SOP Risk Declaration

✅ Section 1: Find the Risk Declaration form on the LifeBio server

Save on your computer and fill in **name**, **date** and type of **experiment**. **Describe** the experiment briefly.

> **Lifebio**:   LAB info → Risk Assessments → Risk Declaration Form

✅ Section 2: Read existing KLARA Risk Assessments

Log in to **KLARA** chemical handling system (see below) to read through **experimental** and/or **instrumental risk assessments** relevant for your experiment. You can also find these risk assessments in the binder "All you need for making a Risk declaration".

> **Link to KLARA**
>
> You find KLARA via **Chalmers' webpage**. Go to "**Intranet**" on the bottom of the homepage. To the right you will find a window with "**E-services**". Here you choose "**KLARA Kemikaliehanteringssystem**".
>
> The direct link is:
>
> https://vgrgu.port.se/alphaquest/app_cth
>
> **Login**
>
> Username: biology
> Password: system
>
> Click on "**Kemikaliehantering"** and then on the English flag in the top right-hand corner of the window. Choose "**Risk assessments"** from the menu on the top left of the window. The list of risk assessments appearing are all risk assessments made at the Life Science Department. All risk assessments starting with SB/IB belongs to our groups. By clicking on a risk assessment and then clicking **"Show"** at the bottom a new easy-to-read window will open.

State in your own **risk declaration form** what risk assessments you have read. If you find that there are important risk assessments missing - instrumental or experimental - **inform Marie/Helén** so that one can be made for that instrument/experiment.

Risks associated with chemicals, reactions, equipment or waste handling procedures should be pointed out in the risk declaration form. Documents on **waste handling** and actions **in case of emergency** valid for our lab are found in the binder or on the server.

✅ Section 3: Read Material Safety Data Sheets (MSDS)

For correct handling of chemicals you need to be aware of the **properties** of and **risks** associated with the chemicals included in your experiment.

Fill out the table which MSDS you have read, add which pictograms apply, specify final concentration of chemical used, and specify the **hazard statement(s)** for each chemical.

Any potential risks associated with the experiment should be stated under **"Comments on risks"**.

If your chemicals were not covered in the risk assessments above you need to search for their **Material Safety Data Sheets (MSDS)**, either in **KLARA** or at a **chemical company webpage**, e. g. Sigma-Aldrich. If some MSDS cannot be found inform **Ximena/Helén** who will contact the distributor.

MSDS in KLARA

Open KLARA via Chalmers webpage (see box on first page) or with the following link:

https://vgrgu.port.se/alphaquest/app_cth

Go to "**Kemikalieregister**" and press the English flag for English. Type the product name or CAS number and press Search. You will get a list of chemicals to choose from. Click on the window for MSDS and download the MSDS or go to the referred webpage.

MSDS at Sigma

Open the Sigma webpage with the following link:

http://www.sigmaaldrich.com/sweden.html

Type **product name** or **product number** (if Sigma product) at the **search field** on the start page. If Sigma has this compound it will show up and you are able to choose MSDS to the right. Change the language of the MSDS in the top right corner.

✔ Sections 4 and 5: State risk reductions

Specify how chemicals handled in your experiment should be stored. Check the Storage of chemicals information in this binder or on Chalmers Insidan http://www.chalmers.se/insidan/EN/about-chalmers/environmental-work/policies/chemical-safety-routine/storage-labeling.

Specify how the chemicals should be handled in a risk-reducing way, eg volatile, corrosive and toxic chemicals should always be handled in a fume hood. Specify also what personal protection should be used.

Specify how to handle the waste you accumulate during your experiment, both chemical and biological. Check the information about Waste handling in this binder for more information or on Chalmers Insidan: http://www.chalmers.se/insidan/EN/about-chalmers/environmental-work/policies/chemical-safety-routine/waste-management

✔️ Section 6: Final evaluation of risks

A final assessment should be prepared of the work as a whole. The matrix below should be used to help with this. If the assessment reached using the matrix is "high risk", additional risk precautions should be taken to enable the procedure/laboratory experiment to be carried out.

Probability *Of the accident* Different factors are taken into consideration - Frequency and duration. - Historic events. - Possibility of avoiding or limit the damage; training on the equipment, awareness of the risk, sudden - quick or slow event - Existing protection	**Consequence** (Gravitas) *If the accident occurs.*					
	0. Safe or bagatelle	1. Short sick listing	2. long sick listing	3. Disablement	4. Casualties	5. Many casualties
5. Very common *Once a day.*	2	3	4	4	4	4
4. Common *Once a month.*	1	2	3	4	4	4
3. Rather common *Once a year.*	1	2	3	3	4	4
2. Rare *Once every ten years.*	1	1	2	3	4	4
1. Unlikely *Once every hundred years*	0	1	2	2	3	3
0. Very unlikely *Less then once every hundred years*	0	0	1	1	2	2

0. Negligible risk
1. Acceptable risk, no action needed
2. Some risk, action needed
3. Severe risk, action needed
4. Very severe risk, action needed
Modellen framtagen av Previa

✔️ E-mail your completed Risk Declaration to Helén (for Indbio) or Marie (for Sysbio)

After being read and approved by Research engineer/Lab manager, the risk declaration should be printed out, signed by you and research engineer/Lab manager and placed in the binder for completed risk declarations. There is one binder for the Systems Biology group, and one for the Industrial Biotechnology group. The supervisors will continuously check the binders.