New Standards and New Directions in Quality Assurance – UK & EU Perspective

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Programme

**Context**
- European Union
- Chilled food and its importance

**European regulatory framework**

**Official enforcement**

**Self-regulation mechanisms**

**Traceability**

**Industry standards and approach**
>380M inhabitants, 1.25M sq miles, 15 countries:
- Own cultures and legal systems
- ‘Common Market’ in only a few products

Enlargement:
- 27 countries, 495M inhabitants, 1.7M sq miles
- Local chilled food markets - diverse cultures:
  - recipes and products
  - consumer expectations

**Common factor:**
*No market without product safety*
# What are Chilled Foods? UK NPD Chronology

**1970s**
- Meat products: Sliced, Pies
- Dressed salads: coleslaw, potato

**1980s**
- Recipe Dishes
- Non-dairy desserts
- Quiche, Flans
- Sandwiches
- Pizza
- Fresh Pasta
- Breaded Meat, Fish
- Soups

**1990s**
- Ethnic snacks
- Dips
- Dressings
- Meal Accompaniments
- Sauces
- Prepared Vegetables
- Prepared fruit
- Stir fry kits
- Chilled speciality breads
- Bistro/luxury ready meals/kits
- Sandwich fillings
- Stocks

**2000s**
- Sushi

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UK: >95% are retailer own label. ‘Fresh’/unpreserved. Many only reheated. Many are hand made (short runs).
CFA Members’ Products:

- Multicomponent, prepared
- Hygiene/safety critical
  - Unpreserved
  - HACCP, traceability
- Short shelf life – JIT systems
- Seasonal raw materials
- Year-round supply/production
  - Pan-global sources
- >95% retailer own label
CFA Represents:

- >85% of UK chilled prepared food market
  - ~$10Bn = ~50% total EU
- 29 Member companies
- 2 subscriber associations
- 150 plants:
  - UK/EU
  - Australia
- 9,000 SKUs
- 50,000 employees inc 1,000 scientists
- ~10% of UK food industry (employees, value)
European Chilled Ready Meals Market

2001 SYNAFAP/Stratega Survey:
- UK, France, Germany, Italy, Spain, Belgium, NL, Switzerland
- Ready meal = recipe dishes, flans, pizzas, fresh pasta, sandwiches, breaded products, soup, sauce, chilled pastry

Estimates:
- 1999: 1.221 M tonnes
- 2005: 1.998 M tonnes = 63% increase

UK market value comparisons
- 1999 ~$8 bn (43% total European market)
- 2005 ~$11.5 bn (43% increase, 38% total European market)
Basis of UK Industry’s Success

- Massive investment in hygiene & technology
  - 1970s secure chill chain established: UK target 5°C (41°F)
  - Factory design and layout: area segregation (GMP, HCA, HRA)
  - Process design and control: 6D heat processes
  - Safety and traceability: ‘farm to fork’ whole chain approach
  - Generally, short shelf lives: 1-10 days
  - HACCP + best practice: industry (CFA) guidance
  - Quality Systems: Manufacturer/retailer partnerships
  - Forecast/orders/manufacturing/distribution systems integration
  - Generally, no stock and minimal raw materials held at plants - JIT

- Distribution over short distances
  ➔ CONTROL as foundation for innovation
CFA’s Approach:

- CFA promotes and maintains standards of excellence in chilled food production
  - Best practice emphasis
  - Whole chain approach

Membership criteria:

- Compliance with CFA Guidelines for Good Hygienic Practice in the Manufacture of Chilled Foods; and
- Successful UKAS-accredited audit
European Regulatory Framework

**Instruments:**

- **Regulations**
  - Come into force in all Member States immediately on publication

- **Decisions**
  - Binding on parties e.g. Member States, companies

- **Directives**
  - Require implementing into national law via national legislation
Historic EU Food Regulatory Framework

- General Food Hygiene Directive
  - All foods

  *Being replaced*

- Other Hygiene Directives (17) - protein
  - Red meat
  - Poultry
  - Products: meat, egg, dairy, fishery

  *Being consolidated*

- Temperature, Shelf life
  - No EU-wide legislation or harmonisation, but little trade
New: General Food Law Principles, EFSA

New framework - general food law & food, feed safety principles:
- HACCP
- Farm to table
  - Responsibility of feed manufacturers, farmers, food operators
  - Traceability of feed, food and its ingredients
- Risk analysis (assessment, management, communication)
- Application of the precautionary principle, if appropriate

European Food Safety Authority
- New for 2003
- Risk assessment-based advice and information to the EC
- Hub for EU/national scientific committees, provide peer review
- Run Rapid Alert System for Food and Feeds
Key Additional European Legislation

Labelling

‘Use by’ dates: Food Labelling Directive (since 1979)

‘Fresh’: some national rules and guidance - review

Microbiological Criteria

EU strategy and draft Regulation under development

Issues

Role in HACCP – verification

Methodology questionable

Sampling issues

Inherent variability – lab procedures and methods (human element)

Unsuitable methods – confusion between non-/pathogens

Testing is not a control measure = diversion of resources
## EU Temperature Legislation Examples

<table>
<thead>
<tr>
<th>Country</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>7°C max (ground beef)</td>
</tr>
<tr>
<td>Denmark</td>
<td>5°C</td>
</tr>
<tr>
<td>Finland</td>
<td>6°C (meat products) Others 8°C</td>
</tr>
<tr>
<td>France</td>
<td>Retail ≤ 4°C</td>
</tr>
<tr>
<td>Italy</td>
<td>-1 to 7°C (meat products) 0 to 4°C (fish products)</td>
</tr>
<tr>
<td>Spain</td>
<td>0-3°C</td>
</tr>
<tr>
<td>Sweden</td>
<td>&lt;8°C</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>7°C max</td>
</tr>
<tr>
<td>UK</td>
<td>8°C max + tolerances</td>
</tr>
</tbody>
</table>
Shelf life determination

- French industry guidance
- CCFRA guidelines (under review - UK)
- Retailer protocols
- Company protocols
Official Enforcement

European Union

- Horizontal legislation:
  - Enforced under national food control systems
  - EC Food & Veterinary Office audits of Member States’ control systems
  - FVO third country role

- Vertical legislation:
  - Under veterinary control – food technology knowledge?

UK

- Local authority responsibility for premises inspection (EHOs)
- Report to Food Standards Agency
Additional Elements: UK Industry Self Regulation

- Manufacturers’ systems and audits
  - HACCP implementation
  - Housekeeping
  - Suppliers/growers
  - Traceability

- Customer audits
  - Close partnership with suppliers – own label

- Third party audits, e.g. vs.
  - BRC Food Technical Standard – general requirements for own label
  - CFA Guidelines – specifics for chilled products

- Competencies of auditors
  - UKAS accreditation
Supply Chain Management
Traceability throughout the supply chain - a non-negotiable, standard part of chilled food management systems

- Must link a lot or batch with its source and any treatment it has received
- Will allow rapid access to product information
- Can limit the potential scope of a problem associated with a raw material
- Can help identify where the source of a problem may be
Supplier Approval & Management Process:

Supplier approval inspection vs technical standards

Material inspection vs specifications

Supplier management - Repeat inspection vs technical standards

Continuous material appraisal vs product & process specification

Traceability
Industry Guidelines

- European Chilled Food Federation (ECFF)
  - Manufacturing guidelines – based on 1993 CFA Guidelines
- UK Chilled Food Association (CFA)
  - ‘CFA Guidelines’ 3rd edition
  - High Risk Area Best Practice Guidelines 2nd edition
  - Packaging Hygiene Guidelines
  - Water Quality Management Guidance
  - Microbiological Guidance for Growers
  - Pesticides Due Diligence
  - Hygienic Design Guidelines
- SYNAFAP (French Ready Meal Manufacturers Assn)
- BRC Food Technical Standard
  - Global Food Safety Initiative
CFA Guidelines - Hygiene Areas

Key concern: **CROSS CONTAMINATION**!

- **GMP Area**
  - *raw* ingredients/components, packed final product

- **High Care Area**
  - *raw + cooked* composite products
  - aim is to *minimise* contamination

- **High Risk Area**
  - *fully cooked* ingredients/products only (6D process)
  - aim is to *prevent* contamination
High Risk Areas

- Segregation from non-HRA
- Total exclusion of raw ingredients/components

**Personnel**
- Operatives, cleaners, service staff
  - Specially selected, trained, instructed
- Specified changing procedures: clothing, footwear
- Handwashing guidelines
- Enter/leave through designated areas

**Areas**
- Physical barriers: cookers at GMP/HRA boundary
- Separate equipment & utensils
- Filtered air
Summary

- Framework of general and POAO European hygiene legislation but not specific to chilled products
- Absence of European temperature legislation, but also generally lack of intracommunity trade in chilled products
- High degree of industry self-regulation using HACCP-based trade body guidelines
- Close partnership of manufacturers and retailers in most successful markets
- Controls and traceability from farm to fork
- Investment in technology for safety underpins innovation