

# Legal Regulations of Fats and Oils in Europe

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# EU White Paper on Food Safety

- High level of human health and consumer protection
  - Comprehensive integrated approach
    - Chain approach
  - Responsibility of stakeholders
    - Farm to table principle
  - Risk analysis
    - Risk assessment, risk management, risk communication
- From quality control to quality assurance

# Food Safety Management Systems

- Monitoring systems
  - Population level
- Hazard analysis critical control points
  - HACCP system
  - Company level
- Guides for good hygienic practices
  - GGHP system
  - Sector or subsector level

# Food Safety Population level

- Risk Analysis
  - Risk assessment: scientific approach
  - Is there a risk of (over)heated fats and oils?
  - No examples of heated fats and oils
  - Responsibility of authorities, scientific bodies
- Monitoring systems
  - Responsibility of authorities
  - Objective: to collect information about the quality of heated fats and oils at the population level
  - Need for quality parameters!

# Food Safety :Company Level

- HACCP system:
  - Mandatory :food companies
- GGHP system: guides for good hygienic practices: » The Guides »
  - Voluntary basis, alternative to HACCP
  - Particularly for small and medium enterprises (SME's)
  - Sector or sub-sector level, not individual enterprise
  - Approved by authorities
  - Notified to EU
  - Opportunity for SME's

# Regulations in Europe

- No specific regulation for heated fats and oils at the EU level
- Several member states approved specific regulation for heated fats and oils
- In addition to general regulation for fats and oils in general: ( erucic acid ...)
- Different status of regulations: official regulation, statement by advisory body, recommendations...
- In the last two decades; several parameters
- Applied for control purposes and others

# Quality Parameters 1

- Temperature specifications,
- Acid value or equivalent
- Polar compounds
- Petroleum ether insoluble substances,
- Polymerized triglycerides
- Viscosity
- Smoke point
- « Acceptable sensorial quality »

# Quality Parameters 2

- Range of quality factors in use
  - Diversity in approach between member states
  - Impossible to discuss all details
  - Limited to examples en comments
- Acceptable sensorial quality
  - Relative criterion but important
  - Convincing factor

# Quality Parameters 3

- Polar substances:
  - Max 24% DE, Max 25% FR, BE, GR, ES
- Polymerized triglycerides:
  - Max 10% BE, Max 12 % DE, GR,  
Max 16% NL
- Both are very often used
  - Control purposes
  - « Reference » method

# Quality Parameters 4

- Temperature : max 180 °C BE
- Acid value: max 2,0 DE
  - Nature of the oil
  - In combination with other criteria
- Smoke point min 170 °C DE, BE
  - See acid value
- Petrol. ether insoluble subst: max 0,7% DE

# Fast Methods

- Several methods in use
- Particularly for screening and monitoring purposes, not for control
- Useful in a quality assurance programme
- Careful calibration necessary
  - Relationship between fast method and « reference » method
  - Valid for a particular application

# Conclusions

- No specific EU regulation for heated fats and oils
- Need for such a regulation?
- Risk analysis of heated fats and oils!!!
- New knowledge about health aspect of particular fats and oils
- Acrylamide story!