



# Hazard analysis approaches for certain small retail establishments in view of the application of their food safety management systems

19 June 2017

# EFSA IS



the reference body for risk assessment of food and feed in the European Union. Its work covers the entire food chain – from field to fork



One of the number of bodies that are responsible for food safety in Europe

# WHAT EFSA DOES



Provides independent scientific advice and support for EU risk managers and policy makers on food and feed safety



Provides independent, timely risk communication



Promotes scientific cooperation

# WHAT EFSA DOES **NOT** DO



# QUESTIONS AND ANSWERS



ADVISE



**EFSA receives a question**

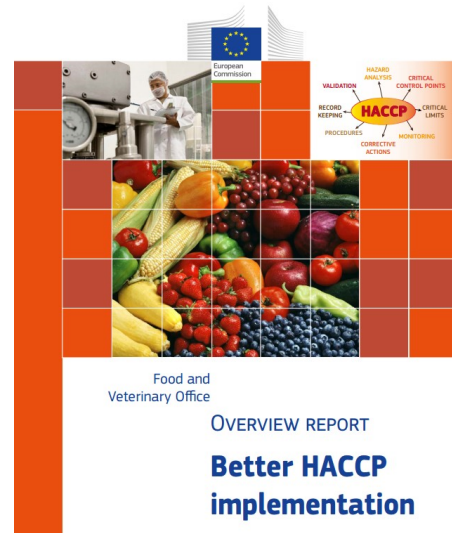
**EFSA's scientists evaluate, assess, advise**

**Adoption and  
communication**



# BACKGROUND HACCP MANDATE

- Mandate received from EC in October 2015
- Background provided in mandate:
  - FVO Report
  - EFSA supporting publication on risk ranking for prioritisation of food and feed



- Commission Notice from July 2016

30.7.2016

EN

Official Journal of the European Union

C 278/1

II  
(Information)

INFORMATION FROM EUROPEAN UNION INSTITUTIONS, BODIES, OFFICES  
AND AGENCIES

EUROPEAN COMMISSION

COMMISSION NOTICE

on the implementation of food safety management systems covering prerequisite programs (PRPs)  
and procedures based on the HACCP principles, including the facilitation/flexibility of the  
implementation in certain food businesses

(2016/C 278/01)

## TERMS OF REFERENCE

EFSA is asked to provide a Scientific Opinion on a hazard analysis approach for certain small retail establishments, in particular for **butcher shop, grocery, bakery, fish shop and ice cream shop**:

- To formulate guidelines on how to identify the most relevant **biological, chemical, physical hazards** and **allergens** at each step;
- To provide guidance on methodology for **hazard ranking** (within HACCP) and select most appropriate method(s) for each type of the selected retail activities;
- To provide guidance on how to select, implement and validate the most efficient approaches to **control** hazards (considering CCP, PRPs, critical limits and monitoring system);
- Using the guidance developed in TOR 1, 2 and 3, to identify and **rank** the hazards in each of the five retail establishments and to describe appropriate **control activities** for the hazards identified including PRPs, CPs and CCPs.

# PRP AND HACCP

- Food hygiene and safety is the result of the implementation of PRPs and procedures based on the HACCP principles. The PRPs provide the foundation for effective HACCP implementation and should be in place before any HACCP-based procedures are established
- PRP 1: Infrastructure (building and equipment);
- PRP 2: Cleaning and disinfection;
- PRP 3: Pest control: focus on prevention;
- PRP 4: Technical maintenance and calibration;
- PRP 5: Physical and chemical contamination from production environment;
- PRP 6: Allergens;
- PRP 7: Waste management;
- PRP 8: Water and air control;
- PRP 9: Personnel (hygiene, health status);
- PRP 10: Raw materials (supplier selection, specifications);
- PRP 11: Temperature control of storage environment;
- PRP 12: Working methodology;
- PRP 13: Product information and customer awareness.



Commission Notice



## PRP 13: PRODUCT INFORMATION AND CUSTOMER AWARENESS

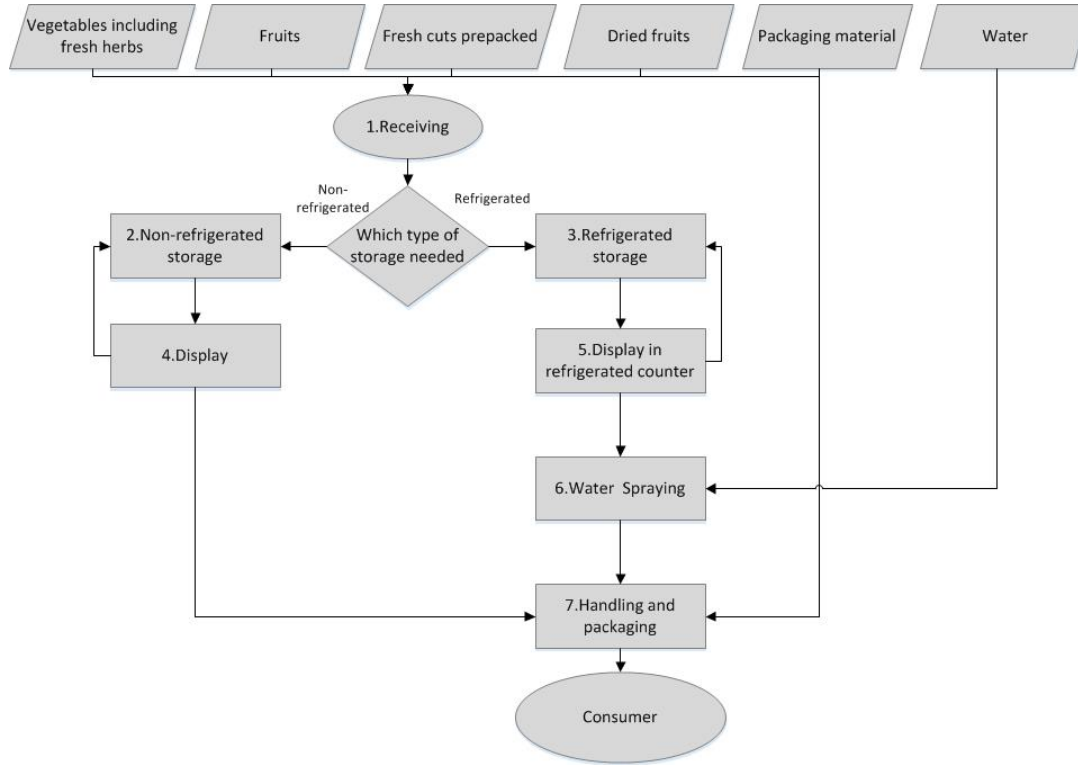
- All products at retail level should be accompanied by sufficient information to promote **proper handling, storage** and **preparation** by consumers.
- Consumers should have sufficient knowledge to enable them to understand the importance of product information, make informed choices appropriate to the individual, and to **prevent contamination and growth** or survival of foodborne pathogens.
- This information can be provided to the consumers using product labeling, other accompanying material (e.g. an information leaflet), or any other means including modern communication methods.

# TORS 1 AND 2: HAZARD IDENTIFICATION AND RANKING

- **Classical approach** to hazard analysis and ranking
  - Description of HACCP and its difficulty for small retailers
- **Simplified approach** (small food retailer food safety management system)
  1. Identify the 'Stages' in the retail establishment;
  2. 'Hazard identification' ('B' biological; 'C' chemical, 'P' physical and 'A' allergen);
  3. 'Activities contributing to an increased/decreased occurrence of the hazard'
  4. 'Control activities'.

Stage	Hazard identification <sup>(a)</sup>				Activities contributing to increased/decreased occurrence of the hazard	Control activities
	B	C	P	A		

# STEP 1: DESCRIBE THE PROCESSES USED



Stage	Hazard identification <sup>(a)</sup>				Activities contributing to increased/decreased occurrence of the hazard	Control activities
	B	C	P	A		
Receiving						
Refrigerated storage						
Display						

## STEP 2: IDENTIFY THE HAZARDS THAT MAY OCCUR AT EACH STAGE

- In the 'simplified approach' it is proposed that rather than specific hazards being identified, instead the hazards are simply grouped as 'biological', 'chemical', 'physical' or 'allergen'.
- There is no need for small food retailers to know detailed and hazard-specific information. Instead of, 'presence of *Campylobacter* in poultry meat' it would be sufficient to know that 'biological hazards may be present'.

Stage	Hazard identification <sup>(a)</sup>				Activities contributing to increased/decreased occurrence of the hazard	Control activities
	B	C	P	A		
1	yes/no	yes/no	yes/no	yes/no		
2	yes/no	yes/no	yes/no	yes/no		
3	yes/no	yes/no	yes/no	yes/no		
Etc.						


## STEP 3: ACTIVITIES CONTRIBUTING TO INCREASED/DECREASED OCCURRENCE OF HAZARD

- Identify factors contributing to an increased probability of occurrence of a hazard for each step in the production process by applying a structured questionnaire


Stage	Hazard identification <sup>(a)</sup>				Activities contributing to increased/decreased occurrence of the hazard	Control activities
	B	C	P	A		
1	Yes	No	No	No	<p><b>Growth due to a failure to chill properly</b></p> <p><b>Cross-contamination due to a failure to separate raw from cooked/RTE products</b></p>	
2	Y/N	Y/N	Y/N	Y/N	....	

# STEP 4: CONTROL ACTIVITIES (TOR 3)


## Biological hazards

Stage	Activities con increased/decrea of the h	
Receiving of raw materials	Biological h	
Storage of raw materials (cold storage)	Microbial gn temperatur result in mik	
		


## Chemical hazards

Stage	Activities con increased/decrea of the h	
Receiving of raw materials	Prohibited chemical concentrations abov level (ML)/maximum (MRL)/indicative val migration limit (SML for action (RPA) in t material/ingredient	
		

## Physical hazards

Stage	Activities incre occur	
Receiving of raw materials	Damaged pr	
	Physical haz materials (s vegetables,	

## Allergens

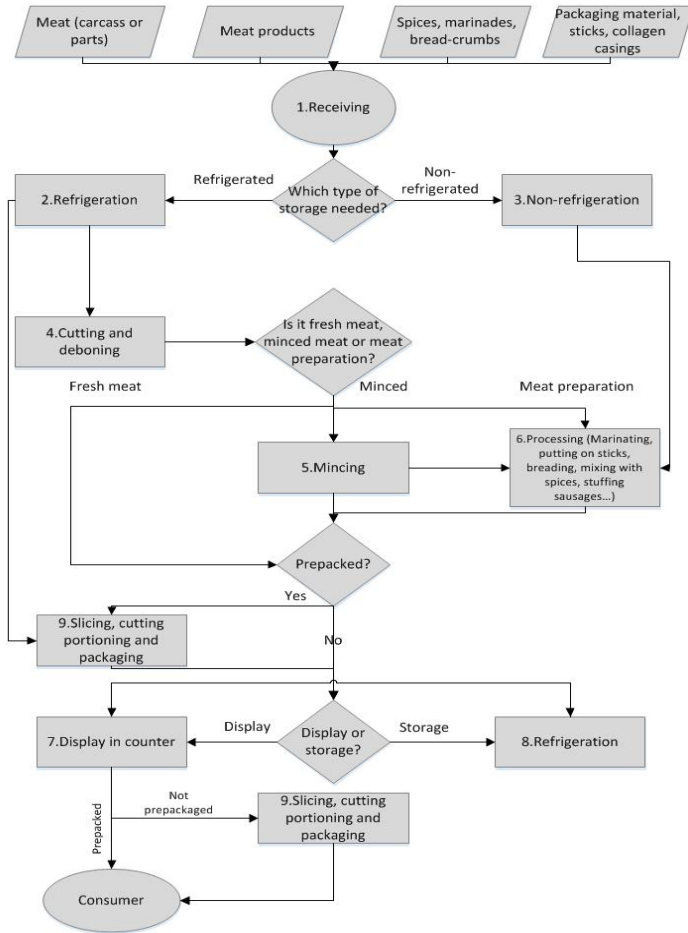
Stage	Activities con increased/decrea of the h	
Receiving of processed raw materials	Presence of undeclar purchased products	
Storage of raw materials	Contamination due to (e.g. powdered mate cross-contamination	

# STEP 4: CONTROL ACTIVITIES (TOR 3)

Small Food Retailer Food Safety Management System table with the control options added

Stage	Hazard identification				Activities contributing to increased/decreased occurrence of the hazard	Control activities
	B	C	P	A		
1	Yes/no	Yes/no	Yes/no	Yes/no	<p>Growth of micro-organism due to failure to chill properly</p> <p>Cross-contamination due to failure to separate raw from cooked/RTE products</p>	<p><b>PRP 11: Temperature control</b></p> <p><b>PRP 12: Working methodology</b></p>
2	Yes/no	Yes/no	Yes/no	Yes/no		
3	Yes/no	Yes/no	Yes/no	Yes/no		
Etc.						

# APPLICATION TO FOOD RETAIL ESTABLISHMENTS (TOR 4)



Stage	Hazard identification <sup>(a)</sup>					
	B	C	P	A		
Receiving	Y	Y	Y	Y	Fa m in Pn ha ra	
Refrigerated storage	Y	Y	Y	Y	Mi ch	





## CONCLUSIONS AND RECOMMENDATIONS

- The 'simplified approach' formulates **guidelines on how to identify** the most relevant biological, chemical (including allergens) and physical **hazards** along the production stages of five small food retail establishments
- In this approach the **retailer does not require specific knowledge of the hazard** but should be aware that 'biological', 'chemical', 'physical' or 'allergen' hazards may be present and also of activities that contribute to increased or decreased occurrence of the hazard
- Based on analysis of the hazards which may occur in the five target retail establishments, **PRPs were sufficient** to assure food safety
- Individual retail establishments need to tailor their SFR-FSMS based on the specific processes (stages) and products relevant to their business
- A wider application within the food industry should be considered

# STAY CONNECTED!



## Subscribe to

[www.efsa.europa.eu/en/news/newsletters](http://www.efsa.europa.eu/en/news/newsletters)

[www.efsa.europa.eu/en/rss](http://www.efsa.europa.eu/en/rss)



## Engage with careers

[www.efsa.europa.eu/en/engage/careers](http://www.efsa.europa.eu/en/engage/careers)



## Follow us on Twitter

[@efsa\\_eu](https://twitter.com/efsa_eu)

[@plants\\_efsa](https://twitter.com/plants_efsa)

[@methods\\_efsa](https://twitter.com/methods_efsa)