

eCHAP-BASIC

AN **EXCEL** TOOL **IN ASSESSING**
TO HELP YOU **CHEMICAL**
EXCEL **HAZARDS**
IN YOUR
WORKPLACE



Welcome to **eCHAP-Basic!**

(Chemical Hazard Assessment and Prioritization—Basic)

This is a user guide to help you learn how to use eCHAP-Basic. This tool uses hazard banding, a process to categorize chemicals into bands that correspond to the chemical's adverse effects and potency. Banding can help workplaces understand their chemicals' hazards and help prioritize chemicals for further assessment and control. To do this, the only information each assessment needs comes from Section 2 in the chemical's Material Safety Data Sheet (now called Safety Data Sheet).

eCHAP-Basic is as its name suggests: the basic form of eCHAP. This version of the tool acts as a starting point for those new to hazard banding, providing users with 10 chemicals to assess. If you want to assess more than 10 chemicals, you can then use eCHAP-Advanced. This can be accessed at www.ryerson.ca/chemical-hazard-assessment-prioritization/chap-tools

When you are ready to learn how to use eCHAP-Basic,
continue on!

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Why you should use eCHAP

The purpose of eCHAP is to assist small to medium sized workplaces to:

- Better understand the hazards associated with the chemicals they are using; and
- Prioritize the most 'hazardous' chemicals for additional assessment of the control measures which are currently in-place.

Benefits to eCHAP include:

- It helps workplaces meet their WHMIS obligations
- It improves understanding by and communication with workers of the hazards posed by the chemicals they use
- It improves management of chemical hazards with a focus on improved control measures and protection of workers
- It is an easy-to-use software package that does not require internet access
- Results of the assessments reside on in-house computer systems and can be used to create improved chemical inventories

Background to eCHAP

Chemical safety within the workplace is important. However, understanding how hazardous different chemicals are can be difficult. Small and medium-sized workplaces often get much of their information on chemicals from the Safety Data Sheets that come with each chemical. The Safety Data Sheets have information on how hazardous the chemical is, and on the correct use of the chemical.

One way of assessing and ranking chemical hazards is through 'hazard banding'. In this approach, the hazards associated with a chemical are allocated to different 'hazard bands'. For example, a chemical assigned an "A" 'hazard band' is a 'low' hazard, up to an "E" 'hazard band', which is an 'extremely high' hazard. By looking at what 'hazard band' a chemical is allocated to, you are able to determine how hazardous the chemical is. For more information on hazard bands, visit the [Frequently Asked Questions](#) section.

An important consideration is that hazard banding was designed to be used for chemicals/mixtures that lack sufficient toxicological or health data to assign exposure limits. In Ontario, where eCHAP was developed, occupational exposure limits are available for only a select few chemicals. eCHAP helps users to understand how hazardous a chemical is, which is useful when an exposure limit is not available to compare monitoring results with and to justify control measures.

eCHAP is based in Microsoft Excel, an application many computers are usually expected to have in a workplace setting. It integrates a range of assessment approaches from the original CHAP and includes various functions to improve efficiency such as:

- Automatic completion of hazard banding assessments
- Sort functions
- Export function (to a Word document)

How to use eCHAP

This guide will assume that you are using a relatively recent version of Microsoft Excel. Older versions of Excel (e.g. 1998, 2003) may lack the functions that were designed into the tool. It is recommended that eCHAP is used on Excel 2005 or newer. If you encounter any technical concerns/issues, please feel free to contact us using the information on the [Contact Page](#).

Note: the content of your sheets may slightly differ from what you see in this guide but the guide will still remain applicable to any updated versions. eCHAP is continuously undergoing changes to improve its usability and readability.

Note: from this point forward, “hazard band” will be referred to as “hazard level”.

Once you open eCHAP-Basic, you will be greeted by the Intro worksheet.

Setting Priorities
Chemical Hazard Assessment and Prioritization (CHAP)

Scroll to top

eCHAP-Basic

Research Partners:

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Workplace Safety & Prevention Services®

"Setting Priorities" was funded by the Ontario Ministry of Labour through an OSHPIP Grant ROP 16-E-005. Funding was provided by Ryerson University.

eCHAP-Basic was developed by Thomas Tenkate and Jeremiah Joo,
School of Occupational and Public Health, Ryerson University, Toronto.

INSTRUCTIONS FOR USE (PLEASE READ BEFORE STARTING)

This tool will help you assess the level of hazard posed by the chemicals you use.

Before you start:
You will need to have an up-to-date inventory of the chemicals you use plus current Safety Data Sheet (SDS) for each chemical. Each SDS should comply with the current requirements of WHMIS because the assessment is based on key information from Section 2 of the SDS's.

You must enable macros for this tool. Usually, macros are disabled as a security measure.
Windows: Enable them by clicking "Enable Content" on the message bar every time you open this file.
Mac: Enable them by clicking "Enable Macros" on the message box every time you open this file.
If you find the macros are disabled but the message bar is unavailable, then exit the file and reopen.

This version of eCHAP-Basic allows users to assess up to 10 chemicals. If you wish to assess more chemicals, eCHAP-Advanced allows you to assess potentially all of the chemicals in your workplace.

User guides are available for both eCHAP-Basic and eCHAP-Advanced to:

Brief instructions:

Intro | Summary Sheet | Hazard Level Assessment 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Review a ...

Intro worksheet

The Intro worksheet will contain information to help you get started using the tool.

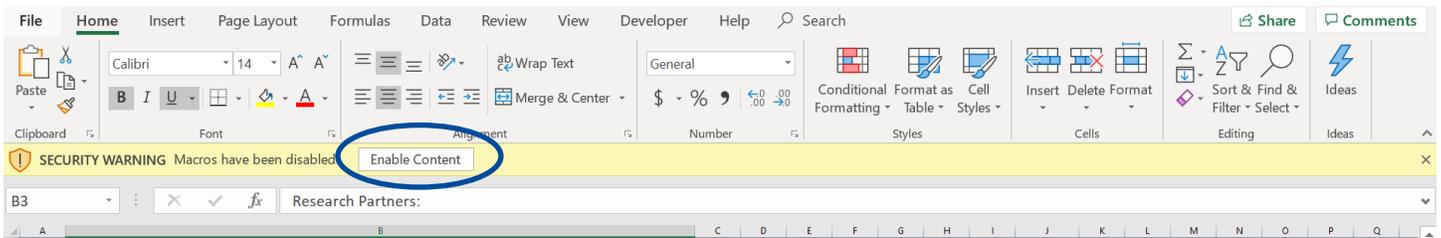
A few frequently asked questions are shown on the Intro worksheet. Alternatively, you may also view the “Frequently asked questions” section of this user guide.

Enabling Macros

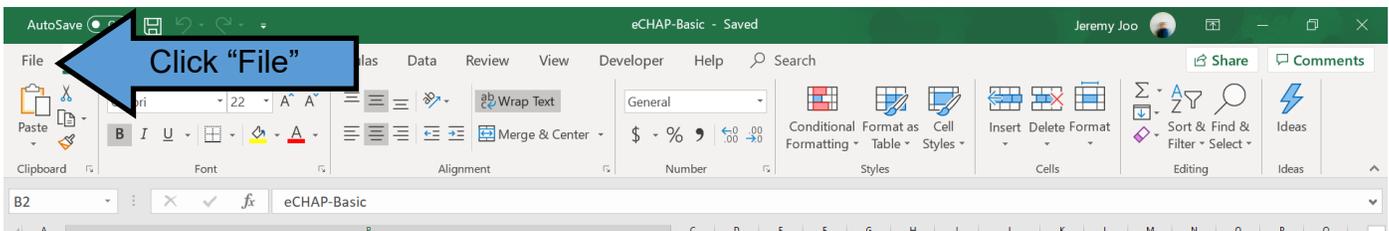
This next step is extremely important and must not be skipped.

Enabling macros is the **first** step you should do, as you will not be able to use eCHAP-Basic without enabling macros.

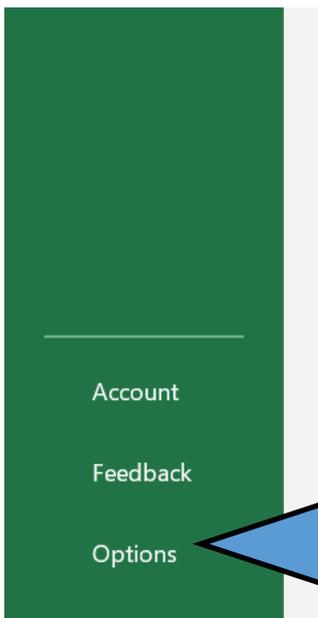
1) **Normally**, a text box will open at the top when you open the tool. When it does, click “Enable Content”, and the tool will function properly during your session.



2) If this text box does not open, either close and re-open the tool **OR**:



Click “Options” at the bottom of the opened window



Then click “Trust Center”

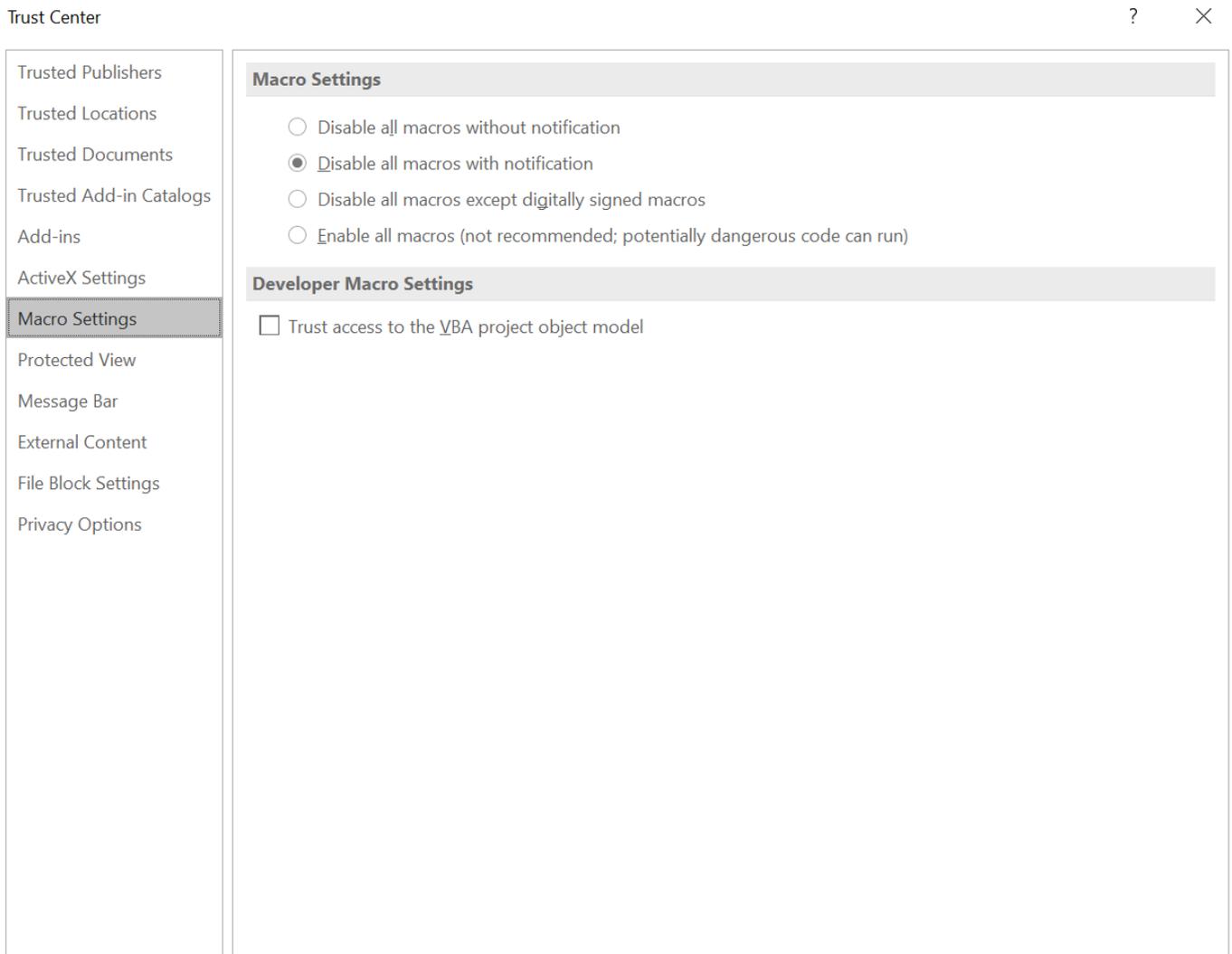
Then “Trust Center Settings”

Click “**disable all macros with notification**” if not clicked already.

Doing this will allow Excel, when opening eCHAP-Basic, to enable macros.

It is not recommended that you enable all macros.

While the macros used in our eCHAP-Basic are perfectly safe, it may not be the case for other Excel sheets you may encounter.



After this, close the window, close the tool, and reopen.

By this point, the notification should appear for you to enable macros for the tool.

If you would like insight into macros and what they are used for, visit the [Frequently Asked Questions](#) section of this User Guide.

Assessing chemicals

Now that macros are enabled, you can start your assessments.

You will need:

- 1) 10 chemicals from your workplace inventory
 - 5 chemicals that you use the most, or have the most of, and
 - 5 chemicals that you think are the most hazardous
- 2) The most recent safety data sheet (SDS) for each chemical. The SDS should comply with WHMIS 2015.

Complete the Summary Sheet

a) Visit the Summary Sheet by clicking on the “Summary Sheet” tab.

You will be greeted with the following:

The screenshot shows an Excel spreadsheet with the following content:

"Setting Priorities"
Chemical Hazard Assessment and Prioritization (CHAP)

Brief instructions

1. Enter worksite and contact information.
2. Enter the names of the chemicals for assessment. Please choose the top 5 chemicals by quantity used, and the top 5 chemicals you feel are the most hazardous (i.e. perceived hazard).
3. Enter any further identifying details about the chemicals in the 'Notes' cell for each chemical. This could be location stored or used, who uses them, what process they are used in, etc.
4. Go to the **Hazard Level Assessment** sheets for each chemical (e.g. Hazard Level Assessment 1 = the hazard level assessment for the chemical entered as chemical 1 in the list of chemicals).
5. Completed hazard level assessments will be automatically transferred back to this **Summary Sheet** and will be seen in the **Hazard Level** column.
6. The Summary Sheet can be exported to MS Word using the **Review and Export** sheet. This sheet also allows you to sort the chemicals by hazard level.

Summary Sheet

	Company name	
Specific worksite	Name	
	Address	
	Phone number	
	Fax number	
Contact person	Name	
	Address	
	Phone number	
	Fax number	

The spreadsheet has tabs for "Summary Sheet", "Hazard Level Assessment 1", "2", "3", "4", "5", "6", "7", "8", "9", "10", "Review and Expo ...". The "Summary Sheet" tab is circled in blue.

b) You may add identifiers if you like, which can help you to organize your Summary Sheet. Available options are your Company Name; the Specific Worksite this sheet applies to; the Contact Person for this sheet; and the Date Last Updated (which will automatically update based on the date eCHAP-Basic is opened last). **See below:**

	Company name	
Specific worksite	Name	
	Address	
	Phone number	
	Fax number	
Contact person	Name	
	Address	
	Phone number	
	Fax number	
	Date last updated	Will update with current date

c) Add the names of your 10 chemicals in their corresponding spaces. *Here you may insert the names of your 10 chemicals, specifically your **Top 5 Chemicals—By Quantity Used** and **Top 5 Chemicals—By Perceived Hazard**.* You also may add any notes (e.g. location, users, processes used) on each chemical in the Notes.

Top 5 Chemicals - By Quantity Used		
	Chemical/Product Name	Hazard Level
1		
2		
3		
4		
5		
Top 5 Chemicals - By Perceived Hazard		
	Chemical/Product Name	Hazard Level
6		
7		
8		
9		
10		

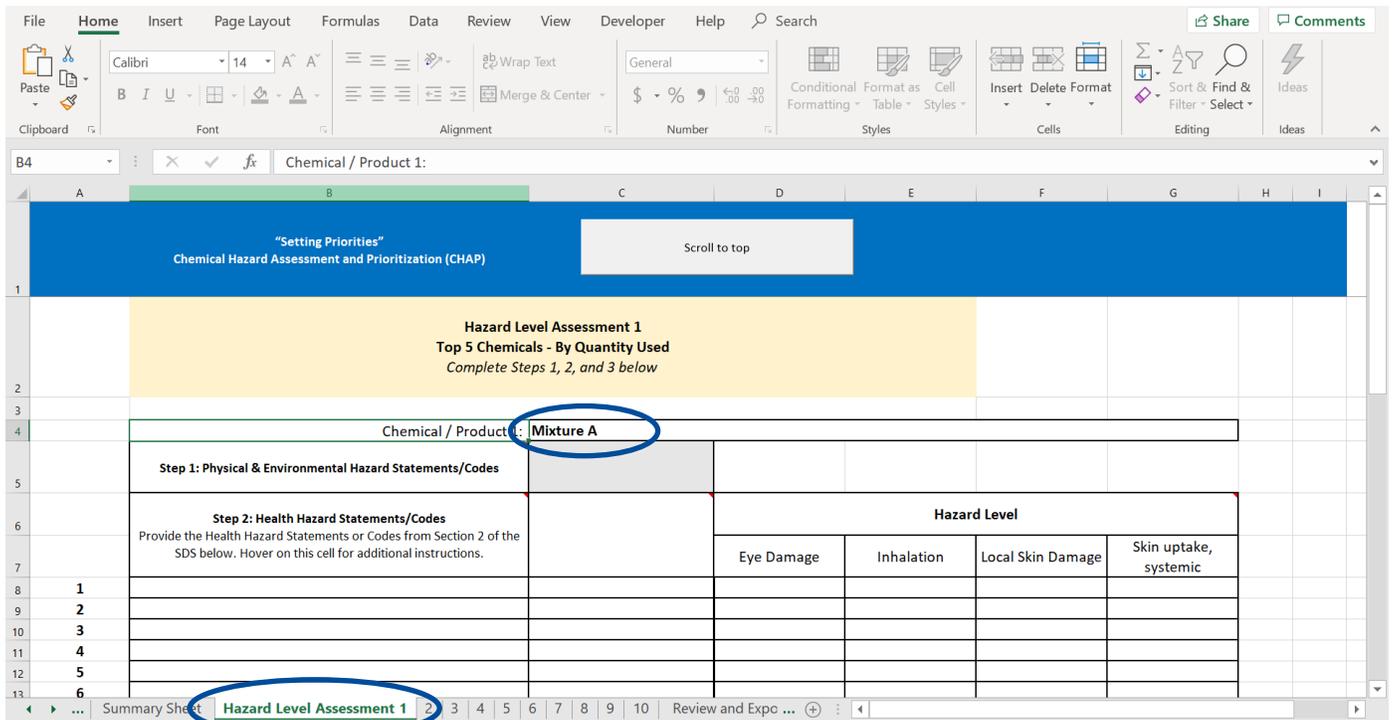
Adding the names of your chemicals would lead to a Summary Sheet like the following:

Top 5 Chemicals - By Quantity Used		
	Chemical/Product Name	Hazard Level
1	Mixture A	
2	Mixture B	
3	Mixture C	
4	Mixture D	
5	Mixture E	
Top 5 Chemicals - By Perceived Hazard		
	Chemical/Product Name	Hazard Level
6	Mixture F	
7	Mixture G	
8	Mixture H	
9	Mixture I	
10	Mixture J	

These will be auto-completed following the hazard level assessment.

Complete your Hazard Level Assessments (1-10)

You can access a Hazard Level Assessment for each chemical you wrote into the Summary Sheet via the tabs: “Hazard Level Assessment 1”, “2”, “3”, “4” and so on. Here is an example of what an assessment looks like. The name you added to the Summary Sheet is automatically added to the assessment, to ensure each Hazard Level Assessment is properly labelled with the name you assigned your chemicals on the Summary Sheet. Hazard Level Assessment 1 is labelled with “Mixture A”, which was inputted as Chemical #1 in the Summary Sheet.



To start assessing the hazard levels of your chemicals, **find the section in each chemical’s SDS that contains hazard statements/codes. This should be Section 2 of the SDS.**

Step 1: Physical & Environmental Hazard Statements/Codes

First, add if your chemical has any “physical hazard” and/or “environmental hazard” statements/codes. “Physical hazard” statements can include properties such as explosive, flammable, oxidizing; “physical hazard” codes start with H2. “Environmental hazard” statements can include aquatic toxicity and danger to ozone; “environmental hazard” codes start with H4.

If it has **any**, then choose **Yes**; if **not**, choose **No**. To do so, **click on the box to the right of Step 1, click the arrow to the right of the box to open a dropdown menu, and select Yes or No**. If you are unsure that your statement/code is a physical hazard or environmental hazard statement/code, view the “Hazard Codes & Statements” Tab/Sheet.

<p>Step 1: Physical & Environmental Hazard Statements/Codes Find Section 2 of the SDS and determine if the SDS has physical and/or environmental hazard statements/codes. Hover on this cell for additional instructions.</p>		
<p>Step 2: Health Hazard Statements/Codes Provide the Health Hazard Statements or Codes from Section 2 of the SDS below. Hover on this cell for additional instructions.</p>		<p>Eye</p>

If your SDS has any physical hazard statements/codes and/or environmental hazard statements/codes, then without any health hazard statements, the chemical has an overall hazard level of B (see example below).

Chemical / Product 1: Mixture A				
Step 1: Physical & Environmental Hazard Statements/Codes	Yes			
Step 2: Health Hazard Statements/Codes Provide the Health Hazard Statements or Codes from Section 2 of the SDS below. Hover on this cell for additional instructions.		Hazard Level		
		Eye Damage	Inhalation	Local Skin Damage
Highest hazard level for each 'Uptake Route'				
Highest hazard level for all 'Uptake Routes'				
Step 3: D(E) Assessment Skip this step if your assessment above <u>does not reveal a D(E) hazard level</u> . Hover over this cell for additional instructions.	No	Overall hazard level	B	

Continue to the next page

If you would like to write down the statements/codes, use the Notes section in the Summary Sheet. The focus of eCHAP are human health hazards, so it has been designed to focus on the **health hazard statements**.

You will notice that the overall hazard level will change between levels (i.e. B, C, D, D (E), and E), as you begin to add health hazard statements.

Step 2: Health Hazard Statements/Codes

You can add the health hazard statements/codes in the spaces shown under the appropriately named heading: “Health Hazard Statements/Codes”.

Click on the cells and click the arrow to open the dropdown menu that is available in each cell. Scroll until you find the statement that aligns with the one you wish to input. Click on the statement. **Repeat** in separate cells until all the statements from your SDS are inputted.

Step 2: Health Hazard Statements/Codes	
Provide the Health Hazard Statements or Codes from Section 2 of the SDS below. Hover on this cell for additional instructions.	
1	
2	Causes damage to organs (or specific organ[s], if known)
3	Causes damage to organs (or specific organ[s], if known) through prolonged or repeated expo Causes eye irritation
4	Causes mild skin irritation
5	Causes serious eye damage Causes serious eye irritation
6	Causes severe skin burns and eye damage Causes skin irritation
7	
8	

Once the hazard statements are entered, you will see the corresponding “hazard codes” completed automatically. You will see letters to the right automatically added as well. These are the “hazard levels” that were mentioned in previous sections: categories that depict the hazard level. Once you add in all the statements/codes, you will have a completed assessment.

See the next page for an example of completing Step 1 and 2:

While each statement has corresponding hazard levels assigned to them, the assessment aims to find an **overall hazard level**, which is the highest hazard level out of all hazard levels shown.

All this is done automatically for you. In the example below, you can see that the highest hazard level for all uptake routes is D; thus, the overall hazard level is D.

Chemical / Product 1: Mixture A					
Step 1: Physical & Environmental Hazard Statements/Codes		Yes			
Step 2: Health Hazard Statements/Codes Provide the Health Hazard Statements or Codes from Section 2 of the SDS below. Hover on this cell for additional instructions.		Hazard Level			
		Eye Damage	Inhalation	Local Skin Damage	Skin uptake, systemic
1	Causes serious eye damage	H318	D	C	B
2	May cause an allergic skin reaction	H317	B	C	D
3	May cause drowsiness or dizziness	H336	B	B	n.a.
4					
5					
6					
7					
8					
9					
10					
Highest hazard level for each 'Uptake Route'		D	C	D	D
Highest hazard level for all 'Uptake Routes'		D			
Step 3: D(E) Assessment <i>Skip this step if your assessment above does not reveal a D(E) hazard level. Hover over this cell for additional instructions.</i>		No	Overall hazard level	D	

This will be automatically transferred to the Summary Sheet.

Step 3: D(E) Assessment

The box indicated below requires a response (Yes or No) **only** if your assessment reveals an overall hazard level of D (E). This results when your chemical has hazard statements such as fatal effects (H300/H310/H330) that are either “if swallowed”, “if inhaled” or “in contact with skin”. If you have any of these statements, review your SDS (usually Section 2).

If any Acute Toxicity (oral, inhalation, or dermal) is a category 1, then answer “yes”; if not, answer “no.” To do so, click on the box to the right of Step 3, click the arrow on the right of the box to open a dropdown menu, and then select Yes or No.

Answering yes will mark your chemical as E; answering no will mark as D.

Step 3: D(E) Assessment <i>Skip this step if your assessment above <u>does not reveal a D(E) hazard level.</u></i> Hover over this cell for additional instructions.		Overall hazard level	D (E) Find if cat. 1 acute tox.
	Yes No		

If the chemical is a category 1 for Acute Toxicity, the D(E) hazard level will convert to an E:

Step 3: D(E) Assessment <i>Skip this step if your assessment above <u>does not reveal a D(E) hazard level.</u></i> Hover over this cell for additional instructions.	Yes	Overall hazard level	E
---	-----	----------------------	----------

If the chemical is not a category 1 for Acute Toxicity (e.g. 2, 3, 4), the D(E) hazard level will convert to a D:

Step 3: D(E) Assessment <i>Skip this step if your assessment above <u>does not reveal a D(E) hazard level.</u></i> Hover over this cell for additional instructions.	No	Overall hazard level	D
---	----	----------------------	----------

Example of a completed Summary Sheet

Once all your assessments are completed, the Summary Sheet will automatically reflect the hazard levels found. Again, hazard levels are from E to A, with E being “extremely high hazard” and A being “low hazard”.

Example:

Top 5 Chemicals - By Quantity Used		
	Chemical/Product Name	Hazard Level
1	Mixture A	D
2	Mixture B	C
3	Mixture C	D
4	Mixture D	C
5	Mixture E	E
Top 5 Chemicals - By Perceived Hazard		
	Chemical/Product Name	Hazard Level
6	Mixture F	D
7	Mixture G	C
8	Mixture H	D
9	Mixture I	B
10	Mixture J	E

From this example, we can surmise that Mixture J and Mixture E would be this workplace’s priorities, given that they are the highest hazards.

Completing assessments

If you are wondering what you can do with your own assessment results, refer to the [What to do with results](#) page in this User guide or the **What to do with results** Tab/Sheet in eCHAP-Basic.

“Setting Priorities”
Chemical Hazard Assessment and Prioritization (CHAP)
What to do with assessment results

The hazard level assessment for each chemical provides a qualitative rating that is primarily based on human health effects. The hazard levels are:

- A = Low hazard
- B = Moderate hazard
- C = High hazard
- D = Very high hazard
- E = Extremely high hazard

These hazard levels do not take into account ‘exposure’ factors such as how the chemical is used, how much is used, what form is the chemical in (e.g. solid, liquid, powder), they do not account for any changes in chemical properties due to processing factors, and do not account for existing control measures. However, the hazard level assessments from eCHAP provide you with important information on how hazardous a chemical is and provides the first component of a broader risk assessment.

As the health and safety risk to workers of using chemicals is due to both the hazardous properties of the chemical (as assessed by eCHAP), and the level of exposure workers have to the chemical (i.e. risk = hazard x exposure), reducing either the level of hazard or the level of exposure will decrease the risk to workers. In managing worker health and safety risk, it is important to keep in mind the ‘hierarchy of risk controls’, which is shown in the following figure:

Review & Export Hazard Codes & Statements What to do with results

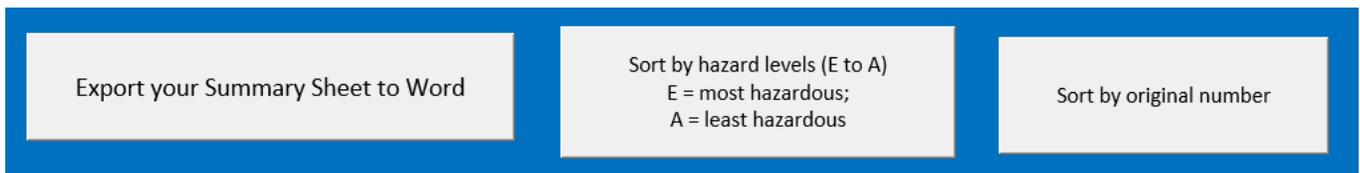
Optional step: Exporting the Summary Sheet to a Word document

If you wish to export your Summary Sheet to a Word document, do **not** attempt to cut and paste from the Summary Sheet tab. **Instead**, visit the “**Review and Export**” tab.

Top 5 Chemicals - By Quantity Used	
Chemical/Product Name	Hazard Level
1 Mixture A	D
2 Mixture B	C
3 Mixture C	D
4 Mixture D	C
5 Mixture E	E

Top 5 Chemicals - By Perceived Hazard	
Chemical/Product Name	Hazard Level
6 Mixture F	D
7 Mixture G	C
8 Mixture H	D
9 Mixture I	B
10 Mixture J	E

The following buttons are at the top of the Review and Export sheet:



Export your Summary Sheet to Word

Exports your Summary Sheet to a new Word document. This is the button users may use to export the Summary Sheet. This function can be useful if you wish to view your Summary Sheet on a different platform or would like to print a physical copy of it. A Word document will open with your Summary Sheet on it once this button is used.

On a Mac, this button will operate extremely slowly. It should still function properly but will require you to wait for an extended period.

Sort by hazard levels (E to A)

Sorts by hazard levels from E to A, which will help visually show which chemicals should be prioritized over others.

Sort by original number

Sorts by the original number that each chemical was listed under.

What to do with results

The hazard level assessment for each chemical provides a qualitative rating that is primarily based on human health effects. The hazard levels are:

A = Low hazard

B = Moderate hazard

C = High hazard

D = Very high hazard

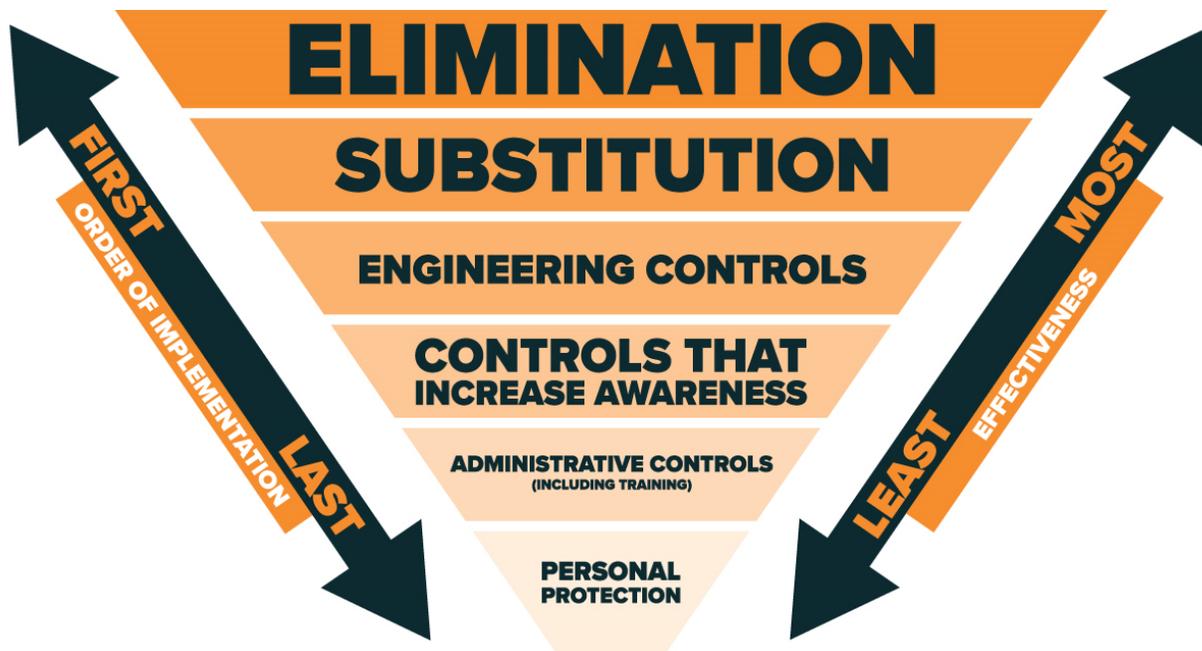
E = Extremely high hazard

These hazard levels do not take into account 'exposure' factors such as how the chemical is used, how much is used, what form is the chemical in (e.g. solid, liquid, powder), they do not account for any changes in chemical properties due to processing factors, and do not account for existing control measures.

However, the hazard level assessments from eCHAP provide you with important information on how hazardous a chemical is and provides the first component of a broader risk assessment.

As the health and safety risk to workers of using chemicals is due to both the hazardous properties of the chemical (as assessed by eCHAP), and the level of exposure workers have to the chemical (i.e. risk = hazard x exposure), reducing either the level of hazard or the level of exposure will decrease the risk to workers.

In managing worker health and safety risk, it is important to keep in mind the 'hierarchy of risk controls', which is shown in the following figure:



Source: <https://sunsafetyatwork.ca/>

The 'hierarchy of risk controls' provides the underlying approach to identifying and implementing **control measures**. Using this hierarchy, the most effective controls should be implemented first, with the less effective controls implemented in order and only considered when control is not achieved using more effective controls.

Control measures can also be considered at three points between the source and the worker:

- The most effective control addresses the hazard at its source (through elimination or substitution)
- The next most effective level of control is to intervene between the source and the worker (i.e. through engineering controls and systems that increase awareness)
- The least favourable level of control is to implement measures at the point of the worker (i.e. administrative controls or personal protective equipment)

As indicated by this approach, the use of **personal protection** is the least favourable approach to controlling workplace hazards, even though it is often considered (mistakenly) as the control option of first choice. It should be clear that the reason for personal protection being the 'last line of defense' is that if it fails, the worker will be directly exposed.

In many cases, it is necessary to use a combination of control measures in order to effectively manage the risk of a hazardous exposure.

Using the hierarchy of risk controls as a guide, actions to take in response to the hazard level assessment results from eCHAP include (in order of preference):

- Is it possible to eliminate the use of the chemical altogether?
- If elimination is not possible, can the current chemical be substituted for a less hazardous chemical? Any potential substitute chemicals can be assessed using eCHAP to see whether they are less hazardous (i.e. have a lower hazard level).
- If elimination and substitution are not possible, what engineering control measures (e.g. local exhaust ventilation) are appropriate?
- What administrative control measures (e.g. training of workers, task rotation) are able to be implemented?
- What personal protection (e.g. safety glasses, gloves, respirators) are appropriate for workers to wear when handling the chemical?

As indicated previously, it is often necessary to implement a range of control measures (e.g. both substitution and personal protection). As such, an important response to the hazard level assessments is to review the current control measures that are in place and to assess how appropriate and effective they are. It is important to review *Section 8 – Exposure Controls/Personal Protection* of the SDS for each chemical to confirm what control measures are recommended for the chemical.

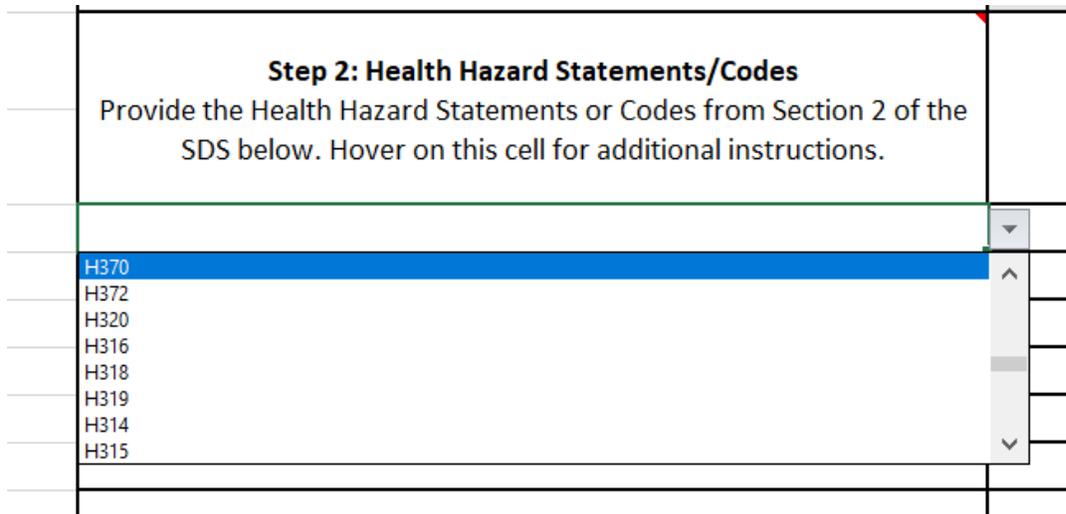
Given the resource constraints experienced by many small to medium sized businesses, undertaking an assessment of worker exposure and control measures for the chemicals which are the most hazardous (i.e. have the highest hazard levels) is a valuable first step to take once you have completed using eCHAP.

Frequently asked questions

Questions related to the assessment section

1. Can I use hazard codes instead of hazard statements?

Yes, you may. If you scroll down the dropdown menu far enough, you will reach a list of codes.



If you do put in a code, then the column next to it will be filled with the corresponding hazard statement. As always, the hazard levels will be completed for you.

Step 2: Health Hazard Statements/Codes Provide the Health Hazard Statements or Codes from Section 2 of the SDS below. Hover on this cell for additional instructions.	Hazard Level				
	Eye Damage	Inhalation	Local Skin Damage	Skin uptake, systemic	
H333	May be harmful if inhaled	B	A	n.a.	n.a.

2. How do I delete my inputs?

If deleting a single cell's input:

Select a cell and backspace

OR

If deleting a single cell's or multiple cells' input:

Select cell(s), right-click, and click "Clear Contents".

3. How do I list my physical or environmental hazard statements/codes?

The only available space to do so is on the "Summary Sheet" in the Notes section for each chemical. You do not need to assess these formally, besides acknowledging that you have any.

4. My SDS shows more than 10 hazard codes/statements. What should I do?

There are only 10 available rows for statements in the Hazard Level Assessment Sheets. If your SDS has more than 10 hazard statements/codes, try all of them and **exclude** the statements that have very low hazard levels (e.g. A, B), as they do not affect the overall hazard level as significantly.

5. My SDS has a hazard statement regarding a specific organ/system (e.g. lungs, liver), but the only statements available are for "organs (or specific organs, if known)" or "organs (or specific organs, if known) through prolonged or repeated exposure". What do I use?

Any statement regarding organs or specific organs have identical hazard levels. You may use the statements available. Use either "causes damage to organs (or specific organs, if known)" or "causes damage to organs (or specific organs, if known) through prolonged or repeated exposure" appropriately.

6. Are there any other ways I can add my statements/codes to the assessment, other than using the dropdown menus?

There are two other ways: using the search function or copy-and-pasting your inputs.

Search function:

If you type a part of your statement and press Enter, you will be greeted with a search function to find the statement you are looking for. For instance, let's say you input "May be" as you are looking for the specific statement "May be harmful in contact with skin." The first box that opens will be the first option the function was able to find.

Click **yes**, if what appears on the message box is the statement you **wish to input**.

Click **no** to cycle through the available statements that match with "May be" **until you see the one you are looking for**, then click yes.

Click **cancel** at any point if you no longer wish to use the function (keep in mind that you will have to delete what you input or try typing what you wished to type again)

The screenshot displays the "Setting Priorities" section of the Chemical Hazard Assessment and Prioritization (CHAP) software. The main window is titled "Step 2: Health Hazard Statements/Codes" and contains a table with 10 rows and 3 columns. The first row contains the text "May be" in a dropdown menu. A "Match Found" dialog box is open over the table, asking "Is this the statement/code you wish to input?" and listing "May be fatal if swallowed and enters airways" as a match. The dialog box has "Yes", "No", and "Cancel" buttons. The table also includes a "Hazard Level" section with columns for "Inhalation", "Local Skin Damage", and "Skin uptake, systemic".

"Setting Priorities" Chemical Hazard Assessment and Prioritization (CHAP)		
Step 2: Health Hazard Statements/Codes Provide the Health Hazard Statements or Codes from Section 2 of the SDS below. Hover on this cell for additional instructions.		
		Hazard Level
1	May be	
2		
3		
4		
5		
6		
7		
8		
9		
10		
Highest hazard level for each 'Uptake Route'		
Highest hazard level for all 'Uptake Routes'		

If you type the statement in its exact form, the search function will not open and you still will have your statement assessed.

Step 2: Health Hazard Statements/Codes Provide the Health Hazard Statements or Codes from Section 2 of the SDS below. Hover on this cell for additional instructions.	
May be harmful in contact with skin	▼



1	May be harmful in contact with skin	H313	B	n.a.	n.a.	A
2						
3						
4						
5						

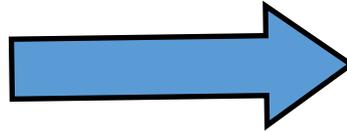
Copy-and-pasting:

Let's say you have a digital SDS or perhaps you typed down your statements beforehand in a document on your desktop computer/laptop.

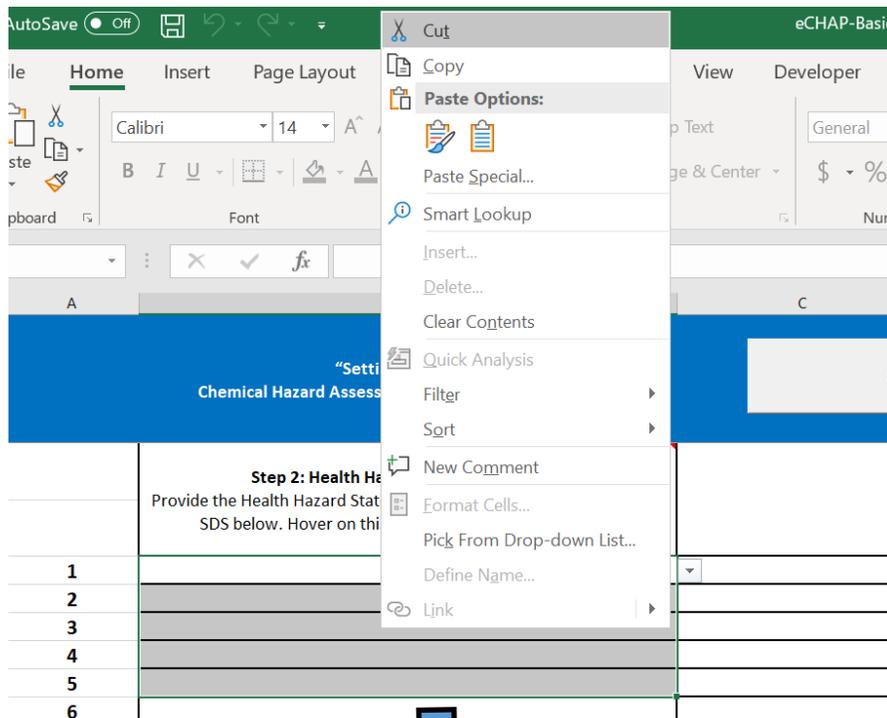
Each statement/code **must** be on separate lines before copy and pasting, for the function to work.

For example:

- Causes serious eye irritation
- May cause respiratory irritation
- May cause drowsiness or dizziness
- Suspected of damaging fertility
- May cause damage to organs through prolonged or repeated exposure



You would not need to type all of these statements separately. It could be more time-efficient to copy and paste your statements into available slots.



Step 2: Health Hazard Statements/Codes Provide the Health Hazard Statements or Codes from Section 2 of the SDS below. Hover on this cell for additional instructions.		Hazard Level			
		Eye Damage	Inhalation	Local Skin Damage	Skin uptake, systemic
Causes serious eye irritation	H319	C	B	A	n.a.
May cause respiratory irritation	H335	C	B	A	n.a.
May cause drowsiness or dizziness	H336	B	B	n.a.	n.a.
Suspected of damaging fertility	H361	B	C	n.a.	C
Causes damage to organs through prolonged or repeated exposure	H372	B	D	n.a.	D
Highest hazard level for each 'Uptake Route'		C	D	A	D

7. Is there a function that will help get rid of duplicates in case I input multiple of the same statement?

Yes, eCHAP implements a duplicate finder function that sees if you have put the same statement multiple times and deletes the duplicates if this is the case.

In the example below, “Causes serious eye damage” is already listed.

Step 2: Health Hazard Statements/Codes	
Provide the Health Hazard Statements or Codes from Section 2 of the SDS below. Hover on this cell for additional instructions.	
Causes serious eye damage	H318
<ul style="list-style-type: none"> Causes damage to organs (or specific organ[s], if known) Causes damage to organs (or specific organ[s], if known) through prolonged or repeated exposure Causes eye irritation Causes mild skin irritation Causes serious eye damage Causes serious eye irritation Causes severe skin burns and eye damage Causes skin irritation 	

When inputting a statement that is already listed, it will delete that input following a message box (see below). Once clicking **OK**, the duplicate will be deleted.

“Setting Priorities”
Chemical Hazard Assessment and Prioritization (CHAP)

Step 2: Health Hazard Statements/Codes		Hazard Level		
Provide the Health Hazard Statements or Codes from Section 2 of the SDS below. Hover on this cell for additional instructions.		Hazard Statement	Local Skin Damage	Skin uptake, systemic
1	Causes serious eye damage	E	B	n.a.
2				
3				
4				
5				
6				
7				
8				
9				
10				

Attention

One or more hazard statements/codes are duplicates and will be deleted.
Be careful not to put the same statement/code.

Questions related to the tool's design and background

8. What are macros?

Macros are actions or a set of actions that can be designed in Microsoft Excel, specifically Visual Basic Applications. Normally, macros are used to increase efficiency of repetitive tasks. For example, a person could implement macros to read through a large dataset and delete any duplicates, rather than having to do it manually. When designing eCHAP, many macros were designed to improve eCHAP's usability.

9. Why can't I delete most rows, columns, or cells? Why can I not undo actions at times?

eCHAP is designed to be error-free and tamperproof. Many codes, formulae, macros that are designed into the tool depend on the sheet being exactly how it is made. For example, formulae in certain cells depend on what is in other cells; if a user did tamper with the tool, these formulae may no longer be applicable. We ask users of eCHAP to only input where you are allowed to input—fortunately, the tool is also protected with a password which should prevent tampering. Macros also erase the undo/redo actions, so when macros are performed, it is not possible to undo/redo the changes made by the macro.

eCHAP's system is not perfect so it is prudent to make multiple copies of an empty eCHAP form; your ongoing eCHAP form; and a completed eCHAP form in case you face concerns during your work sessions. Save often, as if you notice your sheet acting strangely or if you cannot undo/redo a change that must be reversed, then you can refer to past versions.

10. Where did the hazard levels come from?

The hazard levels used in CHAP and eCHAP come directly from a peer-reviewed article published in the journal *Regulatory Toxicology and Pharmacology*. It was authored by Mario Arnone, Dorothea Kopposch, Thomas Smola, Stefan Gabriel, Koen Verbist, and Remco Visser. The citation for the article is: Arnone, M., Kopposch, D., Smola, T., Gabriel, S., Verbist, K., Visser, R. Hazard banding in compliance with the new Globally Harmonised System (GHS) for use in control banding tools. *Regulatory Toxicology and Pharmacology* 2015; 73: 287-295. In this article the term 'hazard banding' is used to refer to the hazard levels assigned to hazard statements. However, for CHAP and eCHAP, we use the term 'hazard level' due to it being more easily understood by users.

Contact page

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