

## FEED. Risk assessment of the chain of starch manufacturing

### EXAMPLE 2.2: FOR A WHEAT PRODUCT, FOCUS ON RECEPTION, PROCESS, STORAGE AND LOADING STEPS

RISK BASED APPROACH FOR WHEAT PROCESSING				Process stage: RECEPTION (Cereal wheat)			
Hazard	Category	Chance	Severity	Risk Class	Legislation	Control Measure	Remarks
Foreign bodies	P	Low	High	3		Closed process, Sieving, dedicated lines, Cleaning steps, magnets, glass policy PRP for personal hygiene.	Visual checks.
Toxic plants / seeds Botanic impurities	C	Low	Medium	2	Dir. 2002/32/EC	PRP for incoming raw materials. Analysis. Product specification.	Visual checks.
Heavy metals above the specified limit	C	Low	High	3	Dir.2002/32/EC	PRP for incoming raw materials. Analysis via monitoring programme .	Purchasing specifications.
Pesticide residues (authorised) above the MRL, i.e. residues of herbicides, insecticides, fungicides or	C	Medium	Medium	3	Reg. 396/2005/EC	PRP for incoming raw materials. Analysis via monitoring programme.	Purchasing specifications.

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rodenticides above the MRL.							
Pesticides residues (unauthorised)	C	Very low	High	2	Directive 2002/32/EC	A monitoring program should be in place.	Directive 2002/32/EC sets limits for a number of pesticides residues in feeding stuff. Some of the banned pesticides may be present in the environment.
Mycotoxins above the specified limit	C	Medium	High	4	Dir.2002/32/EC Rec.2006/576/EC	PRP for incoming raw materials Analysis via monitoring programme Raw material specification contracts.	Purchasing specifications.
Lubricants from equipment	C	Low	High	3		PRP for maintenance. Use of food grade lubricant.	Purchasing specifications.
Pest	B	Medium	Medium	3		Closed buildings, PRP for pest control.	Regular checks on pest activity.



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RISK BASED APPROACH FOR WHEAT PROCESSING				Process stage: <b>PROCESS</b> (Dry Cleaning, Grinding, Sieving, Refining, Concentration, Mixing, Drying)			
Hazard	Category	Chance	Severity	Risk Class.	Legislation	Control Measure	Remarks
Foreign bodies	P	Low	High	3		Closed process, sieving, dedicated lines, cleaning steps, magnets, glass policy in place.	Visual inspection.
Lubricants from equipment	C	Low	High	3		PRP for maintenance. Use of Food grade lubricant.	Purchasing specifications.
Processing Aids	C	Low	High	3		On-line monitoring of usage (follow up excessive use of processing aids) Non toxic processing aids, pH control, ISO9001 plans, work instructions and training personnel.	
Cleaning and disinfection agents	C	Low	Medium	2		PRP for cleaning and sanitation Use of food contact authorized cleaning agents.	Purchasing specifications.
Neoformed compounds	C	Medium	Medium	3	Dir.2002/32/EC	Gas specifications. End-product analyses. (according to the dryer type).	
Water contamination	B/ C	Low	High	3	Reg. 183/2005/EC	PRP for layout of premises and workspace. Analysis via monitoring programme.	
Pest	B	Medium	Medium	3		PRP for pest control. Closed process and buildings.	Checks on pest activity.
Pathogenic microorganisms, including Salmonella	B	Low	High	3		Process control (Temperature, pH, Time and Moisture content). Process monitoring on hygiene indicator micro organisms. Final product monitoring on micro organisms. Drying/evaporating steps: control moisture content of product.	



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<b>RISK BASED APPROACH FOR WHEAT PROCESSING</b>	<b>Process stage: STORAGE &amp; LOAD OUT</b>
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Hazard	Category	Chance	Severity	Risk Class.	Legislation	Control Measure	Remarks
Foreign bodies	P	Low	High	3		Protected storage, sieving, staff hygiene, glass procedure, good maintenance practices.	Visual checks.
Lubricants from equipment	C	Low	High	3		PRP for maintenance. Use of Food grade lubricant.	Purchasing specifications.
Pests	B	Medium	Medium	3		PRP for Pest control.	Checks on pest activity.
Pathogenic microbiological organisms, including Salmonella	B	Medium	High	4		PRP for Pest control, PRP for Personal hygiene, PRP for cleaning and PRP for maintenance. Control of temperature and ventilation. A monitoring programme shall be in place	Good storage practices for bulk storage
Mycotoxins formation	C	Low	High	3	Dir. 2002/32/EC Rec. 2006/576/EC	Appropriate storage control should be in place. The PRP programme should foresee closed storage areas. Humidity & T controls when necessary. Monitoring program should be in place.	Good storage practices for bulk storage
Cross contamination during transport	B	Medium	Medium	3		Cleaning of transport means + verification previous loads.	Service provider specification.

