

Umweltbezogene Stoffsicherheitsbeurteilung in der Praxis

ECETOC TRAM v3.1

- Wo gibt es das Programm?
- Wie installiere ich es?
- Welche Eingaben sind notwendig?
- Was muss ich beachten?
- Was mache ich, wenn das Ergebnis ein Risiko anzeigt?
- Was kann das Tool noch?
- Wie bekomme ich die Daten in den CSR?
- Gibt es Alternativen?
- Weiterführende Literatur



EUROPEAN CENTRE FOR ECOTOXICOLOGY AND TOXICOLOGY OF CHEMICALS

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- ◀ Ongoing task forces
- ◀ Workshops, Symposia and other meetings
- ◀ Contributing to international initiatives
- ◀ Science Awards
- ✔ **Targeted Risk Assessment (TRA)**
 - History
 - TRA Q&As
- ◀ Cefic LRI Projects under ECETOC Management / Leadership



17 June 2014. TRA Tool update to TRAv3.1

In response to feedback received from users of the TRA, ECETOC has further improved the consumer portion of the model by the inclusion of the ability to account for infrequent uses of consumer products. The changes which have been developed in cooperation with ECHA are now found as version 3.1 of the TRA and are also to be found within version 2.3 of Chesar ([Link to Chesar website](#)).

Version 3.1 is available both as an integrated model and a standalone version for the consumer part, and together with updated user guides can now be downloaded from this webpage. A detailed explanation of the rationale for the changes is contained in [Technical Report 124: Addendum to ECETOC TR114: Technical Basis for the TRA v3.1](#) which provides further clarification of how ECETOC has applied 'transfer factors' in the TRA's prediction of oral, dermal and inhalation exposures. These improvements now enable the information contained within developments such as the DUCC Specific Consumer Exposure Determinants (<http://www.ducc.eu/Activities.aspx>) to be suitably processed.

The update to version 3.1 was used as an occasion to include an updated SpERC list and improvements of the functionalities by offering the export and import of single substance datasets.

New TRA User group on Linked In: [Linked in](#)

Introduction

The ECETOC Targeted Risk Assessment (TRA) tool was launched in 2004. The TRA consists of 3 separate models for estimating exposures to workers, consumers and the environment that arise during a series of events ('exposure scenarios'). In order to ensure that the TRA fully aligned with the expectations

TRA version 3.1 downloads

- [Download Consumer Tool](#)
- [Consumer Tool user manual](#)
- [Download Integrated Tool](#)
- [Integrated Tool user manual](#)

TIP: After downloading an item above, click [here](#) to restore centre panel to TRA homepage

Supporting Documents

- [TR 93: Targeted Risk Assessment](#)
- [TR 107: Addendum to TR 93](#)
- [TR 114: ECETOC TRAv3: Background and Rationale for the Improvements](#)
- [TR 124: Addendum to TR114: Technical Basis for the TRA v3.1](#)
- [FAQs - Download &](#)

ECETOC TRA(M) - Download



▼ Ongoing task forces

▼ Workshops, Symposia and other meetings

▼ Contributing to international initiatives

▼ Science Awards

▼ **Targeted Risk Assessment (TRA)**
History
TRA Q&As

▼ Cefic LRI Projects under ECETOC Management / Leadership

You have selected : **Integrated Tool v3.1**

Please send the document to:

all fields are obligatory

Title:

First name:

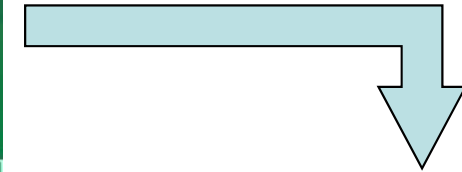
Last name:

Job title:

Company name:

Email:

Country:

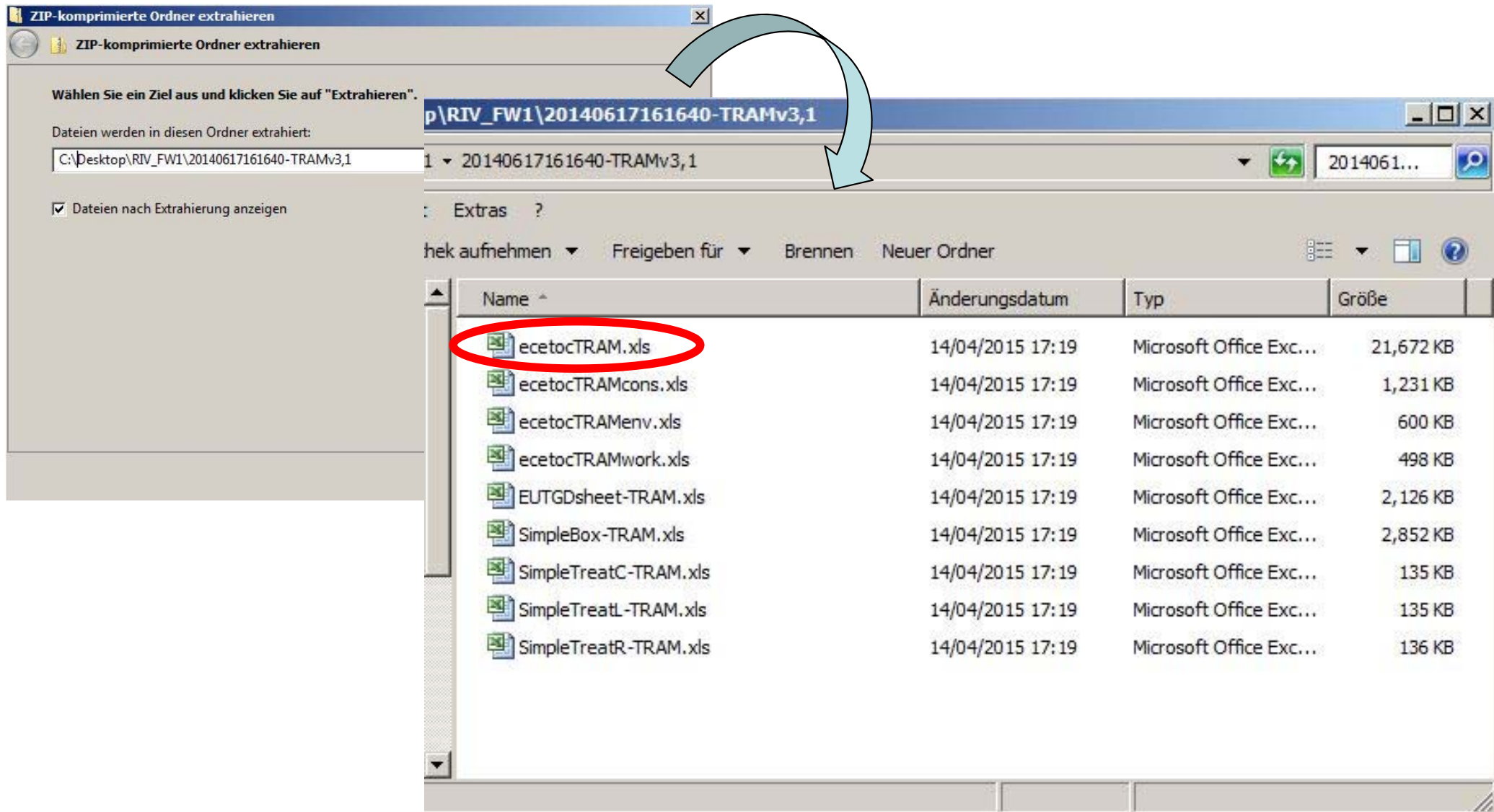


Email mit
Download-Link



ZIP-Datei

ECETOC TRA(M) - Entpacken



ECETOC TRA(M) - Öffnen

ecetocTRAM.xls [Kompatibilitätsmodus] - Microsoft Excel

Start Einfügen Seitenlayout Formeln Daten Überprüfen Ansicht Add-Ins Acrobat

Einfügen Zwischenablage

Calibri 10 A⁺ A⁻

F **K** **U**

Schriftart

Ausrichtung

Zeilenumbruch

Verbinden und zentrieren

Standard

% 000

Zahl

Bedingte Formatierung Als Tabelle Zellenformatvorlagen

Sicherheitswarnung Makros wurden deaktiviert. Optionen...

Microsoft Office Excel

Diese Arbeitsmappe enthält mindestens eine Verknüpfung, die nicht aktualisiert werden kann.

- Sie können die Quelle der Verknüpfungen ändern oder erneut versuchen, die Werte zu aktualisieren, indem Sie auf 'Verknüpfungen bearbeiten' klicken.
- Sie können die Verknüpfungen unverändert verwenden, indem Sie auf 'Weiter' klicken.

Weiter Verknüpfungen bearbeiten...

Manual:

Read ECETOC substance from database

CAS Number

Ecetoc Substance Number retrieved

to be saved as Ecetoc Substance Number

Batch:

Ecetoc Substance Number being processed

Batch mode extends the number of scenarios per substance from 15 to 60. Entries need to be in the datasheets (direct entries on datasheets or from user interface by the Save function). The release estimation for the environment is also extended beyond ERCs and spERCs to three additional "TIER II" approaches.

Read Read substance info from data base (for manual input via interface)

Run Run model with the input data from the interface (output also on interface)

Save Save as new substance in database

Run batch Run model using batch mode from database. From substance #

Run batch - Human health

Run batch - Environment Select Standard or Advanced version of the batch mode

Identification of Substance

SUBSTANCE (USE A UNIQUE NAME FOR EACH SUBSTANCE) **Substance A**

General description/name

Identification of use

Assesment identifier

ECETOC TRA(M) - Makros

The screenshot shows the Microsoft Excel interface with the file 'ecetocTRAM.xls' open in Compatibility Mode. The ribbon includes 'Start', 'Einfügen', 'Seitenlayout', 'Formeln', 'Daten', 'Überprüfen', 'Ansicht', 'Add-Ins', and 'Acrobat'. A security warning dialog box titled 'Microsoft Office-Sicherheitsoptionen' is displayed over the spreadsheet. The dialog has a tab labeled 'Optionen...' which is circled in red. The main text in the dialog reads: 'Makro: Makros wurden deaktiviert. Makros können Viren oder sonstige Sicherheitsrisiken enthalten. Aktivieren Sie diesen Inhalt nur, wenn Sie der Quelle dieser Datei vertrauen. Warnung: Es kann nicht festgestellt werden, ob dieser Inhalt aus einer vertrauenswürdigen Quelle stammt. Sie sollten diesen Inhalt deaktiviert lassen, außer wenn von diesem Inhalt wichtige Funktionalität bereitgestellt wird und Sie dessen Quelle vertrauen. Weitere Informationen: Dateipfad: C:\...ler\Desktop\RIV_FW1\20140617161640-TRAMv3,1\ecetocTRAM.xls'. Two radio buttons are present: 'Vor unbekanntem Inhalt schützen (empfohlen)' and 'Diesen Inhalt aktivieren', with the latter being selected and circled in red. At the bottom of the dialog are 'OK' and 'Abbrechen' buttons, and a link 'Vertrauensstellungszentrum öffnen'.

The spreadsheet content is as follows:

	A	B	C	D
1				
2				
3				
16				
17		Operation mode:		
18		manual/batch (m/b) automatically set by system		b
19				
20		Manual:		
21		Read ECETOC substance from database		
22		CAS Number		#N/A
23		Ecetoc Substance Number retrieved		1
24		to be saved as Ecetoc Substance Number		2
25		Batch:		
26		Ecetoc Substance Number being processed		1
27		Batch mode extends the number of scenarios per substance from 15 to 60. Entries need to be in the datasheets (direct entries on datasheets or from user interface by the Save function). The release estimation for the environment is also extended beyond ERCs and spERCs to three additional "TIER II" approaches.		
28		Identification of Substance		
29				
30		SUBSTANCE (USE A UNIQUE NAME FOR EACH SUBSTANCE)	Substance A	
31		General description/name		

Below the spreadsheet, there are two sections for data entry:

Identification of use	Assesment identifier

ECETOC TRA(M) - Arbeitsmappen

27
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50

Identification of Substance

SUBSTANCE (USE A UNIQUE NAME FOR EACH SUBSTANCE) **Substance A**

General description/name

CAS no.

EC no.

Identification of use

Assesment identifier

Assesment date

Comments

Physical-chemical properties - minimum input for Human Health and Environmental Assessment

Molecular weight **300** g.mol⁻¹

Vapour pressure (Pa OR hPa) **5.00E-02** Pa conversion

Water solubility **100** mg.L⁻¹

Partition coefficient octanol-water (- OR Log(Kow)) **3.20E+00** Kow conversion

Biodegradability test result **readily biodegradable**

Chemical class for Koc-QSAR **Non hydrophobics** mandatory if QSAR estimation of k_{soil/water} and

Koc (L.kg⁻¹) OR Log(Koc)) **Koc** Koc

Partition coefficient k_{soil/water} L.kg⁻¹ optional - can be estimated by QSAR

Partition coefficient k_{ad/soil/water} L.kg⁻¹ optional - can be estimated by QSAR

Partition coefficient to suspended solids L.kg⁻¹ optional

Additional physico-chemical parameter input for refined environmental assessment (TIER 2)

INTERFACE CONTENTS DATABASE datasheet1 datasheet2 datasheet3 datasheet4 datasheet5 datasheet6

Bereit Berechnen

Start XY ecet... ecet... eceto... eceto... EUTG... Simpl... Simpl... Simpl... Simpl...

ECETOC TRA(M) - Module

Microsoft Excel interface showing the ECETOC TRA(M) module. The ribbon includes Start, Einfügen, Seitenlayout, Formeln, Daten, Überprüfen, Ansicht, Add-Ins, and Acrobat. The formula bar shows 'M12' and 'fx'.

The spreadsheet content is as follows:

	B	C	D	E	F	G	H	I	J	K
1										
2	ECETOC TARGETED RISK ASSESSMENT MODEL									
3										
4	General workflow:									
5										
6	STEP 1	Identification of substance, use and assessment				Step 1 - Identification				
7	STEP 2	Input of physical-chemical parameters				Step 2 - PC data				
8	STEP 3	Set-up assessments (select one or more):								
9		a	Human Health - Workers			Step 3a - worker assesement				
10		b	Human Health - Consumers			Step 3b - consumer assessment				
11		c	Environmental			Step 3c - environmental assessment				
12	STEP 4	Safe assessment set-up to database or load from database								
13										
14	DISCLAIMER									
15	Please note that this tool is provided for your personal use only. It should not be copied or forwarded to third parties. The tool has been subjected to thorough testing. Despite this, ECETOC does not guarantee that the ECETOC TRA tool works error-free. The tool contains SPERC content, which has been provided by third parties. ECETOC is making this tool available for users to aid them in the risk assessment of their materials. ECETOC offers no warranty either to the reliability of the tool and of the provided information or to the conclusions or assumptions made by any user on the basis of the use of this tool or the use of such information. All usage is at the discretion of the user and ECETOC is not liable for any consequences resulting from such use.									

The ECETOC logo is visible in the top right corner of the spreadsheet area.

ECETOC TRA(M) – Eingabe von Stoffdaten

ECETOC TARGETED RISK ASSESSMENT MODEL			
Manual:			
Read ECETOC substance from database		Read	Reac
CAS Number	#NV	Run	Run
Ecetoc Substance Number retrieved	1	Save	Save
to be saved as Ecetoc Substance Number	1		
Batch:			
Ecetoc Substance Number being processed	1	Run batch	Run
Batch mode extends the number of scenarios per substance from 15 to 60. Entries need to be in the datasheets (direct entries on datasheets or from user interface by the Save function). The release estimation for the environment is also extended beyond ERCs and spERCs to three additional "TIER II" approaches.			
Run batch - Human health			
Run batch - Environment			
Identification of Substance			
SUBSTANCE (USE A UNIQUE NAME FOR EACH SUBSTANCE)		Substance A	Ident
General description/name			Asse:
CAS no.			Asse:
EC no.			Com:
Physical-chemical properties - minimum input for Human Health and Environmental Assessment			
Molecular weight	300	g.mol ⁻¹	
Vapour pressure (Pa OR hPa)	5.00E-02	Pa	
Water solubility	100	mg	
Partition coefficient octanol-water (- OR Log(Kow))	3.20E+00	Kow	
Biodegradability test result	readily biodegradable		
Chemical class for Koc-QSAR	Non hydrophobics		man
Koc (L.kg ⁻¹) OR Log(Koc))		Koc	Koc
Partition coefficient k _{soil/water}		L.kg ⁻¹	opti
Partition coefficient k _{sediment/water}		L.kg ⁻¹	opti
Partition coefficient to suspended solids		L.kg ⁻¹	opti

Zusätzliche Eingabe der Testtemperatur erforderlich!

ECETOC TRA(M) - Umweltszenarien

ECETOC TARGETED RISK ASSESSMENT MODEL

#NV

Environmental Assessment (including Man via Environment)

						for ERC approach	for spERC approach		for information			
No.	Description of use	Life cycle stage	Annual EU Tonnage (tonnes/year)	Fraction of tonnage to region (for ERCs 1-7 and 12a,12b = 1, ERC 8-11b =	Use ERC or spERC as release estimation approach (default is ERC)	ERC (mandatory in all cases as use descriptor !)	STP for ERC (default is Yes, unless for ERC 1-7 and 12a, 12b direct discharge is given)	Industry sector for spERC	spERC (select appropriate spERC - default STP setting is linked to spERC)	Daily amount used at site [kg/d] for spERC assessment (read comment for further explanation)	Remark/check on spERCs selection	Msperc (kg/d) used if not overwritten in column L
1	Manufacturing of Substance A	Manufacturing	5.00E+01	1	ERC	ERC1	yes					
2					ERC							
3					ERC							
4					ERC							
5					ERC							
6					ERC							
7					ERC							
8					ERC							
9					ERC							
10					ERC							
11					ERC							
12					ERC							
13					ERC							
14					ERC							
15					ERC							

ECETOC TRA(M) – Grenzwerte (PNECs)

ECETOC TARGETED RISK ASSESSMENT MODEL

ERC glossary (text descriptions for reference):	ERC10b Wide dispersive outdoor use of long-life articles and materials with high or intended release
SpERC glossary (text descriptions for reference):	AISE SPERC 2.1.b.v1 - AISE 2 - Formulation of Detergents/Maintenance Products: Granular Detergent -Regular (medium scale)

Manual entry of reference values

Microorganisms in STP	1.00E+00	mg L ⁻¹	PNEC
Freshwater aquatic	2.00E+00	mg L ⁻¹	PNEC
Freshwater sediment	7.00E+00	mg kg _{dwt} ⁻¹	PNEC
Marine water	2.00E-01	mg L ⁻¹	PNEC
Marine sediment	7.00E-01	mg kg _{dwt} ⁻¹	PNEC
Terrestrial compartment	3.00E+00	mg kg _{dwt} ⁻¹	PNEC
Secondary poisoning - for TIER II only		mg kg _{food} ⁻¹	PNEC
Freshwater aquatic, intermittent release - for TIER II only		mg L ⁻¹	PNEC
Marine water, intermittent release - for TIER II only		mg L ⁻¹	PNEC
Man via the environment (total daily intake)		mg kg _{bw} ⁻¹ d ⁻¹	DNEL

The reference values for inhalation and oral from consumer part will be used unless a worst case consumer reference value (=lower of inhalation or oral in [mg.kgBW⁻¹.d⁻¹]) is entered here.

Basis of reference value

* The most conservative assumption is that 100 % of the manufacturer's or importer's tonnage per year is applied at one site (i.e. fraction = 1). If it is known that the production or processing sites are numerous, various in size and randomly distributed over Europe, a "10 % rule" can be applied by assuming that 10 % of the amount produced or imported is used at the local scale (i.e. fraction = 0.1).

NOTE:

Defaults setting in TRA TIER I (ERCs/SPERCs):

STP marine coupled with STP freshwater, i.e. if STP freshwater = yes, STP marine = yes; Can be adjusted in batch mode in STP settings.

PNEC secondary poisoning, PNEC freshwater-intermittent, and PNECmarine.water.intermittent addressed in TIER II (advanced batch mode) batch mode only

Input of (eco)toxicological data for PNEC derivation can be done in row 188 of datasheets. The model needs to be run in batch mode - Advanced to activate this functionality.

ECETOC TRA(M) - Berechnung

Operation mode:
manual/batch (m/b) automatically set by system

Manual:
Read ECETOC substance from database
CAS Number
Ecetoc Substance Number retrieved
to be saved as Ecetoc Substance Number

Batch:
Ecetoc Substance Number being processed
Batch mode extends the number of scenarios per substance from 15 to 60. Entries need to be in the datasheets (direct entries on datasheets or from user interface by the Save function). The release estimation for the environment is also extended beyond ERCs and spERCs to three additional "TIER II" approaches.

b

1

2

1

Read

Run

Save

Run batch

Run batch - Human health

Run batch - Environment

Entr

Read

Run

Save

Run

ECETOC TRA(M) – Ergebnisse (PECs)



N	O	P	Q	R	S	T	U	V	W
---	---	---	---	---	---	---	---	---	---

ECETOC TARGETED RISK ASSESSMENT MODEL

All uses assessed separately:									
Mspc (kg/d) used if not overwritten in column L	Wide dispersive use - WDU (automatically set by ERC selection)	PEC in STP (mg.L ⁻¹)	PEC for local freshwater (mg.L ⁻¹)	PEC for local freshwater sediment (mg.kg _{dwt} ⁻¹)	PEC for local soil (mg.kg _{dwt} ⁻¹)	PEC for local marine water (mg.L ⁻¹)	PEC for local marine sediments (mg.kg _{dwt} ⁻¹)	Total daily intake man via the environment regional (mg.kg _{dwt} ⁻¹ .d ⁻¹)	RCR in STP
	no	9.47E+00	9.47E-01	5.22E+00	3.78E-01	9.47E-02	5.22E-01	3.95E-07	9.47E+00

ECETOC TRA(M) – Ergebnisse (RCR, Msafe)



W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
GETED RISK ASSESSMENT MODEL																		
RCR in STP	RCR for local freshwater	RCR for local freshwater sediment	RCR for local terrestrial environment	RCR for local marine water	RCR for local marine sediments	RCR for humans via the environment regional	Msafe in STP (kg day ⁻¹)	Msafe freshwater (kg day ⁻¹)	Msafe freshwater sediments (kg day ⁻¹)	Msafe terrestrial (kg day ⁻¹)	Msafe marine water (kg day ⁻¹)	Msafe marine sediments (kg day ⁻¹)	Msafe humans (kg day ⁻¹)	STP used?	Removal in STP	RMM considered in spERC for air emissions and efficiency	RMM considered in spERC for waste water emissions and efficiency	
9.47E+00	4.73E-01	7.46E-01	1.26E-01	4.73E-01	7.46E-01	#WERT!	2.64E+02	5.28E+03	3.35E+03	1.99E+04	5.28E+03	3.35E+03	#WERT!	yes	0.8738			

ECETOC TRA(M) – Datasheets (Stoffdaten)

A	B	C	D	E	F	G
1	2	3	4	5	6	7
2	ECETOC TRA FLAT DATABASE	1				
3		0	1	2	3	4
4	ECETOC TRA FLAT DATABASE - INPUT TIER 1					
5						
6	Identification of Substance					
7						
8	SUBSTANCE	Substance A				
9	General description					
10	CAS no.					
11	EC no.					
12						
13	Identification of use					
14	Assessment identifier					
15	Assessment date					
16	Comments					
17						
18	Physical-chemical properties - minimum input for Human Health and Environmental Assessment					
19						
20	Molecular weight (g.mol ⁻¹)	300				
21	Vapour pressure (Pa; temperature range 15-25°C) - temp. can be specified in line 166	5.00E-02				
22	Water solubility (mg.l ⁻¹ ; temperature range 15-25°C) - temp. can be specified in line 168	100				
23	Kow	3.20E+00				
24	Biodegradability test result	readily biodegradable				
25	Chemical class for Koc-QSAR	Non hydrophobics				
26	Koc (l.kg ⁻¹)					
27	Partition coefficient $k_{\text{soil/water}}$ (l.kg ⁻¹)					
28	Partition coefficient $k_{\text{sediment/water}}$ (l.kg ⁻¹)					
29	Partition coefficient to suspended solids (l.kg ⁻¹)					
30						
31	Human Health - Workers					
32	Workers scenario number	60	1	2	3	4
33	Scenario name	1				
34	Process Category (PROC)	60				
35	Type of setting (PROC 7 and 22 always industrial, PROC 11 and 20 always professional)					
36	Is substance a solid? (yes/no)					
37	Dustiness of solids (high/medium/low) OR VP of volatiles (Pa) at process temperature					
38	Duration of activity (hours/day)					
39	Use of ventilation ? (addresses outdoor use, LEV and General ventilation)					
40	Use of respiratory protection and, if so, minimum efficiency ?					
41	Substance in preparation?					

ECETOC TRA(M) – Datasheets (Umweltszenarien)

A	B	C	D
1	2	3	4
2	ECETOC TRA FLAT DATABASE	1	
3		0	1
72	Environmental Assessment (including Man via Environment)		
73			
74	Environment scenario number	1	1
75	Description of use		Manufacturing of Substance A
76	Life cycle stage		Manufacturing
77	Annual EU tonnage (tonnes/year)		5.00E+01
78	Fraction of EU tonnage to region (-) (default for point sources = 1, wide dispersive = 0.1)		1
79	Daily amount used at site [kg/d] for spERC assessment (read comment for further explanation)		
80	ERC (mandatory in all cases as use descriptor I)		ERC1
81	Municipal STP (for ERC based assessment only)		yes
82	Industry sector for spERC		
83	spERC (select appropriate spERC)		
84	Wide dispersive use (automatically set by ERC selection)		no
85	Reference value microorganisms STP (mg.l-1)	1	
86	Basis of reference value	PNEC	ERC glossary (for reference):
87	Reference value freshwater aquatic (mg.l-1)	2	spERC glossary (for reference):
88	Basis of reference value	PNEC	For information: Msperc in line 1
89	Reference value freshwater sediment (mg kgdwt-1)	7	
90	Basis of reference value	PNEC	
91	Reference value marine water (mg L-1)	0.2	
92	Basis of reference value	PNEC	
93	Reference value marine sediment (mg kgdwt-1)	0.7	
94	Basis of reference value	PNEC	
95	Reference value terrestrial compartment (mg kgdwt-1)	3	
96	Basis of reference value	PNEC	
97	Secondary poisoning (mg.kg food-1)		
98	Reference value freshwater aquatic, intermittent release (mg.l-1)	TIER II PNEC	
99	Reference value marine water, intermittent release (mg L-1)	TIER II PNEC	
100	Reference value man via the environment (total daily intake) Worst case Consumer DNEL		
101			
102	Select approach ERC		WAHR
103	Select approach spERC		FALSCH
104	TIER II Assessment Approaches:		
105	Select approach using SPECIFIC RELEASE FRACTIONS		FALSCH
106	Select approach using MEASURED DATA (releases in kg/day)		FALSCH
107	ECETOC TRA FLAT DATABASE - INPUT TIER 2		
108	Environmental Assessment (including Man via Environment)		
109	Justifications for refined release parameters		
110	Basis used for refinement (e.g. ERC, SPERC)		

ECETOC TRA(M) – Regionale Freisetzung

A	B	C	D	
1	2	3	4	
2	ECETOC TRA FLAT DATABASE	1		
3		0	1	
142	Local STP with primary settler?			
143	Use STP local marine?			
144	SludgeToSoil? (yes/no)			
145	River flow (m3/d)			
146	Effluent discharge rate of local STP (m3/d)			
147				
148	VOLUMES and RELEASES (INTERIM RESULTS)			
149	EU tonnage for use (tpa)			
151	Amount used locally (kg/d)			
152	Release times per year (d/year)			
153	Release fraction air (as in ERC or SPERC background table or set in line 125)			
154	Release fraction (waste) water (as in ERC or SPERC background table or set in line 125)			
155	Release fraction soil (as in ERC or SPERC background table or set in line 125)			
156	Local release to air (kg/d) (will be set to 0 for WDU - see ECHA guidance R.16)			
157	Local release to waste water (kg/d)			
158	Local release to soil (kg/d) (will be set to 0 for WDU - see ECHA guidance R.16)			
159	Regional release (from all uses) to air (kg/d)	6.849315068		
160	Regional release (from all uses) to waste water (kg/d)	6.575342466		
161	Regional release (from all uses) to fresh water directly (kg/d)	1.62739726		
162	Regional release (from all uses) to soil (kg/d)	0.01369863		
163				
164	PHYSICAL-CHEMICAL SUBSTANCE PROPERTIES			
165	Vapour pressure at the temperature of the data set (Pa) - from TIER I			
166	Temperature at which vapour pressure was measured (degrees C)	20		
167	Water solubility at the temperature of the data set (mg.l-1) - from TIER I			
168	Temperature at which solubility was measured (degrees C)	20		
169	Melting point (degrees C)			
170	Solids-water partition coefficient raw sewage sludge (l.kg-1)			
171	Solids-water partition coefficient settled sewage sludge (l.kg-1)			

ECETOC TRA(M) – PECs, RCRs, Msafe

A	B	C	D	E	F
1	2	3	4	5	6
2	ECETOC TRA FLAT DATABASE	1			
3		0	1	2	3
487					
488	Environmental Assessment (including Man via Environment)				
489	----- Plausibility check for regional tonnage -----				
490	PEC				
491	PEC in STP (mg.l-1)		9.467945732		
492	PEC for local freshwater (mg.l-1)		0.946777041		
493	PEC for local freshwater sediment (mg.kg _{dw} -1)		5.223379621		
494	PEC for local soil (mg.kg _{dw} -1)		0.377787529		
495	PEC for local marine water (mg.l-1)		0.094677676		
496	PEC for local marine sediment (mg.kg _{dw} -1)		0.522337805		
497	Total daily intake man via the environment regional (mg.kgdw-1.d-1)		3.95404E-07		
498					
499	RCR				
500	RCR in STP (-)		9.467945732		
501	RCR for local freshwater (-)		0.47338852		
502	RCR for local freshwater sediment (-)		0.746197089		
503	RCR for local terrestrial environment (-)		0.125929176		
504	RCR for local marine water (-)		0.473388378		
505	RCR for local marine sediments (-)		0.746196864		
506	RCR for humans via the environment (-)		#WERT!		
507					
508	Msafe				
509	Msafe in STP (kg.d-1)		264.0488307		
510	Msafe freshwater (kg.d-1)		5281.074409		
511	Msafe freshwater sediments (kg.d-1)		3350.321299		
512	Msafe terrestrial (kg.d-1)		19852.42873		
513	Msafe marine water (kg.d-1)		5281.075999		
514	Msafe marine sediments (kg.d-1)		3350.322308		
515	Msafe human via the environment (kg.d-1)		#WERT!		
516	Municipal STP used?		yes		
517	Removal in STP (fraction)		0.8738		
518	RMM considered in spERC for air emissions and efficiency				
519	RMM considered in spERC for waste water emissions and efficiency				
520	ECETOC TRA FLAT DATABASE - OUTPUT Advanced batch mode				
521	Environmental Assessment (including Man via Environment)				
522	DEFINITION CONCENTRATION				

ECETOC TRA(M) – Erweiterte Ausgabe

Operation mode:			
manual/batch (m/b) automatically set by system	b		Entr
Manual:			
Read ECETOC substance from database		Read	Read
CAS Number	1	Run	Run
Ecetoc Substance Number retrieved	2	Save	Save
to be saved as Ecetoc Substance Number			
Batch:			
Ecetoc Substance Number being processed	1	Run batch	Run
Batch mode extends the number of scenarios per substance from 15 to 60. Entries need to be in the datasheets (direct entries on datasheets or from user interface by the Save function). The release estimation for the environment is also extended beyond ERCs and spERCs to three additional "TIER II" approaches.			
		Run batch - Human health	
		Run batch - Environment	

ECETOC TRA(M) – Erweiterte Ausgabe

A	B	C	D
1	2	3	4
2	ECETOC TRA FLAT DATABASE	1	
3		0	1
520	ECETOC TRA FLAT DATABASE - OUTPUT Advanced batch mode		
521	Environmental Assessment (including Man via Environment)		
522	PREDICTED CONCENTRATIONS		
523	PECs		
524	Regional PEC in surface water (total) (mgc.L-1)		9.69217E-06
525	Regional PEC in sea water (total) (mgc.L-1)		9.40686E-07
526	Regional PEC in air (total) (mgc.m-3)		1.22812E-07
527	Regional PEC in agricultural soil (total)(mgc.kgdwt-1)		8.93983E-07
528	Regional PEC in natural soil (total) (mgc.kgdwt-1)		1.65638E-06
529	Regional PEC in industrial soil (total) (mgc.kgdwt-1)		1.65638E-06
530	Regional PEC in sediment (total) (mgc.kgdwt-1)		4.74052E-05
531	Regional PEC in sea water sediment (total) (mgc.kgdwt-1)		4.62705E-06
532	Annual average local PEC in air (total) (mgc.m-3)		0.001904232
533	Local PEC in surface water during emission episode (dissolved) (mgc.L-1)		0.946777041
534	Annual average local PEC in surface water (dissolved) (mgc.L-1)		0.051887355
535	Local PEC in fresh water sediment during emission episode (mgc.kgdwt-1)		5.223379621
536	Local PEC in sea water during emission episode (dissolved) (mgc.L-1)		0.094677676
537	Annual average local PEC in sea water (dissolved) (mgc.L-1)		0.005188707
538	Local PEC in marine sediment during emission episode (mgc.kgdwt-1)		0.522337805
539	Local PEC in agricultural soil, averaged over 30 days (mgc.kgdwt-1)		0.377787529
540	Local PEC agricultural soil, averaged over 180 days (mgc.kgdwt-1)		0.106097312
541	Local PEC in grass land, averaged over 180 days (mgc.kgdwt-1)		0.035120313
542	PEC for microorganisms in STP (mgc.L-1)		9.467945732
543	PEC for microorganisms in STP with intermittent release (mgc.L-1)		75
544			
545	Secondary poisoning		
546	Environment		
547	Conc. in fish for secondary poisoning in freshwater environment (mgc.kgwwt-1)		0.036587418
548	Conc. in fish for secondary poisoning in marine environment (mgc.kgwwt-1)		0.003658702
549	Conc. in fish-eating predator for marine top predators (mgc.kgwwt-1)		0.000732801
550	Conc. in earthworms for secondary poisoning (mgc.kgwwt-1)		0.085761184
551	Humans		
552	Regional daily dose via inhalatory intake for humans (mgc.kgbw-1.d-1)		3.5089E-08
553	Regional total daily intake for humans (mgc.kgbw-1.d-1)		3.95404E-07
554	Local daily dose via inhalatory intake for humans (mgc.kgbw-1.d-1)		0.000544066
555	Local total daily intake for humans (mgc.kgbw-1.d-1)		0.008496588

ECETOC TRA(M) – Scaling (TIER 2)

A	B	C	D
1	2	3	4
2	ECETOC TRA FLAT DATABASE	1	
3		0	1
760	Scaling output for Environment	Open Scaling output	To populate this section properly, the as
761	GEST tool output		
762	Risk from environmental exposure is driven by release to:		Wastewater
763	Mspc / Msite (kg/d)		2500
764	Receiving Water Dilution (Fresh or Marine)		10
765	Emission days per year		20
766	Wastewater treatment plant flow (m ³ /d)		2000
767	Risk Driving Compartment (Code)		1
768	Release Fraction to Air (including RMM considered in assessment)		0.05
769	Release Fraction to Wastewater (including RMM considered in assessment)		0.06
770	Onsite Removal Efficiency - Air (%)		0
771	Required Removal Efficiency (wastewater)		98.66666667
772	Onsite Removal Efficiency - Wastewater (%)		89.43804677
773	Removal Efficiency Fraction (offsite; STP)		87.37607236
774	Removal Efficiency (total)		98.66666667
775	Msafe (kg/d)		264.0488307
776	Risk-driving RCR - air compartment driven		0.125929176
777	Risk-driving RCR - water compartment driven		9.467945732
778	Risk-driving Compartment Number Code: 1- STP; 2- Freshwater; 3- Freshwater Sediment; 4- Freshwater Secondary Poisoning; 5- Marine Water; 6- Marine Sediment; 7- Marine Secondary Poisoning; 8- Soil; 9- Terrestrial Secondary Poisoning; 10- Humans via Indirect Exposure (primarily inhalation); 11- Humans via Indirect Exposure (primarily ingestion)		
779			

ECETOC TRA(M) – Verfeinerungsansätze

A	B	C	D
1	2	3	4
2	ECETOC TRA FLAT DATABASE	1	
3		0	1
101	Comment on amount used at site if spERC assessment is selected in line 103:		
102	Select approach ERC		WAHR
103	Select approach spERC		FALSCH
104	TIER II Assessment Approaches:		
105	Select approach using SPECIFIC RELEASE FRACTIONS		FALSCH
106	Select approach using MEASURED DATA (releases in kg/day)		FALSCH
107	ECETOC TRA FLAT DATABASE - INPUT TIER 2		
108	Environmental Assessment (including Man via Environment)		
109	Justifications for refined release parameters		
110	Basis used for refinement (e.g. ERC, SPERC)		
111	Fraction of EU tonnage to region (-) - modified in line 78		
112	Daily amount used at site [kg/d]		
113	Release times per year (d/year)		
114	Local release to air - RMM		
115	Local release to air - efficiency of RMM (%)		
116	Local release to sewage - RMM (beyond municipal STP)		
117	Local release to sewage - efficiency of RMM (%) [default for on-site STP is same as municipal STP]		
118	Local release to soil - RMM		
119	Local release to soil - efficiency of RMM (%)		
120	RELEASE ESTIMATION BASED ON SPECIFIC RELEASE FRACTIONS		
121	Comments 1		
122	Comments 2		
123	Daily amount used at site [kg/d] (release fractions)		
124	Release times per year (d/year)		
125	Local release fraction to air		
126	Local release fraction to sewage		
127	Local release fraction to soil		

ECETOC TRA(M) - Spracheinstellungen

A	B	C	D
1	2	3	4
2	ECETOC TRA FLAT DATABASE	1	
3		0	1
101	Comment on amount used at site if spERC assessment is selected in line 103:		
102	Select approach ERC		WAHR
103	Select approach spERC		FALSCH
104	TIER II Assessment Approaches:		
105	Select approach using SPECIFIC RELEASE FRACTIONS		FALSCH
106	Select approach using MEASURED DATA (releases in kg/day)		TRUE FALSE
107	ECETOC TRA FLAT DATABASE - INPUT TIER 2		
108	Environmental Assessment (including Man via Environment)		
109	Justifications for refined release parameters		
110	Basis used for refinement (e.g. ERC, SPERC)		
111	Fraction of EU tonnage to region (-) - modified in line 78		
112	Daily amount used at site [kg/d]		
113	Release times per year (d/year)		
114	Local release to air - RMM		
115	Local release to air - efficiency of RMM (%)		
116	Local release to sewage - RMM (beyond municipal STP)		
117	Local release to sewage - efficiency of RMM (%) [default for on-site STP is same as municipal STP]		

!!!



ECETOC TRA(M) – Freisetzungsanteile (TIER 2)

ECETOC TRA FLAT DATABASE

	1	
	0	1
Comment on amount used at site if spERC assessment is selected in line 103:		
Select approach ERC		FALSCH
Select approach spERC		FALSCH
TIER II Assessment Approaches:		
Select approach using SPECIFIC RELEASE FRACTIONS		WAHR
Select approach using MEASURED DATA (releases in kg/day)		FALSCH

ECETOC TRA FLAT DATABASE - INPUT TIER 2

Environmental Assessment (including Man via Environment)

Justifications for refined release parameters		
Basis used for refinement (e.g. ERC, SPERC)		ERC
Fraction of EU tonnage to region (-) - modified in line 78		
Daily amount used at site [kg/d]		
Release times per year (d/year)		
Local release to air - RMM		
Local release to air - efficiency of RMM (%)		
Local release to sewage - RMM (beyond municipal STP)		
Local release to sewage - efficiency of RMM (%) [default for on-site STP is same as municipal STP]		
Local release to soil - RMM		
Local release to soil - efficiency of RMM (%)		
RELEASE ESTIMATION BASED ON SPECIFIC RELEASE FRACTIONS		
Comments 1		
Comments 2		
Daily amount used at site [kg/d] (release fractions)		2500
Release times per year (d/year)		20
Local release fraction to air		0.05
Local release fraction to sewage		0.006337172
Local release fraction to soil		0.0001

ECETOC TRA(M) – Erweiterte Ausgabe (TIER 2)

A	B	C	D
1	2	3	4
2	ECETOC TRA FLAT DATABASE	1	
3		0	1
487			
488	Environmental Assessment (including Man via Environment)		
489	----- Plausibility check for regional tonnage -----		
490	PEC		
491	PEC in STP (mg.l-1)		1
492	PEC for local freshwater (mg.l-1)		0.099998456
493	PEC for local freshwater sediment (mg.kg _{dwt} -1)		0.551692612
494	PEC for local soil (mg.kg _{dwt} -1)		0.04018765
495	PEC for local marine water (mg.l-1)		0.079212516
496	PEC for local marine sediment (mg.kg _{dwt} -1)		0.437016346
497	Total daily intake man via the environment regional (mg.kgdw-1.d-1)		1.43082E-07
498			
499	RCR		
500	RCR in STP (-)		1
501	RCR for local freshwater (-)		0.049999228
502	RCR for local freshwater sediment (-)		0.07881323
503	RCR for local terrestrial environment (-)		0.013395883
504	RCR for local marine water (-)		0.396062581
505	RCR for local marine sediments (-)		0.624309066
506	RCR for humans via the environment (-)		#WERT!
507			
508	Msafe		
509	Msafe in STP (kg.d-1)		2500
510	Msafe freshwater (kg.d-1)		50000.77193
511	Msafe freshwater sediments (kg.d-1)		31720.56256
512	Msafe terrestrial (kg.d-1)		186624.4963
513	Msafe marine water (kg.d-1)		6312.133787
514	Msafe marine sediments (kg.d-1)		4004.426871
515	Msafe human via the environment (kg.d-1)		#WERT!

ECETOC TRA(M) – Scaling output (TIER 2)

A	B	C	D
1	2	3	4
2	ECETOC TRA FLAT DATABASE	1	
3		0	1
651	Soil		
652	Terrestrial RCR		2.78379E-07
653			
760	Scaling output for Environment	Open Scaling output	To populate this section properly, the ass
761	GEST tool output		
762	Risk from environmental exposure is driven by release to:		Wastewater
763	Mspc / Msite (kg/d)		2500
764	Receiving Water Dilution (Fresh or Marine)		10
765	Emission days per year		20
766	Wastewater treatment plant flow (m3/d)		2000
767	Risk Driving Compartment (Code)		1
768	Release Fraction to Air (including RMM considered in assessment)		0.05
769	Release Fraction to Wastewater (including RMM considered in assessment)		0.006337172
770	Onsite Removal Efficiency - Air (%)		0
771	Required Removal Efficiency (wastewater)		0
772	Onsite Removal Efficiency - Wastewater (%)		0
773	Removal Efficiency Fraction (offsite; STP)		87.37607236
774	Removal Efficiency (total)		87.37607236
775	Msafe (kg/d)		2500
776	Risk-driving RCR - air compartment driven		0.013395883
777	Risk-driving RCR - water compartment driven		1
778			
779	Risk-driving Compartment Number Code: 1- STP; 2 - Freshwater; 3 - Freshwater Sediment; 4 - Freshwater Secondary Poisoning; 5 - Marine Water; 6 - Marine Sediment; 7 - Marine Secondary Poisoning; 8 - Soil; 9 - Terrestrial Secondary Poisoning; 10 - Humans via Indirect Exposure (primarily inhalation); 11 - Humans via Indirect Exposure (primarily ingestion)		

ECETOC TRA(M) – Sonstiges (PNEC Herleitung)

A	B	C	D
2	ECETOC TRA FLAT DATABASE	1	
176	Rate constant for degradation in STP (d-1)		
177	Total rate constant for degradation in surface water at env. Temp (d-1)		
178	Total rate constant for degradation in marine water at env. Temp (d-1)		
179	Total rate constant for degradation in bulk sediment at env. Temp (d-1)		
180	Rate constant for degradation in air (d-1)		
181	Total rate constant for degradation in bulk soil at env. Temp (d-1)		
182			
183	Environmental Assessment - PNEC derivation	Open PNEC derivation area	
184			
444	ECETOC TRA FLAT DATABASE - OUTPUT TIER 1		
445			
446	Human Health - Workers		
447	Estimate of exposures		
448	Long-term Inhalative Exposure Estimate (ppm volatiles/mg.m-3 solids)		#NV
449	Long-term Inhalative Exposure Estimate (mg/m3)		#NV
450	Long-term Dermal Exposure Estimate (mg/kg/day)		#NV
451	Short-term Inhalation Exposure Estimate (mg/m3)		#NV
452	Long-term Local Dermal Exposure Estimate (µg/cm2)		#NV
453	Notes/comments on exposure estimates:		#NV
454	Risk characterization		
455	Risk Characterisation Ratio - Long-term Inhalation		No Inhalation DNEL
456	Risk Characterisation Ratio - Long-term Dermal		No Dermal DNEL
457	Risk Characterisation Ratio - Long-term Total Exposure		No Dermal DNEL
458	Risk characterisation Ratio - Short-term Inhalation		No short-term DNEL
459	Risk characterisation Ratio - Long-term Local Dermal		No Local Dermal DNEL
460	Human Health - consumer		

ECETOC TRA(M) - Testdateneingabe

A	B	C
2	ECETOC TRA FLAT DATABASE	1
181	Total rate constant for degradation in bulk soil at env. Temp (d-1)	
182		
183	Environmental Assessment - PNEC derivation	Open PNEC derivation area
184		
185	TOXICOLOGICAL SUBSTANCE PROPERTIES	
186	Toxicity to micro-organisms (mg.l-1)	
187	Respiration inhibition EU Annex V C.11, OECD 209	
188	EC50 for micro-organisms in an STP	
189	EC10 for micro-organisms in an STP	
190	NOEC for micro-organisms in an STP	
211	Aquatic toxicity	
212	Fresh water (mg.l-1)	
213	LC50 for fish	
214	L(E)C50 for crustaceans	
215	EC50 for algae	
216	LC50 for additional taxonomic group	
217	NOEC for fish	
218	NOEC for crustaceans	
219	NOEC for algae	
220	NOEC for additional taxonomic group 1	
221	NOEC for additional taxonomic group 2	
222	NOEC for additional taxonomic group 3	

ECETOC TRA(M) – Ausgabe für den CSR

A	B	C	D
2	ECETOC TRA FLAT DATABASE	1	
803	NEW ECHA CSR Template		
804	Local concentrations for MvE - oral route		
805	Drinking water		2.22E-02
806	Fish		7.73E-03
807	Leaf crops		4.66E-02
808	Root crops		2.16E-02
809	Meat		3.64E-06
810	Milk		3.64E-05
812	Regional concentrations for MvE - oral route		
813	Drinking water		1.62E-06
814	Fish		1.88E-06
815	Leaf crops		2.96E-06
816	Root crops		1.57E-06
817	Meat		2.41E-10
818	Milk		2.41E-09
820	Local contribution to oral route (dose)		
821	Drinking water		6.35E-04
822	Fish		1.27E-05
823	Leaf crops		8.00E-04
824	Root crops		1.19E-04
825	Meat		1.57E-08
826	Milk		2.92E-07
828	Regional contribution to oral route (dose)		
829	Drinking water		4.62E-08
830	Fish		3.08E-09
831	Leaf crops		5.07E-08
832	Root crops		8.61E-09
833	Meat		1.04E-12
834	Milk		1.93E-11

ECETOC TRA(M) – CSR Template



<http://echa.europa.eu/de/support/guidance-on-reach-and-clp-implementation/formats>

Formate

Formats for Industry | Formats for Authorities

REACH

The following forms and templates, to be used in the context of REACH, can be downloaded from this webpage.

▼ Templates for a Chemical Safety Report (CSR)

- Chemical Safety Report - (Section 9 and 10) for non PBT/vPvB substances**
 - The CSR template (section 9 and 10) suggests how the information as required in Annex I of REACH can be reported.
 - For section 1 to 8 of the CSR it is suggested to report the information according to the structure generated by the IUCLID CSR plug-in.
 - An example of how the information can be reported for the full CSR is available [here](#) - (see [Illustrative CSR example](#)).

ECETOC TRA(M) – CSR (Abschnitt MvE)

CHEMICAL SAFETY REPORT TEMPLATE

CHEMICAL SAFETY REPORT

Template for Part B section 9 and for non PBT or vPvB substances
(to be merged with Part A and Part 8)

CHEMICAL SAFETY REPORT TEMPLATE

Table 8. Contribution to oral intake for man via the environment from local contribution

Type of food	Estimated daily dose	Concentration in food
Drinking water		
Fish		
Leaf crops		
Root crops		
Meat		
Milk		

Conclusion on risk characterisation:

9.1.2 Worker contributing scenario 1

9.1.2.1 Conditions of use

ECETOC TRA(M) – Datenübertrag

A	B	C	D
2	ECETOC TRA FLAT DATABASE		
803	NEW ECHA CSR Template	1	
804	Local concentrations for MVE - oral route		
805	Drinking water		2.22E-02
806	Fish		7.73E-03
807	Leaf crops		4.66E-02
808	Root crops		2.16E-02
809	Meat		3.64E-06
810	Milk		3.64E-05
812	Regional concentrations for MVE - oral route		
813	Drinking water		2.22E-02
814	Fish		7.73E-03
815	Leaf crops		4.66E-02
816	Root crops		2.16E-02
817	Meat		3.64E-06
818	Milk		3.64E-05
820	Local contribution to oral route (dose)		
821	Drinking water		6.35E-04
822	Fish		1.27E-05
823	Leaf crops		8.00E-04
824	Root crops		1.19E-04
825	Meat		1.57E-08
826	Milk		2.92E-07
828	Regional contribution to oral route (dose)		
829	Drinking water		
830	Fish		
831	Leaf crops		
832	Root crops		
833	Meat		
834	Milk		

CHEMICAL SAFETY REPORT TEMPLATE

Table 8. Contribution to oral dose for man via the environment from local contribution

Type of food	Estimated daily dose	Concentration in food
Drinking water	6.35E-04	2.22E-02
Fish	1.27E-05	7.73E-03
Leaf crops	8.00E-04	4.66E-02
Root crops	1.19E-04	2.16E-02
Meat	1.57E-08	3.64E-06
Milk	2.92E-07	3.64E-05

ECETOC TRA(M) – Abspeichern/Schließen

Microsoft Excel interface showing the ECETOC TRA(M) add-in menu and a data table.

The menu bar includes: Start, Einfügen, Seitenlayout, Formeln, Daten, Überprüfen, Ansicht, **Add-Ins**, Acrobat.

The **ecetocTRAM** dropdown menu is open, showing options: **Save and Exit**, quasi-dynamic computation, and quasi-dynamic computation.

The formula bar shows: D805, 0.0222391800992038

A	B	C	D
2	ECETOC TRA FLAT DATABASE	1	
801	801 Risk Driving RCR - Water compartment driven		1
803	803 NEW ECHA CSR Template		
804	804 Local concentrations for MvE - oral route		
805	805 Drinking water		2.22E-02
806	806 Fish		7.73E-03
807	807 Leaf crops		4.66E-02
808	808 Root crops		2.16E-02
809	809 Meat		3.64E-06
810	810 Milk		3.64E-05
811			
812	812 Regional concentrations for MvE - oral route		
813	813 Drinking water		1.27E-05
814	814 Fish		2.57E-06
815	815 Leaf crops		3.28E-06
816	816 Root crops		1.24E-05
817	817 Meat		7.46E-10
818	818 Milk		7.46E-09
819			
820	820 Local contribution to oral route (dose)		

ECETOC TRA(M) – Alternativen

CONSULTANTS FOR
CFCs
CHEMICAL SAFETY



CHESAR

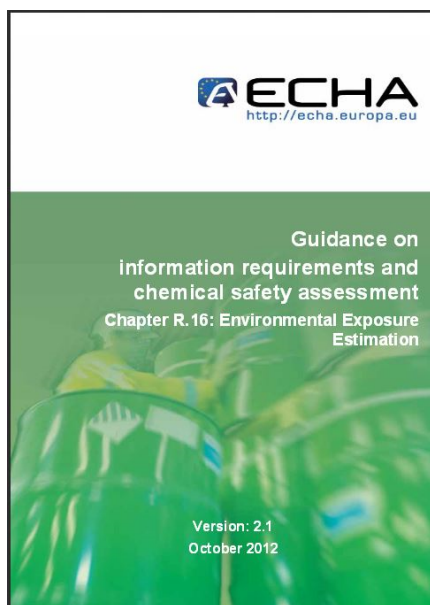
<https://chesar.echa.europa.eu/de>



EUSES

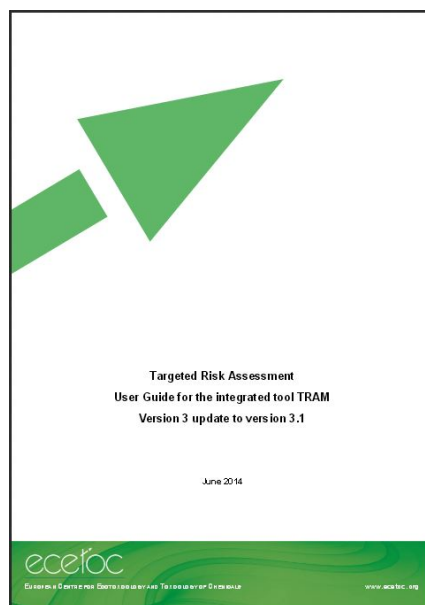
<https://ec.europa.eu/jrc/en/scientific-tool/european-union-system-evaluation-substances>

ECETOC TRA(M) – Zentrale Publikationen



ECHA Guidance R16

<http://echa.europa.eu/web/guest/guidance-on-information-requirements-and-chemical-safety-assessment>



**ECETOC TRA(M)
Handbuch**

<http://www.ecetoc.org/tra>



**ECETOC TRA(M)
Hintergrundpapier**

<http://www.ecetoc.org/tra>



Vielen Dank für Ihre Aufmerksamkeit!

Fragen? Schulungs- oder Beratungsbedarf?

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