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 **Cloning using restriction/Gibson**

	The operation includes handling of the following chemicals, mixtures and solutions			
	Chemical/Mixture/Solution	CAS No.	Amount	Indications of danger
1	Tryptone	73049-73-7	1 kg	No hazard statements, but still recommended to wear gloves and goggles to avoid contact.
2	NaCl	7647-14-5	0.5 kg	Not Hazardous
3	Yeast extract	68876-77-7	1 kg	Not Hazardous
4	Glucose	50-99-7	1 kg	Not Hazardous
5	SOC medium	Composition of several components	0.5 kg	Not Hazardous
6	DNA fragments	N/A	50 microliters	N/A
7	Master Mix	N/A	20 microliters	Not Hazardous
8	Deionized H2O	7732-18-5	0.5 L	Not Hazardous

	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	Incubation of samples at 50° C	Risk of burning when touching the hot plate	Mild	Unlikely	Moderately Hazardous	Be cautious around the hot plate and do not leave it on longer than necessary.

	Yes/No	Comments:
Rules for working alone has been observed	**yes**	Supervisor needs to be present at all time, no individual work allowed
The possibility of evacuation and ventilation/water/power failure has been taken into account	**yes**	Work will be stopped, flasks closed, staff will evacuate (long power outage) or wait until the power/water/ventilation will be turned on
Environmental issues have been considered	**yes**	Follow waste management rules, no concentrated substance will be poured down the drain
Special risk assessment for pregnant staff has been done	**yes**	

References:

New England BioLabs Protocol

General Safety Regulations

Date: 2026-06-17

Risk assessment made by:

Emma Esping iGEM Lund 2025

Risk assessment checked by:

Name: **Rytis Jurgaitis iGEM Lund 2026**

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 2026-06-17