

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!