals and fraudsters
Protesters - Anti-capitalist demonstrators
Subversives, radicals, saboteurs
Pressure Groups, ALF, WI

PEOPLE
Food Fraud Vulnerability Assessments

Information Harvesting on your Supply Chain

• Map / Document your supply chain
• Raw Materials inputs
• Ingredient inputs
• Products and Packaging

Identify and prioritise vulnerabilities for food fraud
What, Where, How, Who
Terminology

- Watered down products using non-potable / unsafe water
- Olive oil diluted with potentially toxic tea tree oil
- Sunflower oil partially substituted with mineral oil
- Hydrolyzed leather protein in milk
- Poultry injected with hormones to conceal disease
- Harmful food colouring applied to fresh fruit to cover defects
- Copies of popular foods - not produced with acceptable safety assurances.
- Expiry, provenance (unsafe origin)
- Toxic Japanese star anise labeled as Chinese star anise
- Mislabeled recycled cooking oil
- Melamine added to enhance protein value
- Use of unauthorized additives (Sudan dyes in spices)
- Grey market production/theft/diversion
- Sale of excess unreported product
HorizonScan Risk Framework Matrix

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Continuously monitoring for change

Little or no current reporting or no reporting for five years plus

Some evidence of increased trending on reported product integrity issues

High level of both historic and current reporting with five times trending Reporting from source countries

Key Brand commodity or ingredient in multiple Products of high value

New Product, new market / supply chain without historic confidence or relationship with supplier

‘Store Cupboard’ commodity or ingredient

Product Commodity / Category

Likelihood

Severity

Multiple Integrity / Reported Concerns

= Product Category of low level concern

= Product Category potential concerns
Horizon Scan & Contaminants On-line
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