

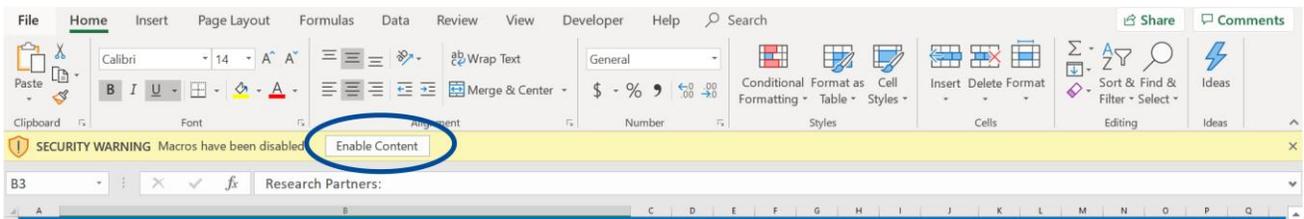
## Steps in Undertaking a Chemical Risk Assessment Using *CHAP-Risk*

**Special Note:** currently *CHAP-Risk* will only work in PCs – it does not work on Apple products

### **Before you start...an important message about “Macros”**

The *CHAP-Risk* Tool uses “macros” and so the tool will not be able to operate unless “macros” are “enabled”.

Depending on the settings of your Excel spreadsheet, often you will receive the following SECURITY WARNING if a spreadsheet contains “macros”:



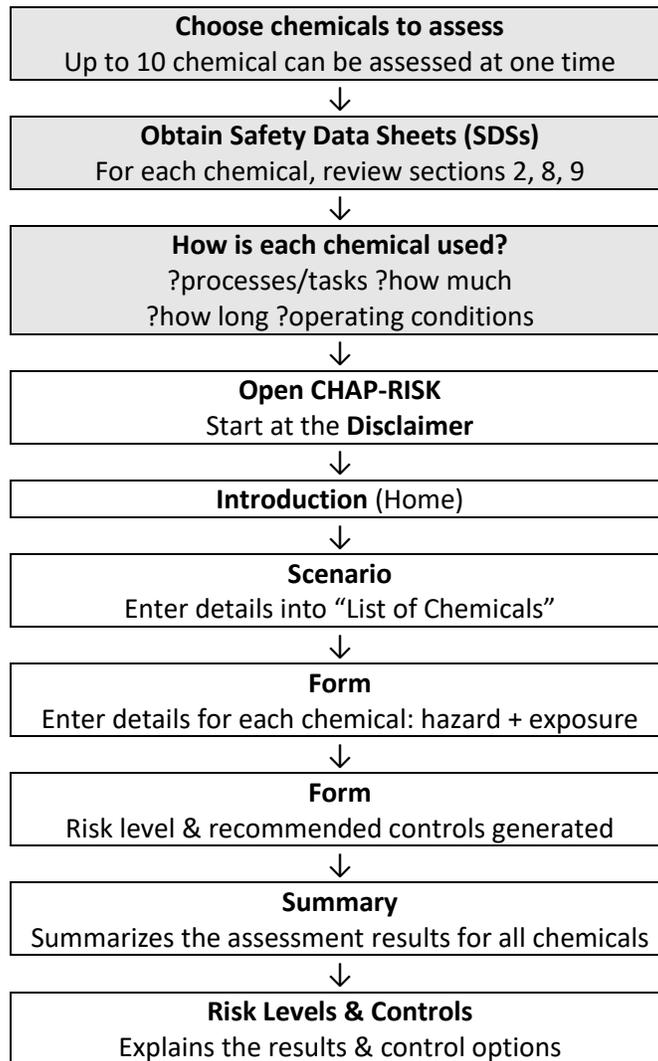
You will need to click on “Enable Content” in order to use *CHAP-Risk*. Once you click on this, the spreadsheet will function.

If you do not see the above SECURITY WARNING, you should check your spreadsheet settings. To do this, follow these steps:

1. Click on “File” located on the top row of tabs, then...
2. Click on “Options” (this should be the last in the list), then...
3. Click on “Trust Center” (this should be the last in the list), then...
4. Click on “Trust Center Settings” (this will be in a box on the right side), then...
5. Click on “Macro Settings” (this should be half way down the list of options), then...
6. Ensure the “Disable all macros with notification” is selected, then...
7. Click “OK”, close the program, and reopen it.

When you reopen the spreadsheet, you will now see the above SECURITY WARNING and are ready to use *CHAP-Risk*.

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1. Obtain the most recent version available of the Safety Data Sheets (SDSs) of all chemicals/products you wish to assess. These should be dated 2016 or later in order to be compliant with WHMIS 2015. Up to 10 chemicals can be assessed with the *CHAP-Risk* tool. If you don't know where to start, we suggest choosing the 5 chemicals you use the most and 5 chemicals you think are the most hazardous.
2. You need to identify the following information in the SDS of each chemical/product:
  - a. Section 2 – Hazards Identification: does this chemical/product have an acute toxicity listed? If so, is it a Category 1 acute toxicity substance?
  - b. Section 2 – Hazards Identification: what hazard statements are listed?
    - i. Physical hazard statements? E.g. 'unstable explosive', 'extremely flammable gas'; physical hazards codes are H200's (if hazard codes are listed)
    - ii. Environmental hazard statements? E.g. 'toxic to aquatic life'; environmental hazards codes are H400's (if listed)
    - iii. Health hazard statements? E.g. 'may cause damage to organs', 'may be harmful if swallowed'; health hazards codes are H300's (if listed)
  - c. Section 8 – Exposure controls/personal protection: please review details on recommended control measures
  - d. Section 9 – Physical and chemical properties: What is the appearance/form of the product? Is it a solid or a liquid? If a liquid, what is its initial boiling point (in °C)?
3. You need to determine the way in which the chemical/product is used:
  - a. Are there specific processes/tasks it is used in?
  - b. How much do you use in each process/task?
  - c. Do you use the chemical for more than 15 minutes a day each process/task?
  - d. If the chemical is a liquid, what is the temperature at which the process/task is operated at? If it is room temperature, use 25°C.
  - e. If the chemical is a solid, how dusty is it to use?
4. **Open CHAP-Risk**. You will start at the “**Disclaimer**” sheet. Please read the disclaimer and “Enter” if you accept the terms of the disclaimer.
5. The next page is the “**Introduction/Home**” sheet. This provides further instructions and a diagram on how *CHAP-Risk* is structured. Click “Start” to start the assessment.

6. You are now at the **“Scenario” sheet**. At this sheet please enter the following details:
  - a. Title and description of your “scenario”. This could be a facility at which the chemicals being assessed are used, or it could be a specific area/process line within a facility, or it could be your whole organization? You get to choose the “scenario” which best suits your circumstances.
  - b. Details about your organization, e.g. company name, worksite contact details, person completing the assessment, etc
  - c. List of chemicals: please insert details for each chemical you wish to assess. These details include CAS# (if available), Supplier/Manufacturer name, process/location details (i.e. work area, task, process line, etc.), and any further notes which are relevant to identify/describe the chemical and its use. If the same chemical is used in more than one location/process/task, please list the chemical separately for each process/task.
  - d. Once all of the details about the chemicals for assessment are included, please click “to FORM”.
7. You are now at the **“Form” sheet**. This is where the risk assessment is undertaken using information from the SDS of each chemical/product and from the details on how the chemical is used. Remember that this assessment is for a specific way a chemical is being used (e.g. based on the process/task/operation).
  - a. The chemicals listed in the “Scenario” sheet have now been auto-populated into the Form. They are listed under the “Substance” dropdown (top left of sheet).
  - b. Select the chemical to be assessed from the “Substance” dropdown list.
  - c. Step 1 – physical & environmental hazard statements/codes: from section 2 of the SDS. Are there any ‘physical’ or ‘environmental hazards’ statements (or codes, i.e. 200’s or 400’s) listed for this chemical/product? If so, click “Yes”
  - d. Step 2 – Acute toxicity: from section 2 of the SDS. Is the chemical described as being an *acute toxicity – category 1* substance? If so, click “Yes”.
  - e. Step 3 – Health hazard statements/codes: from section 2 of the SDS. Identify the ‘health hazard statements’ (or codes, i.e. 300’s) and enter each code or statement by (1) finding them in the dropdown lists of codes or statements, and (2) clicking “add to the table” to insert the statement/code – inserting one code/statement at a time
  - f. Step 4 – Release into the environment: from section 9 of the SDS. Is the chemical a liquid or a solid? If a liquid, what is its boiling point? (This is also described in section 9 of the SDS). If it is a liquid, what is the operating temperature of the process/task the chemical is used in? If it is a solid, how dusty is it?

- g. Step 5 – Quantity used: How much of the chemical is used in the operation/process/task? (i.e. small, medium, large quantity used).
  - h. Step 6 – Frequency of use: Is the chemical used for more than 15 minutes a day in the process/task/operation?
  - i. Result: The overall risk level is now displayed for use of the chemical in the described process/task/operation. A recommended “Control Approach” is also indicated for this chemical based on the risk level.
  - j. Send to Summary: Now that the risk assessment is complete, click on “Send to Summary” to send this information to the “Summary” sheet. The “Form” sheet will now be reset.
  - k. Please repeat the above steps b. to j. for each chemical included in the “Scenario” sheet, which are also listed in the “Substance” dropdown menu of this “Form” sheet.
8. The **“Summary” sheet** provides a summary of the chemicals assessed and the results of the assessment. All of the details in this sheet come from details already provided in the *CHAP-Risk* tool. If needed, additional “notes” can be inserted in the “Summary” sheet. A link also takes the user to the **“Risk Levels and Controls”** sheet which provides further explanation of the results and available control options.

If you have any questions or comment on CHAP-Risk, please contact Thomas Tenkate via email: [thomas.tenkate@ryerson.ca](mailto:thomas.tenkate@ryerson.ca)