



Health and Safety Department

Health Assessment

Check Pintra for more information

Check Pintra Nieuwsbrief for updated information

Risk inventory

(Mandatory for every new employee in faculties with risks related to job)

University of Antwerp
Health & Safety Department

Risk inventory
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Risk analysis (RA)
for Medical follow up
Present & Signed?

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for Medical follow up
Present & Signed?

Appointment
Occupational
physician

Worksite Tour

5

1


2

3

4

6

Laboratory related

<p>Chemicals</p>  <p>CMR-products, Narcotics, Psychotropic, ...</p>	<p>Biological agents Human fluids Human tissue ...</p>	<p>Biological agents (Lab)animals</p>	<p>Physical agents</p> <p>Ionizing radiation</p> <ul style="list-style-type: none"> - x-rays - radio-isotopes - sealed sources
<p>HEALTH ASSESSMENT NECESSARY</p>			
<p>Medical check-up, + Medical background anamnesis</p>	<p>Hepatitis B vaccination ...</p>	<p>Tetanus vaccination If applicable:</p> <ul style="list-style-type: none"> - <i>Rabies</i> vaccination? - <i>FSME?</i> (<i>Tick-Borne Encephalitis Vaccine</i>) - ... 	<p>Medical check-up, + Medical background anamnesis + Blood sample</p>

Prevention Hierarchy of Controls

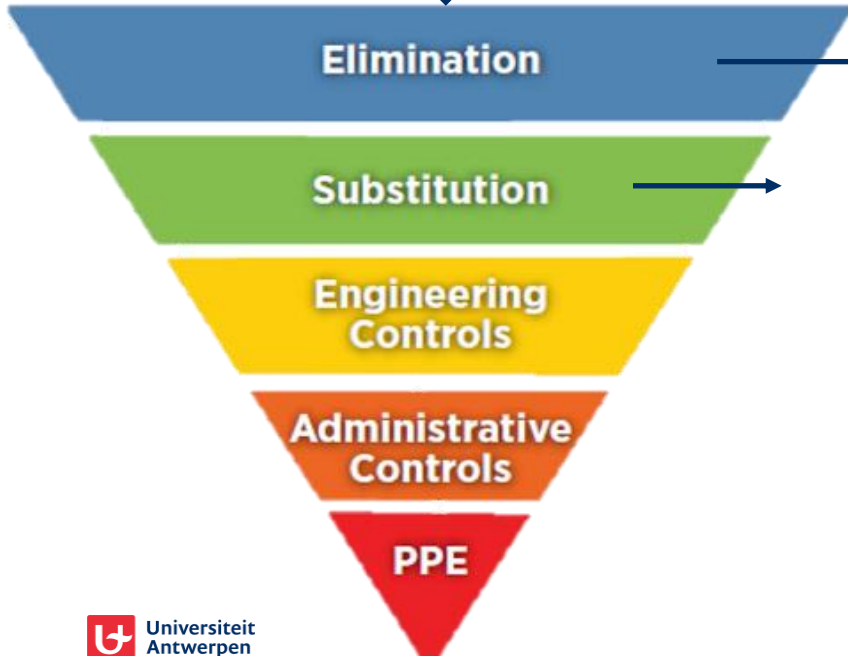
Risk and preventive measures: e.g. product with reproductive toxicity

e.g. order of Sodium tetraborate-10-hydrate
Product would be used as buffer (pH8-10).



SECTION 2: Hazards identification	
2.1 Classification of the substance or mixture	
Classification according to Regulation (EC) No 1272/2008	
Eye irritation (Category 2), H319	
Reproductive toxicity (Category 1B), H360FD	
For the full text of the H-Statements mentioned in this Section, see Section 16.	
2.2 Label elements	
Labelling according Regulation (EC) No 1272/2008	
Pictogram	
Signal word	Danger

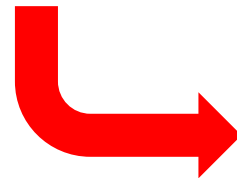
Follow Hierarchy of Controls



Don't buy this product but search for alternative.

Substitute: buffer based on CHES.

(2-(Cyclohexylamino)ethanesulfonic acid) = same pH (pH 8-10)



SECTION 2: Hazards identification	
2.1 Classification of the substance or mixture	
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.	

Please, contact us if you have a question 😊 !

Personal Protective Equipment

Check Pintra for more information

Check Pintra Nieuwsbrief for updated information

Personal Protective Equipment: a few examples

Respiratory Protection



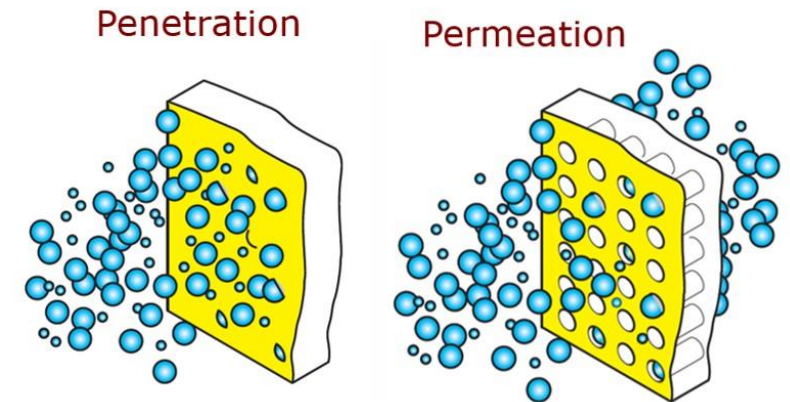
Perfect fit? No leaks?

Safety goggles and face shield



Protection against
Impact? Splashes?
UV-light?

Gloves



Interaction
Product – gloves ?
Breakthrough time?

Correct choice of disposable gloves

Are you using the correct gloves for the products you work with?

e.g. Which glove would you use with n-heptane?

CHEMICAL	Nitrile												Chloroprene	
	Level	Time	Level	Time	Level	Time	Level	Time	Level	Time	Level	Time	Level	Time
Acetaldehyde	0	5 mins			0	0 mins	0	0 mins					0	0 mins
Acetic Acid (50%)	2	43 mins			3	120 mins	2	35 mins			1	10 mins	3	120 mins
Acetone	0	0 mins			0	0 mins	0	0 mins			0	0 mins	0	3 mins
Acetonitrile	0	0 mins			0	0 mins	0	0 mins					0	0 mins
Acrylamide (40%)	4	120 mins			4	120 mins	4	120 mins			3	80 mins	4	120 mins
n-Heptane	1	>10 mins ¹			4	120 mins	6	480 mins ¹	0	0 mins ¹	1	>10 mins ¹	0	0 mins ¹
Nitric Acid (50%)	1	16 mins			1	20 mins	1	12 mins			2	32 mins	4	120 mins
Nitric Acid Fuming (70%)			0	6 mins									1	23 mins
Periodic Acid (50%)	4	120 mins			4	120 mins	4	120 mins						
Phenol (0.1%)	4	120 mins			4	120 mins	4	120 mins			4	>120 mins		
Silver Nitrate (0.17N)	4	120 mins			4	120 mins	4	120 mins			4	>120 mins		
Sodium Arsenate							4	120 mins					4	120 mins
Sodium Hydroxide (40%)	6	>480 mins ¹			6	>480 mins ¹	6	480 mins ¹	6	480 mins	6	>480 mins ¹	6	>480 mins ¹
Sodium Selenate (10%)							4	120 mins						
Sulfuric Acid (50%)							0	120 mins						
Sulfuric Acid (100%)	1	10 mins ^{1,2}			1	>10 mins	0	0 mins ¹	0	4 mins	0	0 mins ¹	1	>10 mins ^{1,2}
Toluene	0	0 mins ¹			0	0 mins ¹	0	0 mins ¹	0	0 mins	0	0 mins ¹	0	0 mins ¹
Xylene	0	0 mins	0	0 mins	0	0 mins								

If you have ANY QUESTION concerning Personal Protective Equipment! PLEASE contact us! preventiedienst@uantwerpen.be

Emergency situations

Check PINTRA for more information

Learning from accidents and near misses: Formic acid 96%



Concentrated formic acid

→ Slowly decomposes to CO and H₂O

→ Resulting in **pressure build-up** in containing vessel.



Storage conditions

→ **plastic** bottles with **self-venting caps** to lower risk of pressure build-up in bottle

→ **Cool storage (4°C) and/or Storage under inert atmosphere (Argon)**



Factors leading to explosion of bottle:

- ✓ Storage at room temperature
- ✓ No inert atmosphere
- ✓ Bottle was hermetically sealed (additional sealing with parafilm)

BIPP

Goals of Safety, Health & Environment codes (SHE-codes)

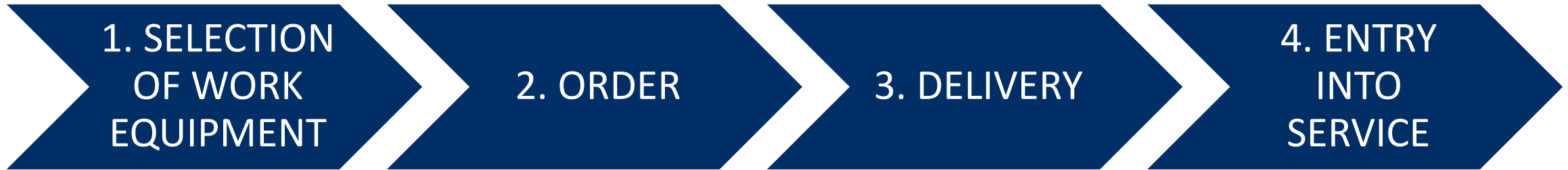
1- to divide purchases into groups that

- ✓ do
- ✓ do not have to be reviewed

2- Ensure correct follow up of those that need follow up e.g.

- ✓ Health & Safety:
 - Prevention hierarchy, Entry-into-service of equipment, ...
- ✓ Environmental Department:
 - Biosafety permission, register stock of large quantities of chemicals, ...
- ✓ Infrastructural Department:
 - check concerning HVAC, ...

Purchasing process for work equipment



- = Process from ordering to commissioning and authorisation to use work equipment
- Conditions that must be met to order and use work equipment in the workplace

Actions asked of the person in charge of selection




- **When selecting work equipment, it is good practice to consult the manual to check whether the equipment meets all expectations on:**
 - ✓ Operating instructions, maintenance and manufacturer's service;
 - ✓ Control of information regarding the required infrastructure and environmental conditions to operate the device safely, efficiently and sustainably;
 - ✓ Safety.
- **For extensive installations and high-risk work equipment, it is advised to involve the Prevention Department well in advance.**
- **Prevention department must check and complete specifications before purchase.**





SHE-codes





P-codes = Products and biological agents

Decision table SHE-codes (Safety, Health and Environment codes)

Version 29.03.2019

SYMBOL	DESCRIPTION IN THE ORDERING PLATFORM (BIPP)	SHE-CODE
P-codes	products	
No symbol	Products without danger warning (eg. Antibodies, nucleic acids, media...) and not classified as P03, P04 or P09	P00
 GHS01	Instable, combustible products. In case of fire : risk for mass explosion.	P02
 GHS06	Products with a high acute toxicity (toxic or lethal by inhalation, ingestion or skin contact), e.g. toxins.	P02
 GHS08	Substances with delayed health damage (allergens, mutagenic, carcinogenic, teratogenic, reproductive toxicity, systemic toxicity for target organs in case of single or repeated exposure)	P02

 GHS03	Fire promoting, oxidising products	P10
 GHS02	(Very) (highly) flammable products and products developing flammable gases when being in contact with water	P10
 GHS05	Corrosive substances. Danger of serious eye damage / eye irritation, skin corrosion and skin irritation. Corrosive to metals.	P10
 GHS07	Substances with immediate damage to health (irritant, corrosive, allergenic, toxic by single exposure) or dangerous for the environment (depleting the ozone layer)	P10

 <p>GHS09</p>	<p>Environmentally hazardous substances</p>	<p>P10</p>
 <p>GHS04</p>	<p>Gases (regardless of the hazardous properties of the gas)</p>	<p>P11</p>
	<p>Biological agents (genetically modified organisms, pathogens, sera,...).</p>	<p>P03</p>
	<p>Radioactive products or kits</p>	<p>P05</p>
<p>Pharmaceutical products</p>	<p>Pharmaceutical products on prescription or requiring a license (psychotropic, anaesthetic, (anti-)hormone, anabolic, beta-andrenergic, anti-infectious, anti-parasitic, anti-inflammatory, ...).</p>	<p>P04</p>
<p>Animal(related)</p>	<p>Laboratory animals, animals and animal related items (bedding material, cages,...).</p>	<p>P09</p>
<p>?</p>	<p>"I don't know", the health and safety department will contact you</p>	<p>Pi</p>

E-codes = Equipment

- Autoclave
- Gloves
- Consumables
- ...

≠ Products

E-codes	Equipment	
	New devices (CE-conform) or equipment for laboratory or workplaces without evident risks during use, or for which it has been officially evaluated that there are sufficient safety guarantees: common devices (plate shaker, slowly turning hand tools ...)	E00
	New devices, installations and equipment that has been custom made, adapted and/or assembled (i.e. not yet officially evaluated for risks during use) or that needs a check concerning infrastructure/surrounding area (e.g. incubator connected to gas bottles, 3D-printer)	E01
	New devices and equipment with known specific risks during use (e.g. transformer, compressor, airconditioning, steam generator, bulk gas tank, ...); in most cases requiring official inspection	E02
	New devices and equipment intended for lifting and working at heights (ladder, pallet jack, ...)	E03
	Equipment for personal and/or collective protection with a long lifespan (fume hood, Microbiological safety cabinet, safety shoes, dust removal equipment, fall arrest harness, ...)	E04
	Single use equipment for personal protection (gloves, masks, lab coat, shoe covers,....)	E05
	Devices and equipment not classified under one of the above mentioned categories (spare parts, replacement parts, extension cables, ...)	E06
	Non dangerous consumables (e.g. glass bottles, funnel, ...) or disposables (e.g. pipettes, tips,) without protective function	E07

S-codes = Services (e.g. maintenance of lab equipment)

S-codes	Services	
	Services without manual labour on UAntwerp sites (e.g. Production*of primers, calibration of equipment, licences, ...).	S00
	Services with manual labour on UAntwerp-sites (e.g. maintenance).	S01
	Administration or shipping costs	S02

* e.g. production of primers by a third party

X-codes = No lab material (e.g. portable, flowers, bustrip,...)

X-codes	Non lab material	
	Non lab material (e.g. office materials (chairs,...) computers, adhesive tape, staples,...)	X00

NEGADV = not enough information

The Health and Safety Department hasn't got enough information to approve this purchase. You will be contacted with additional questions.	NEGADV
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Thank you for your
cooperation!