



Targeted Risk Assessment
Frequently Asked Questions on using the tool

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ECETOC's Targeted Risk Assessment (TRA) Tool can be found and downloaded here:

<https://www.ecetoc.org/tools/tra-main/>

ECETOC's Technical Reports (TR) including version releases and changes to the TRA Tool can be found here:

<https://www.ecetoc.org/publications/technical-reports/>

Brief list of significant TRs for the TRA

Technical Reports	Version
140 and 141	3.2
124 and 131	3.1
114	3
107	2
93	1

PREFACE

An in-depth, step by step, guide on how to use the Integrated and standalone Consumer/Worker TRA tools please refer to their respective dedicated User Guides here:

<https://www.ecetoc.org/tools/tra-main/tra-faq/>

FAQ

- Q:** I have downloaded and installed the ECETOC tool. Is there a databank with the established physical-chemical properties of substances that can be integrated into the tool? This would clearly save putting in lots of data (boiling point, CAS number, etc.) which is well-established and not specific to the use scenarios.

A: We suggest that you refer to the ECHA REACH registration database for this information: <http://apps.echa.europa.eu/registered/registered-sub.aspx>
- Q:** Do you also offer courses or workshops on how to use ECETOC TRA for formulators? If not, do you know who can support us in getting familiar with the tool?

A: Unfortunately, ECETOC does not currently offer courses/workshops on how to use TRA for formulators. We suggest referring to the corresponding User Guides for more practical information on how to use the tools (see Preface above).
- Q:** I have an issue regarding Excel's range names in the ECETOC TRA integrated tool. The following names result in a "#REF!" value error message appearing: ESNos, AC_3_1_n, AC_3_2_n, ... Could you indicate whether this is intended and if I can delete these named ranges?

A: Please note that the Consumer TRA only covers a limited number of Article Categories defined under REACH and that AC_3 is not among those.
- Q:** When can the TRA be used?

A: The TRA tool is recommended for use under the EU REACH Regulation as it provides a conservative estimate of the typical exposures of different groups of workers handling chemicals (75th percentile for the group).
However, many EU regulators consider that for EU health and safety legislation (such as the Chemical Agents Directive), tools should be able to estimate the 90th percentile exposure or even higher for an individual worker.
For this reason, ECETOC does not advocate the use of the TRA for estimating the nature of worker exposures at specific workplaces. Rather, we advise the application of alternative models such as the Advanced REACH Tool (ART) model and StoffenManager or exposure assessors should resort to carrying out workplace measurements.
- Q:** Why is the documentation of the TRA spread out over so many different publications?

A: The TRA has been developed in stages which have each resulted in an ECETOC Technical Report or peer-reviewed publication. A list of the main reports is provided at the beginning of this FAQ. The User Guides may also provide useful information on the practical aspects of the tools.
- Q:** Are there any restrictions or known mistakes up to now for the "Integrated TRA tool" under Windows 10, 11 and Office 365? Are you planning an updated version of your TRA tool for WIN 10, 11/Office 365?

A: To date users have not had any technical issues with the TRA tool under Windows 10, Office 365 or Windows 11. The contents of the TRA tool will be updated but this will not affect its use in a newer Windows operating system or Office 365.
- Q:** Why can only 24 exposure scenarios be entered in the environmental part of the tool? While in the worker and consumer part up to 60 exposure scenarios can be entered? It is a problem when we have more than 24 scenarios.

A: There are only 24 environmental scenarios because this is the number of existing Environmental Release Categories (ERCs).

8. **Q:** I have saved a new substance in the tool. However, I have not been successful in saving subsequent modifications to the substances i.e., addition of physical data.
A: Please refer to the Integrated Tool User Guide for information on saving.
9. **Q:** I already have the tool downloaded from the website. I'm unable to generate reports for new scenarios as it asks whether the substance is used in a preparation but the drop-down box for Yes or No is grayed out and will not activate.
A: The drop-down box (in column L "Substance in preparation?") is linked to column F ("is substance a solid?"). First select 'No' in column F and then the drop-down options in column L will appear.
10. **Q:** I would like to request the password to unprotect the worker, consumer and integrated tools.
A: In the ECETOC Tools, there are indeed a number of cells that are locked for editing but usually these are values that should not be changed and so the developers decided not to share the password.
11. **Q:** Is there any way to assess and refine the risk posed by a substance bound within a material in the professional use of articles in the worker or integrated assessment?
A: The TRA is not intended to enable users to assess and refine the risk posed by a substance bound within a material i.e. the TRA assumes 100% release. Users wishing to address this aspect of exposure should either use exposure models developed for this purpose (such as those of the US EPA) or other means that they are comfortable with e.g. to treat the % available within the matrix as being akin to the % in the product (i.e. the TRA would not work below an assumed release rate of 10%).
12. **Q:** Can the TRA be used for assessing worker exposures to substances which are gaseous at standard temperature and pressure?
A: No. The TRA-Worker has only been developed and evaluated for liquids (giving off vapour) and solids (giving off dust). The tool does not address industrial gases. Gases, for example certain monomers produced in industry, are handled and stored in closed systems (for obvious reasons) where they may be present as liquids (cooled below their boiling point or compressed), but when released they may give rise instantly to high inhalation exposure levels which are not in the scope of the TRA. For information on the limitations/boundaries of the tool, refer to the ECETOC Technical Reports on the TRA tools (listed at the beginning of this FAQ).
13. **Q:** Does Vapor pressure affect dermal RCR results? If it does, by how much and where could I find their quantitative figures in the document?
A: The TRA (as a Tier 1 model) does not account for how different vapour pressures might influence dermal exposure predictions. The TRA simply differentiates on the basis of whether a substance is a liquid or a solid and the circumstances of use (the PROC). So, the dermal RCR will not be affected by the vapour pressure, with one exception related to the use of the duration modifier.
For information on the limitations/boundaries of the tool, refer to the ECETOC Technical Reports on the TRA tools (listed is provided on at the beginning of this FAQ).
14. **Q:** Is the ECETOC TRA Tool capable of assessing a heterogeneous mixture such as: Product A is a mixture composed of substance B a liquid and substance C a solid. Product A's physicochemical properties are known. The hazards, Exposure limits, DNEL of each separate substance B and C are also known.
A: In your example where you only have an understanding of the properties of the product's component substances, then TR 131 in Section 2.1.7 may offer some suggestions for how the exposures associated with 'solids in liquids' might be approached using the TRA.
Please note, however, that these suggestions have not (yet) been implemented in the TRA tool itself (as of v3.2), so you would need to calculate the exposures/RCRs independently. TR 114 in Section 2.4 deals with exposures to 'mixtures' in more general terms.

15. **Q:** If an exposure duration of a worker is significantly less than 8 hours a modifying factor is applied for the estimation of exposure. But in case the length of a working task is longer than 8 hours, how can this be addressed within TRA?
- A:** The worker module of the TRA is mainly based on the EASE model, which does not address working periods longer than 8 hours and thus neither does the TRA. In such circumstances, the resulting risks need to be evaluated on a case-by-case basis and modifying factors other than what's available within TRA should be applied by the user. However, it should be considered that DNELs or OELs used for comparison with the TRA estimates to assess the risks are time-weighted average values over a standard 8 hours shift and thus would also need to be adapted in a sound scientific approach.
16. **Q:** Could you please indicate which is the basis (daily, yearly...) for the tonnage that has to be indicated in cells E114 to E128 of "Interface excel sheet", for the Environmental Assessment?
- A:** The unit is /year, so tons per year.
17. **Q:** Calculations with ECHA's Chesar tool based on IUCLID data and obtained with the ECETOC TRA tool do not always give the same exposure results. Is there a way to fix this?
- A:** This is not a question that ECETOC can answer. It relates to how ECHA has chosen to implement the TRA within Chesar and its interfaces with IUCLID. The question needs to be addressed to ECHA.
18. **Q:** I'd like to know if the Product Category from 36 to 39 will be added to ECETOC TRA program, and when. Otherwise, is it possible to use another PC, changing a few parameters? If yes, which one?
- A:** There are currently no plans within ECETOC to make such additions to the TRA (at the time of writing).
19. **Q:** I would like to know where I can find the reduction modifiers related to ventilation. There are 7 options for ventilation in ECETOC TRA version 3, but the only information readily available is "for basic general ventilation, 0 and for good, 30%, for enhanced, 70%". Please let me know where I could find additional information about the reduction rate for each ventilation option.
- A:** The rationale behind the assumptions used in ventilation can be found in section 2.1.3 of ECETOC Technical Report 107, and section 2.2.3 and Appendix A of TR 114.
20. **Q:** How is the PNEC for sediment exactly calculated? I calculated the PNEC sediment according to REACH (REACH Guidance R.10) and using the ECETOC TRA Tool and I do not find the same results.
- A:** PNEC derivation is described in REACH Guidance on information requirements and chemical safety assessment Chapter R.10. The PNEC_{sediment} calculation is an integral part of the EU Technical Guidance Document (TGD) which has been integrated into the TRA tool. The only modification introduced in the TRA tool was the conversion of the wet weight-based output into dry weight (by using a constant factor also available in the EU TGD. Please refer to Section 3.5 of the EU TGD Part II 2003: https://echa.europa.eu/documents/10162/987906/tgdpart2_2ed_en.pdf/138b7b71-a069-428e-9036-62f4300b752f)
- The documentation for the EUSES model should also give the appropriate information as it is based on the same principles. For advanced users, the other option is to trace the calculation in the "EUTGDsheet-TRAM" and via the named fields for all parameters (naming pretty much consistent with guidance).
21. **Q:** I use ECETOC TRA for a tier 1 worker inhalation assessment for a liquid substance dossier and we have a technical question: The vapour pressure is 0.8 kPa at 50°C (medium fugacity in ECETOC model) and 0.05 kPa at 25°C (low fugacity in ECETOC model). During the production in the plant, the substance is at 50°C during the first steps and at 25°C during the last steps. Which fugacity should be used: both of them, low (25°C), medium (50°C)?
- A:** It is recommended to start by using both for the two stages of the process (25°C and 50°C). If it has limited impact on the outcome of the assessment you can integrate the two stages later on.

22. **Q:** I am working on the REACH registrations for a series of metal salts and have been considering using ECETOC TRA for environmental risk assessment. Could you please confirm that this tool is suitable for inorganics and let us know if there is anything in particular, we need to bear in mind when using the tool for this type of substance?

A: In principle, the tool can be used for metal salts. Bear in mind that in its standard setting, the tool assumes that intermedia partition coefficients, bioconcentration factors, etc. are estimated from hydrophobicity (K_{ow}), which obviously does not work for metal salts. Instead, the user should enter known (measured) intermedia partition coefficients for the metal cation as well as for the counter anion.

23. **Q:** I work as a toxicologist and risk assessor. When I describe the uses of a chemical and perform a task-by-task description I experience unexpected situations. For instance, I have a chemical reaction made under PROC2 conditions (use in closed batch process) with some sampling of my chemical and occasional maintenance work. The description of PROC2 mentions that these additional tasks are covered by the PROC2 exposure factor. But is it the same for all the PROCs? For instance, do PROC3 or PROC4 also cover sampling and maintenance? Does PROC 5 (mixing or blending) also cover the vessel charging with the raw materials? I've read that these process categories came from the work done by the HSE UK in the frame of the COSHH essential project; unfortunately, I was not able to find the original document describing these generic exposure scenarios. Therefore, may I ask you to provide me with the background documentation allowing me to better understand your codification of the exposure related to technological processes?

A: For PROC2, 3 and 4 sampling is included (please refer to the PROC descriptions in REACH Guidance R12 (2015 version) where it is stated that sampling is included). For PROC 5 and higher, note that these PROCs are activity based. So as a general rule they do not include a sub-activity like sampling which requires a separate assessment, typically using PROC 9. For further information please refer to the list of ECETOC Technical Reports at the beginning of this FAQ.

24. **Q:** While using the TRA tool, some of the drop-down menus are not working properly or when selecting one of the available options the results do not seem to change.

A: If you are using the latest version of the TRA tool, and the problem still persists there may be a compatibility issue with your system/Excel language.

When not using English (UK) as the Excel default language some of the macros and drop-down menus inside the TRA tool may break. To fix the problem please refer to the Microsoft guide on changing the language in excel [here](#) or use the tutorial below:

Display language can be changed inside Excel in "Add a Language" if you go into the "Language" options menu inside the "File" tab on the top left corner of Excel and then the "Options" tab on the bottom left.

Make sure to set English (UK) as your 'display language' after the language package is installed, if you want to return to your original language after using the tool just select it and click "Set as preferred".

If this does not resolve the issue, you need to change the language and region settings of the entire computer to English (UK) via the Windows control panel.

25. **Q:** I have a question about the "Local exhaust ventilation" LEV in the TRA tool. The LEV effectiveness depends on: the PROC, the setting "Professional" and "Industrial" and in the case of PROC 8b on substance properties (volatile or non-volatile).

Can you help me understand how the effectiveness value of 90% assigned has been determined. How can I transpose this value with respect to extraction tools used in our factories as well as in our customers

factories? Could you help me find literature explaining how is the effectiveness of an extraction tool measured.

A: Assignment of 90% was based on an HSE publication (HSE. (2008) Controlling airborne contaminants at work: a guide to local exhaust ventilation (LEV). London, UK: HSE Books). Other publications indicate similar findings (e.g. https://www.esig.org/wp-content/uploads/2018/03/2015-12-15_ESIG_RMM_Final_report-1.pdf and TNO database <https://diamonds.tno.nl/dashboard>).

ECETOC cannot support on proving that equipment reaches the 90% effectiveness and recommends liaison with in-house experts.

26. **Q:** Does the TRA tool predict inhalation exposure to liquids via aerosols, for situations where aerosols are generated (e.g. PROCs 7, 11, 12, 17, 18 or for PROCs 10 and 19 where no LEV is present)?

A: For liquids, the TRA tool only estimates inhalation exposure to vapour, not to mist (aerosol).

However, aerosols are considered to some extent for PROC and vapour pressure combinations where it is considered that exposure to mist (aerosol) could arise.

PROCs 7, 11, 12, 17, 18 and 19 are considered to be processes which may result in mist formation. However, for liquid substances with low, medium or high vapour pressure, i.e. ≥ 0.01 Pa, it is assumed that airborne mist would evaporate quickly to vapour. In contrast, for liquid substances with very low vapour pressure, i.e. < 0.01 Pa, this may not be the case, and airborne mist may contribute to inhalation exposure.

Therefore, the base estimates for inhalation exposure in the TRA tool for PROCs 7, 11, 12, 17, 18 and 19 for substances with very low vapour pressure (< 0.01 Pa) are increased from 0.1 ppm (the maximum airborne vapour concentration for very low volatility liquids) to align with the higher base estimate for low vapour pressure substances.

This is done as a precaution with the aim of avoiding underestimation. Further research could be warranted.