Version 2021-12-20

Risk Assessment of Laboratory Work with Chemicals (AFS 2011:19)1 (LBE)2 (MSBFS 2020:1)3

Department/Division: Pure and Applied Biochemistry

Operation/Activity: Testosterone handling

Information:
Fill in the yellow fields. The blue fields contain information and are not printed out.

The operation includes handling of the following chemicals, mixtures and solutions

	Chemical/Mixture/Solution	CAS No.	Amount	Indications of danger
1	Testosterone (solid)	58-22-0	250 mg	Acute toxicity, (Category 4) Carcinogenicity, (Category 2) Reproductive toxicity, (Category 1B) Short-term (acute) aquatic hazard, (Category 1)
2	Methanol	67-56-1	2 l	Flammable liquids, Hazard Category 2 Acute toxicity, oral, dermal or inhalation, category 3 Specific target organ toxicity – single exposure, Hazard Category 1
3	Ethanol	64-17-5	1 l	Flammable liquids, Hazard Category 2 Serious eye damage/eye irritation, Hazard Category 2
4				

Identification of separate operations/activities that may involve the risk of accident or risk to health

	Operation/Activity	Risk/Problem	Consequence	Probability	Assessed risk	Risk-reducing measures
1	Handling testosterone powder	Exposure to testosterone (CMR-agent)	H302: Harmful if swallowed. H351: Suspected of causing cancer. H360FD: May damage fertility. May damage the unborn child.	Not very likely	Hazardous	Wear lab-coat, safety glasses, golves and mask. Follow Testosterone handling routine. Doping agent, special handling, storage and documentation applies.
		Release of testosterone to environment	Hazardous to aquatic environment	Unlikely	Moderately hazardous	Stick to the waste handling as stated in the Testosterone handling routine.
2	Handling diluted testosterone (1mg/ml or below)	Flammable and/or toxic solvents	Fire risk. Exposure to toxic solvents.	Not very likely	Hazardous	Handle based on the risks connected with the solvent used. Follow the Testosterone handling routine for sample and waste handling.
		Exposure testosterone, Spreading of testosterone to environment	Potential physiologcal/environmental effects of testosterone.	Unlikely	Moderately hazardous	The specific risks of testosterone at low concentrations are unclear, but not considered to be a CMR agent. Treat with caution and follow the Testosterone handling routine.
3	Handling flammable solvents	Flammable liquid or fumes	Fire risk.	Not very likely	Hazardous.	Wear labcoat and safety glasses. Work in well ventilated area, such as fume hood, and keep away from ignition sources and oxidizers. Follow General safety regulations for working with flammables.
4	Handling toxic solvents	Exposure to toxic liquid or fumes via spilling or inhallation.	Irriation or toxicity to exposed tissue, or organs.	Not very likely	Hazardous	Work in fume hood and wear safety glasses, lab coat and nitrile gloves.

	Yes/No	Comments:
Rules for working alone has been observed	Yes	Work should not be done when alone
The possibility of evacuation and ventilation/water/power failure has been taken into account	Yes	Work can be abborted at any time if ventilation fails or if evaquation is needed. Vessels can be closed to avoid spreading chemicals.
Environmental issues have been considered	Yes	TBK handling routine for testosterone
Special risk assessment for pregnant staff has been done	Yes	As an extra precaution, pregnant staff should aviod handling solid testosterone. Methanol has exposure limits for pregnant persons.

Especially for handling of flammables	Yes/No	How:
Flash point and occurance of explosive atmospheres has been taken into account	Yes	Follow general safety regulations for working with flammables
Proper ventilation for the handled goods has been considered	Yes	Fume hoods are available.
Ignition sources and safety measures has been considered	Yes	Follow general safety regulations for working with flammables
Appropriate measures in case of ventilation failure has been considered	Yes	Work can be abborted at any time if ventilation fails. Vessels can be closed to avoid spreading flammable fumes.
Combustible materials (card bords etc.) aren't handled near the flammables	Yes	Chemicals are handled in the labs where no significant amounts of such combustible materials are present.
Use of appropriate materials for handling of flammables has been considered	Yes	Solvent resistant vessels are used to store flammable solvents.
Handling of leakage, fire etc. has been considered	Yes	Bottles have a secondary enclosure and are stored in ventilated cabinets.
Handling of chemical waste from flammables has been considered	Yes	Collected and kept in ventilated storage.
Appropriate fire extinguishing equipment is available	Yes	Several suitable fire extingusihers are available. These are checked once annually by external inspector, and twice during internal inspection.

References:

TBK handling routine for testosterone

Testosterone SDS

Date: 6/25/2026

Risk assessment made by: Name: Johan Bonde

Risk assessment checked by: Name:

1) AFS 2011:19 Chemical Hazard in the Working Environment, provisions (amanded and reprinted in 2014:5; 2014:43; 2017:4; 2018:2; 2019:9)

2) Lag (2010:1011) om brandfarliga och explosiva varor (LBE)

3) MSBFS 2020:1 föreskrifter om hantering av brandfarlig gas och brandfarliga aerosoler

Last updated 2021-12-20