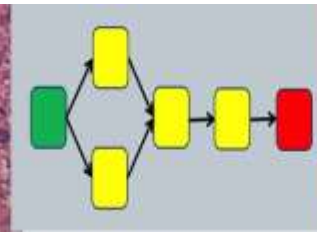
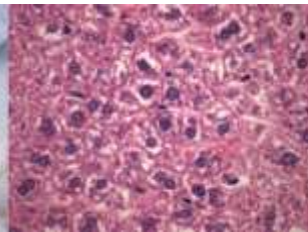
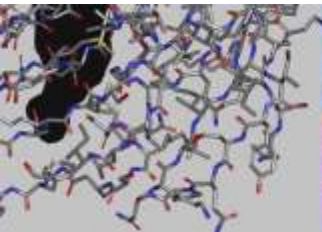




# Introduction to the EuroMix model and data platform



# Content

- 1. How to login**
- 2. Support and help function**
- 3. How to get connected to data needed to perform exposure or hazard assessment**
- 4. How to perform an action in a workspace (example dietary exposure assessment)**
- 5. Short overview of other actions**



# Login via MCRA 9 beta



1. [Make sure you are using Google Chrome](#)
2. [Copy https://mcra-test.rivm.nl](https://mcra-test.rivm.nl) in Google Chrome
3. Click on EuroMix toolbox to get access to the EuroMix model test toolbox



## MCRA 9.0 Beta

MCRA stands for **Monte Carlo Risk Assessment**.

MCRA is a web-based system for probabilistic exposure and risk assessment of chemicals in the diet.

The MCRA system brings together statistical models, shared data and data uploaded by the user.

MCRA also provides **Cumulative Exposure Assessment** for chemicals grouped in a Cumulative Assessment Group for which a single health effect is considered relevant.

Optionally exposure from other routes can be added in an **Aggregate Exposure Assessment**.

MCRA was developed in [EU project ACROPOLIS](#) and is further developed in actions for EFSA and in [EU project EuroMix](#).

[Publications and reports using MCRA](#)

## Login

Username

Password

[Go to registration](#)

LOGIN

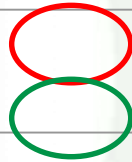
[Go to the EuroMix Test Toolbox](#)



# Login EuroMix toolbox



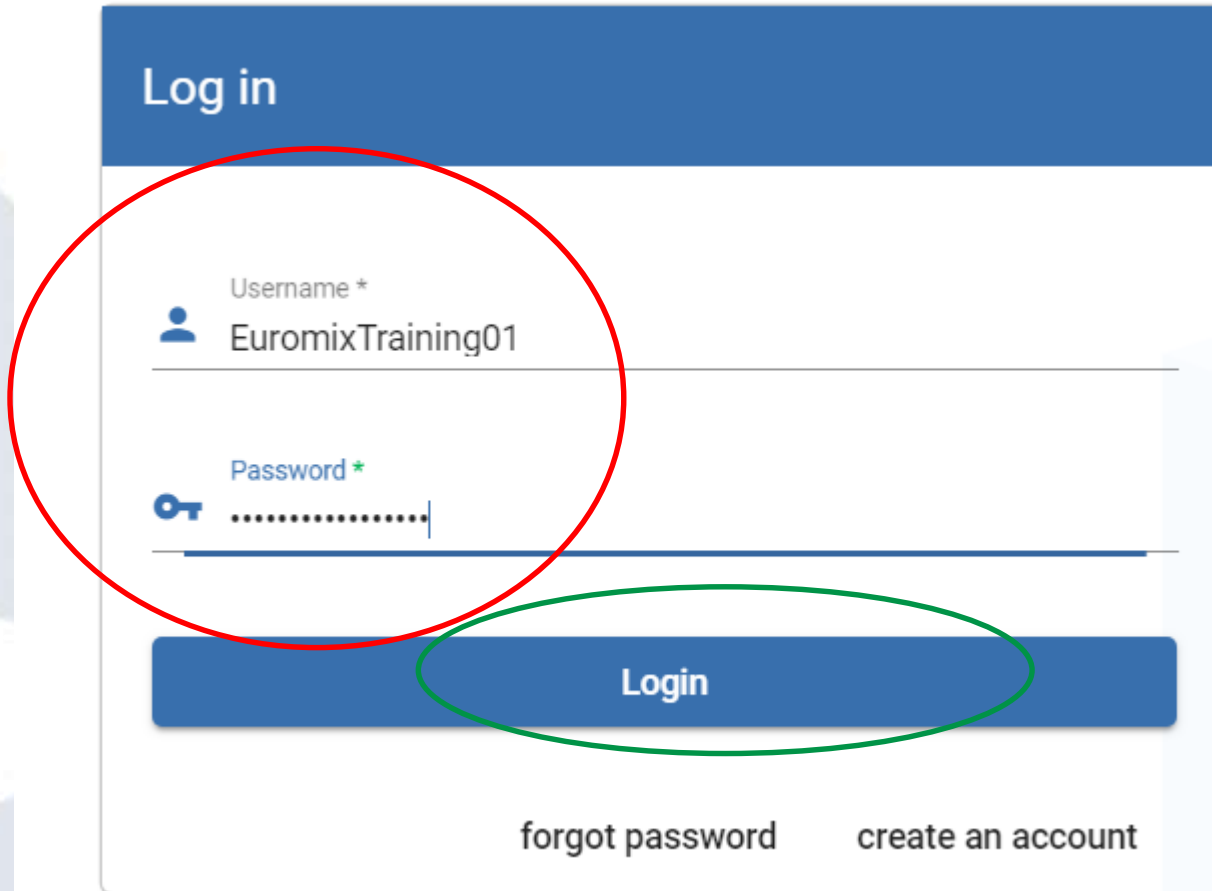
1. Log in: click on
2. Then log in





A screenshot of the EuroMix toolbox web application. The top navigation bar is blue and contains the text "MCRA 9 - EuroMix toolbox" and "Exposure, Hazard &amp; Risk Assessment". On the right side of the navigation bar, there is a user profile icon circled in red. Below the navigation bar, a dropdown menu is open, showing "Log in" (circled in green) and "Register" (with a plus icon). The main content area features a header image of purple grapes. Below the image, the text reads: "Welcome to MCRA 9 (beta), the EuroMix toolbox" followed by "Chemical exposure, hazard and risk assessment". A paragraph explains that every day, we are exposed to a mixture of multiple chemicals via food intake, inhalation and dermal contact. Another paragraph states that the EuroMix project will deliver a mixture test strategy and test instruments using novel techniques as recently proposed by the Joint Research Centre (JRC) of the European Commission. The background of the page has a large, faint "R" watermark.



# Insert username password

A screenshot of the EuroMix login interface. At the top is a blue header with the text "Log in". Below this are two input fields: "Username \*" with a person icon and the text "EuromixTraining01", and "Password \*" with a key icon and a masked password ".....". A blue "Login" button is positioned below the password field. At the bottom of the form are two links: "forgot password" and "create an account". A red oval highlights the username and password fields, and a green oval highlights the "Login" button.

1. Login with the username and password provided by the tutor 
2. Login 



# Content

1. How to login
- 2. Support and help function**
3. How to get connected to data needed to perform exposure or hazard assessment
4. How to perform an action in a workspace (example dietary exposure assessment)
5. Short overview of other actions



# Data folders

1. Click on +



## Welcome to MCRA 9 (beta), the EuroMix toolbox

Chemical exposure, hazard and risk assessment

Typical **action types** which this system can perform are: dietary exposure assessment, hazard dose assessment and risk assessment. Actions are structured in a network of modular calculators [see Overview].

You have to organize your work in one or more **workspaces**. The work consists of specifying **tasks** of a specific action type. Tasks may need subtasks of other action types.

After running a task, **outputs** are available. Outputs are in the form of screen reports and print reports, and may also include data that may be useful as input in other tasks.

All tasks need input data, and some tasks produce output data. Data, but also saved tasks and outputs, are organised in a data repository, which includes shared items from other users and user groups.

Start by clicking **Workspaces** or **Data**, or use wizard options

WORKSPACES

DATA



# Basic input for dietary exposure assessment

- Description of food, substances, recipes etc. (secondary data)
- Food consumption data
- Concentration data
- For multiple chemicals also effect data
- Hazard data translated to Relative Potency Factors (RPFs)



## Optional

- Processing factors (e.g. peeling, cooking, juicing)
- Variability factors (correction composite samples)
- Expected or known percentage agricultural use (occurrence patterns)





# Data folders

1. Click on data 
2. The data folder will be unfolded (see second screenshot)  
You will see EuroMix Training01 which is your own folder. You can upload your own files on this folder. For the training you click on EuroMix Training 

 MCRA 9 - EuroMix toolbox  
Exposure, Hazard & Risk Assessment

☰ Data / EuromixTraining01

Name ▾

Version

 ↑ (Data)

 MCRA 9 - EuroMix toolbox  
Exposure, Hazard & Risk Assessment

☰ Data





Name ▾

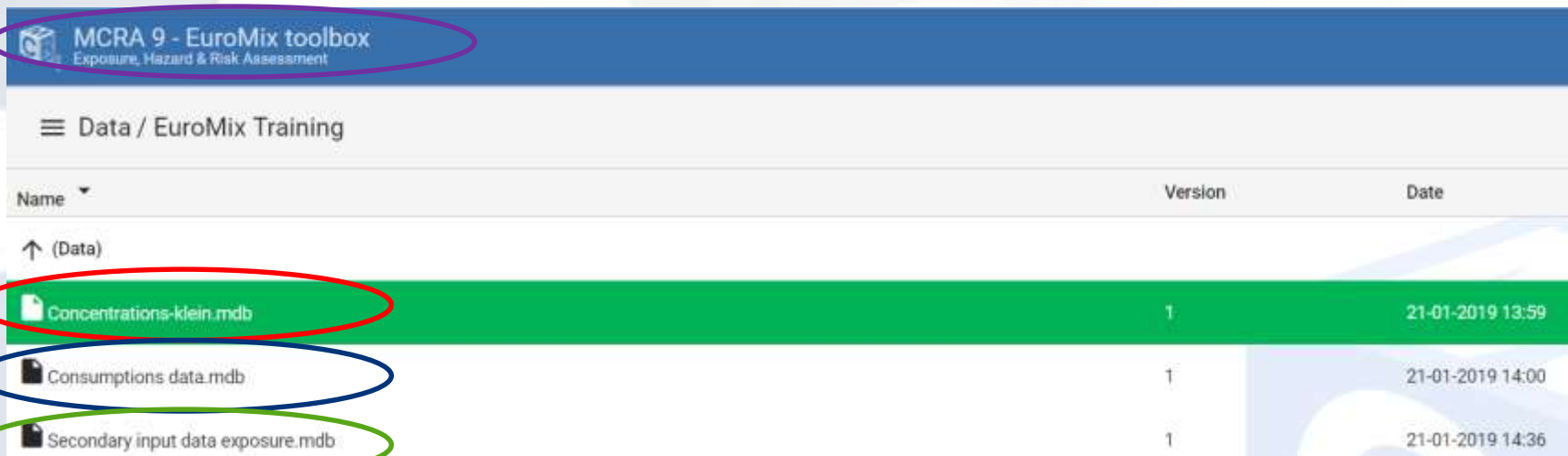
  EuroMix Training

 EuromixTraining01






# Data folders

1. The shared folder contains Concentration data 
2. Consumption data 
3. Secondary input data needed for the exposure assessment (e.g. codes and names of foods, substances, relative potency factors or hazard doses etc.) 
4. When the input data is understood, go to EuroMix toolbox main page by clicking on MCRA 9 – EuroMix toolbox 



MCRA 9 - EuroMix toolbox  
Exposure, Hazard & Risk Assessment

≡ Data / EuroMix Training

Name	Version	Date
↑ (Data)		
 Concentrations-klein.mdb	1	21-01-2019 13:59
 Consumptions data.mdb	1	21-01-2019 14:00
 Secondary input data exposure.mdb	1	21-01-2019 14:36

# Actions needs to be done in workspaces EuroMix

1. Click on workspaces and create a new workspace



## Welcome to MCRA 9 (beta), the EuroMix toolbox

Chemical exposure, hazard and risk assessment

Typical **action types** which this system can perform are: dietary exposure assessment, hazard dose assessment and risk assessment. Actions are structured in a network of modular calculators [see Overview].

You have to organize your work in one or more **workspaces**. The work consists of specifying **tasks** of a specific action type. Tasks may need subtasks of other action types.

After running a task, **outputs** are available. Outputs are in the form of screen reports and print reports, and may also include data that may be useful as input in other tasks.

All tasks need input data, and some tasks produce output data. Data, but also saved tasks and outputs, are organised in a data repository, which includes shared items from other users and user groups.

Start by clicking **Workspaces** or **Data**, or use wizard options

**WORKSPACES**

DATA



# Create a new workspace

1. Click on + and a new window pops up



 MCRA 9 - EuroMix toolbox  
Exposure, Hazard & Risk Assessment

Workspaces

Name ▼

Tags

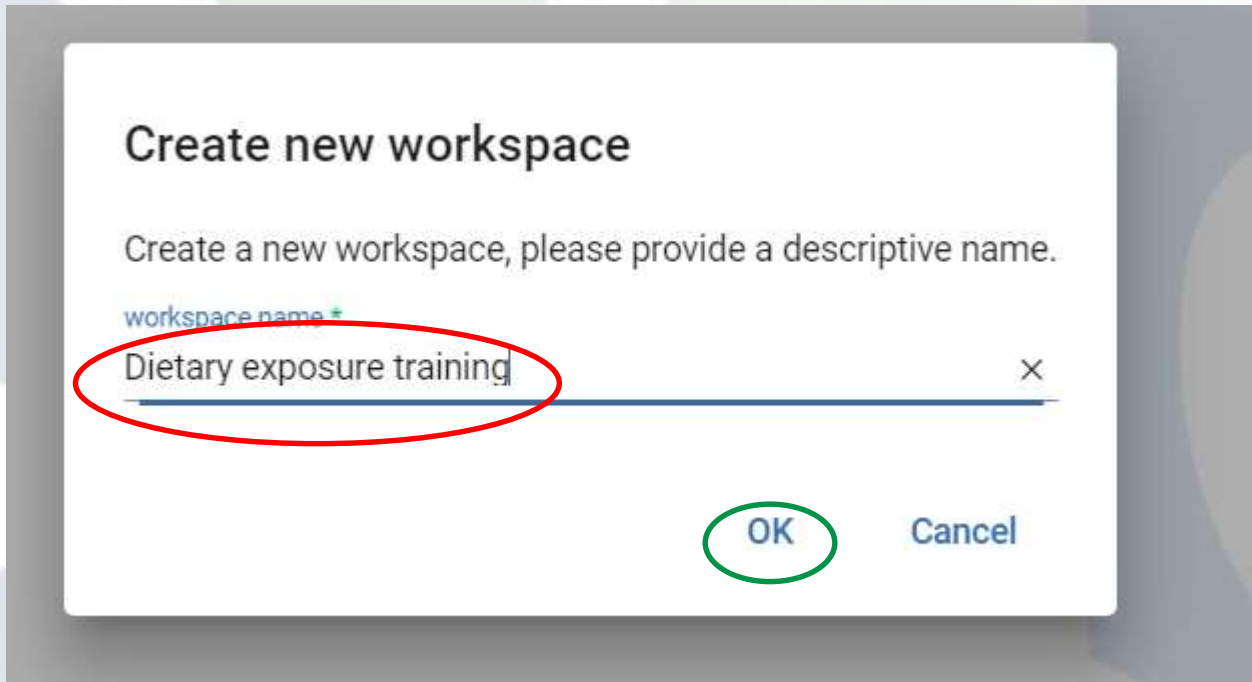


# Create a new workspace (2)

1. Insert a name for the new workspace



2. Click on ok

A screenshot of a dialog box titled "Create new workspace". The dialog contains the text "Create a new workspace, please provide a descriptive name." followed by a text input field. The input field contains the text "Dietary exposure training" and is highlighted with a red circle. Below the input field are two buttons: "OK" (highlighted with a green circle) and "Cancel".

**Create new workspace**

Create a new workspace, please provide a descriptive name.

workspace name \*

Dietary exposure training

OK Cancel



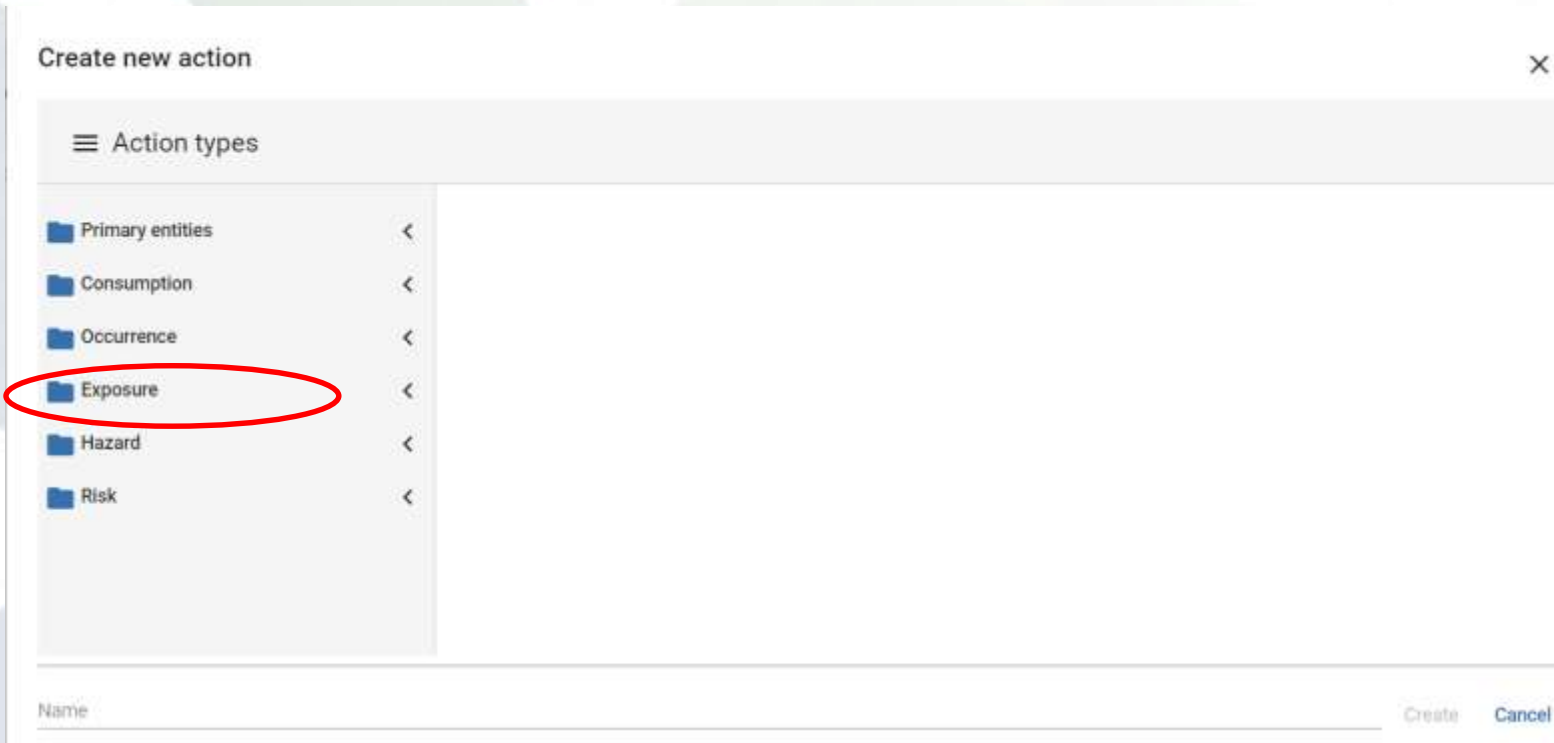
# Create an action in the workspace

1. Click on + and a new window pops up 

A screenshot of the EuroMix software interface. The top blue header bar contains the text "MCRA 9 - EuroMix toolbox / Dietary exposure t..." and "Exposure, Hazard & Risk Assessment workspace". Below this is a navigation bar with four tabs: "Actions", "Data", "Results", and "Properties". The "Actions" tab is selected. The main content area is titled "Workspace actions" and contains the text "This workspace does not contain actions." A red circle highlights a green plus sign icon in the bottom right corner of the interface.

# Create an action in the workspace (2)

1. Create a new action Exposure

A screenshot of a software interface titled "Create new action" with a close button (X) in the top right corner. Below the title bar is a header "Action types" with a hamburger menu icon. A list of action types is displayed: "Primary entities", "Consumption", "Occurrence", "Exposure", "Hazard", and "Risk". Each item has a blue folder icon and a right-pointing arrow. The "Exposure" item is circled in red. At the bottom of the dialog, there is a "Name" input field, and "Create" and "Cancel" buttons are on the right.

# Create an action in the workspace (2)



1. Create a new action type Dietary exposure



Create new action ×

☰ Action types

- Primary entities <
- Consumption <
- Occurrence <
- Exposure <
- Hazard <
- Risk <

### Exposure

- ⚙️ Consumptions per food as measured
- ⚙️ Dietary exposure screening
- ⚙️ **Dietary exposures**
- ⚙️ Exposure mixtures
- ⚙️ Exposures
- ⚙️ Human monitoring analysis

Name \_\_\_\_\_ Create Cancel





# Create an action in the workspace (3)



1. Insert a name for the action 'Dietary exposure training'



2. Click on create



## Create new action



☰ Action type: Dietary exposures

General

Calculation

Uncertainty sources

Output settings

Primary entities <

Consumption <

Occurrence <

Exposure <

Hazard <

Risk <

### Dietary exposures module

Scope: Populations Foods Substances Effects

Calculation module. Dietary exposures are calculated from Consumptions per food-as-measured and from Concentration models. Optionally, also Processing factors and Food unit concentration models are applied.

Name: Dietary exposures training



Create

Cancel



# Create dietary exposure action type



1. Provide a name to the new action e.g. 'dietary exposure training' 
2. Create the new action type 

Create new action ×

☰ Action type: Dietary exposures

- Primary entities <
- Consumption <
- Occurrence <
- Exposure <
- Hazard <
- Risk <

General Calculation Uncertainty sources Output settings

### Dietary exposures module




Scope: **Population** **Foods** **Substances** **Effects**

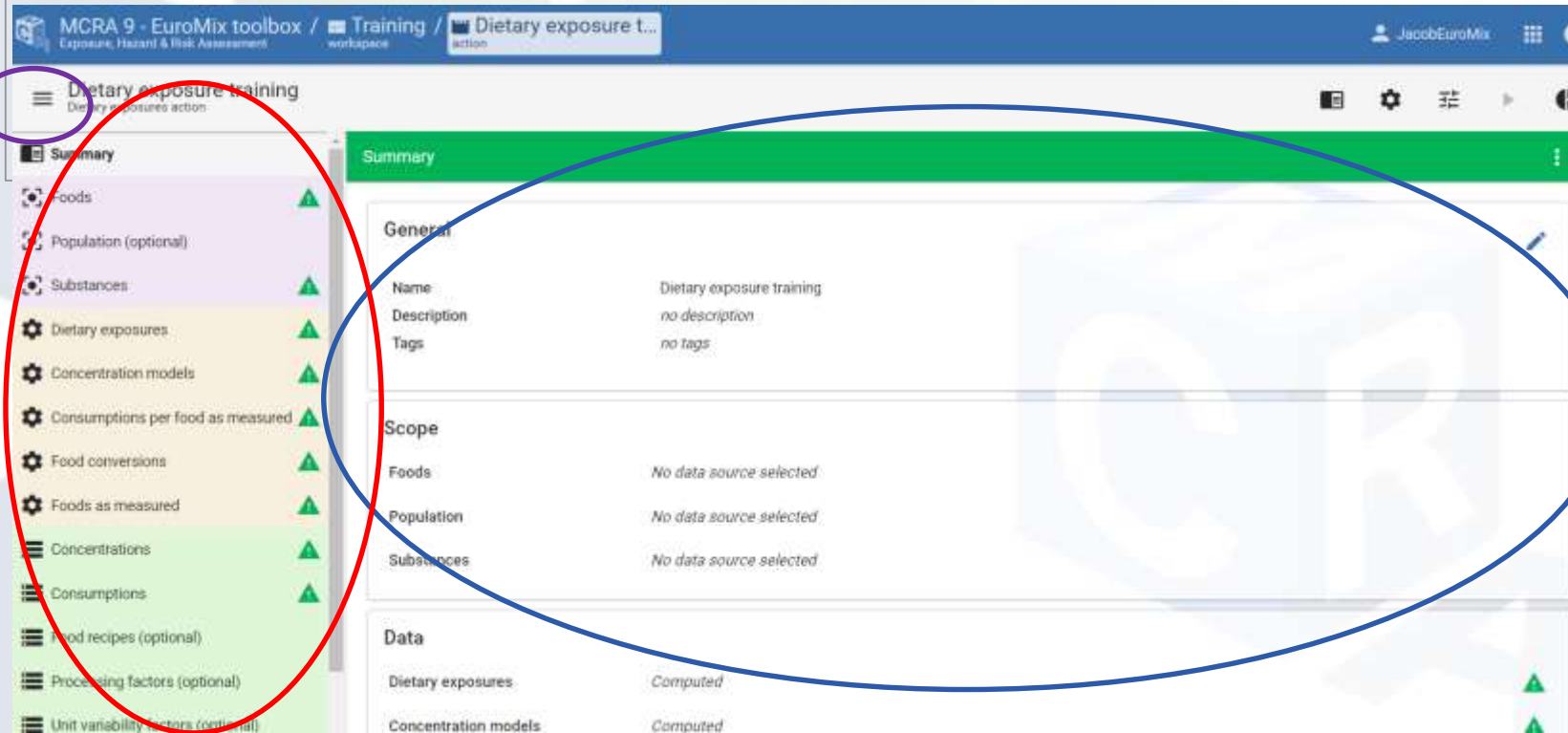
Calculation module. Dietary exposures are calculated from Consumptions per food-as-measured and from Concentration models. Optionally, also Processing factors and Food unit concentration models are applied.

Name: Dietary exposures Create Cancel



# Start dietary exposure assessment

1. You see a panel at the left for navigation 
2. The panel on the right is for selecting input data needed for the scope of your assessment and selecting settings for the model run 
3. The left panel is sometimes confusing, you can close it down 



The screenshot shows the 'Dietary exposure training' configuration screen. The left navigation panel is circled in red, and the main configuration area is circled in blue.

**Navigation Panel (Left):**

- Summary
- Foods
- Population (optional)
- Substances
- Dietary exposures
- Concentration models
- Consumptions per food as measured
- Food conversions
- Foods as measured
- Concentrations
- Consumptions
- Food recipes (optional)
- Processing factors (optional)
- Unit variability factors (optional)

**Main Configuration Panel (Right):**

**Summary**

**General**

Name	Dietary exposure training
Description	no description
Tags	no tags

**Scope**

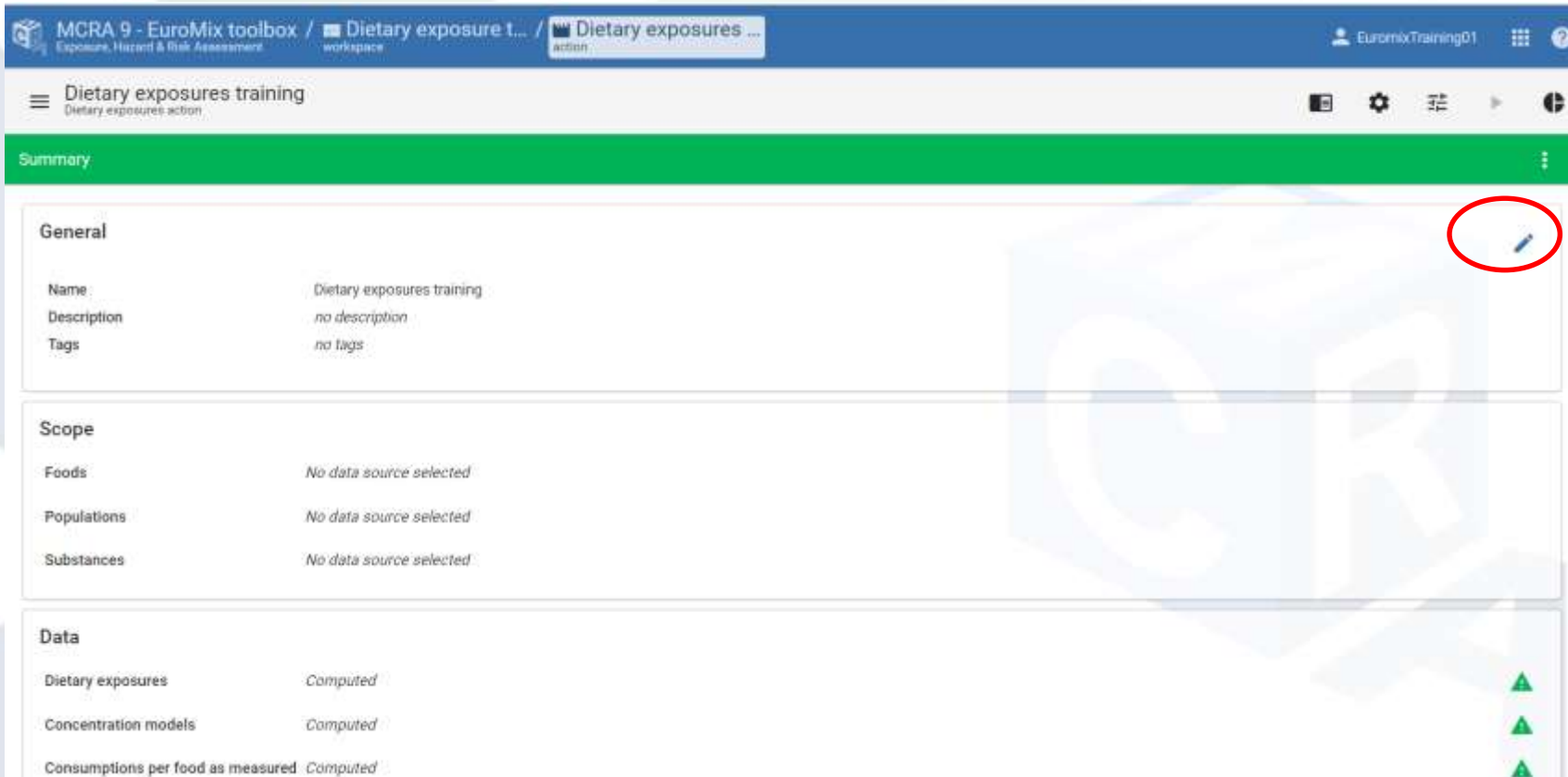
Foods	No data source selected
Population	No data source selected
Substances	No data source selected

**Data**

Dietary exposures	Computed
Concentration models	Computed

# Overview of work to be done

1. You entered the summary overview. Click on the pencil and you can insert a name for your exposure assessment output



MCRA 9 - EuroMix toolbox / Dietary exposure t... / Dietary exposures ...  
Exposure, Hazard & Risk Assessment / workspace / action

EuroMixTraining01

Dietary exposures training  
Dietary exposures action

Summary

**General**

Name	Dietary exposures training
Description	no description
Tags	no tags

**Scope**





Foods	No data source selected
Populations	No data source selected
Substances	No data source selected

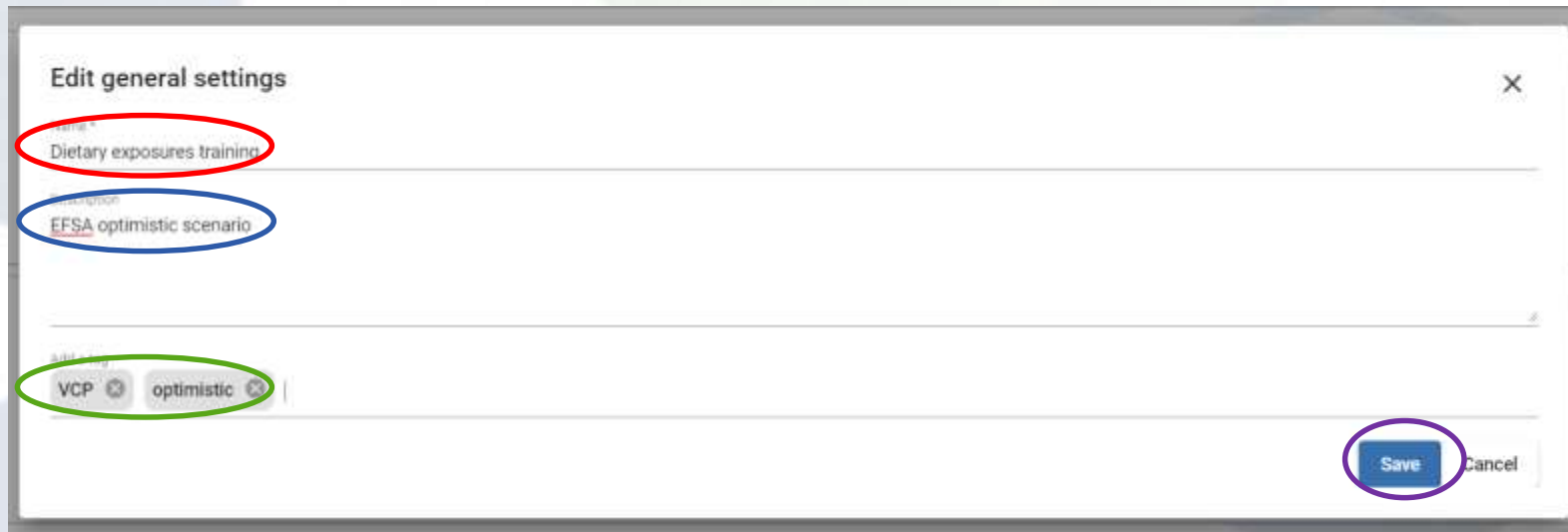
**Data**

Dietary exposures	Computed	▲
Concentration models	Computed	▲
Consumptions per food as measured	Computed	▲



# Insert name, description and tags

1. Insert or adjust name 
2. Insert description 'EFSA optimistic scenario' 
3. Insert tags 'VCP' is the consumption data used and 'optimistic' is the calculation method. You can insert more tags 
4. Save 



**Edit general settings** ×

Name  
Dietary exposures training

Description  
EFSA optimistic scenario

Add tags  
VCP optimistic

Save Cancel

# Navigate via the icons on top of your screen



1. Go to action section

The screenshot shows the top navigation bar of the EuroMix software. The bar is blue and contains the text "MCRA 9 - EuroMix toolbox / Dietary exposure t... / Dietary exposures ...". On the right side of the bar, there are several icons: a user profile icon, a grid icon, and a question mark icon. Below the bar, there is a white navigation menu with a hamburger menu icon and the text "Dietary exposures training". To the right of the menu, there are four icons: a square icon, a gear icon (circled in red), a list icon, and a play icon. Below the navigation bar, there is a green header for the "Summary" section. The main content area is divided into three sections: "General", "Scope", and "Data".


General	
Name	Dietary exposures training
Description	no description
Tags	no tags

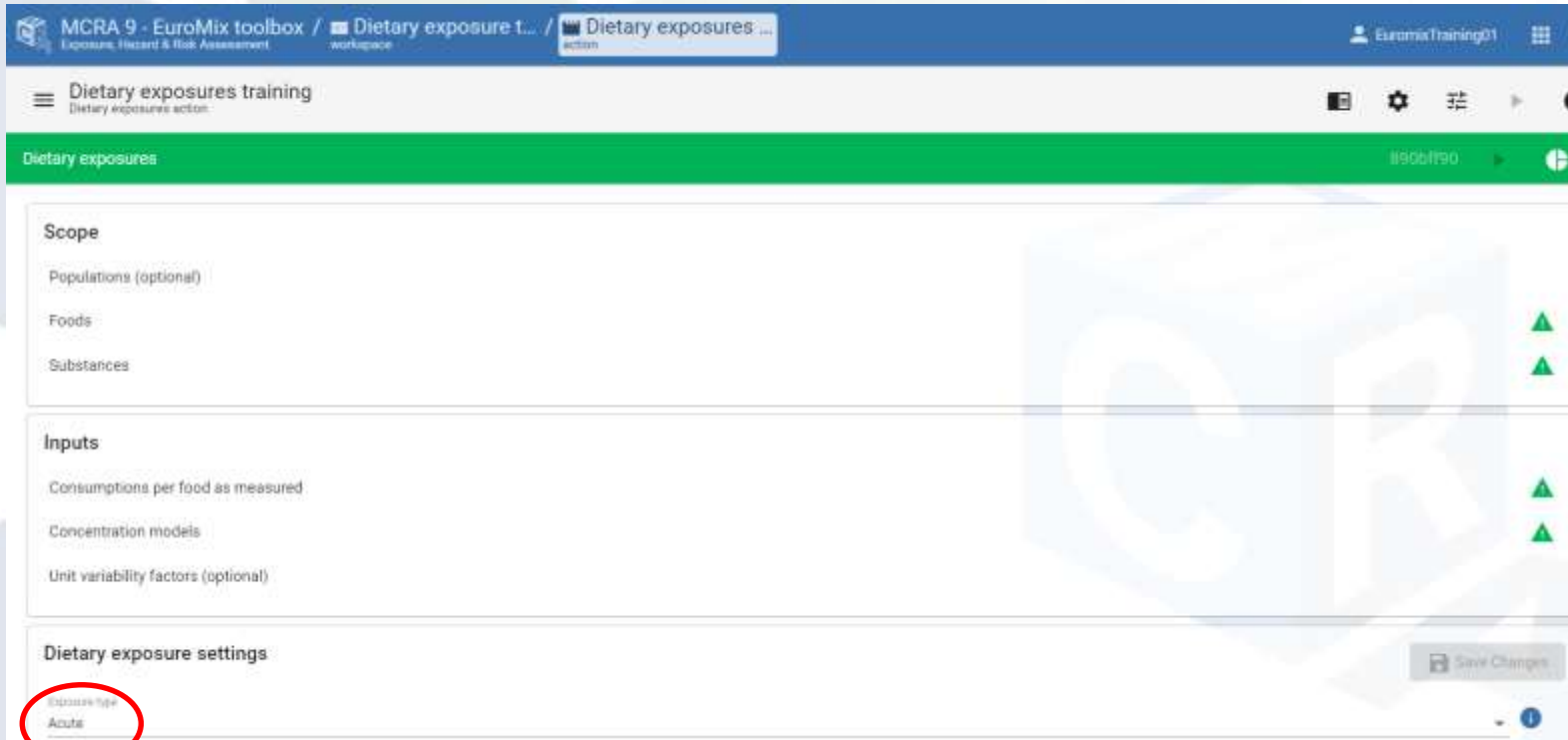
Scope	
Foods	No data source selected
Populations	No data source selected
Substances	No data source selected

Data	
Dietary exposures	Computed
Concentration models	Computed
Consumptions per food as measured	Computed



# Start adjusting the settings




1. Decide whether you will perform an acute or chronic assessment, which depends on the toxicity of your substances. Change to chronic, you will perform an exposure assessment addressing liver steatosis, which is a chronic effect.
2. Change acute to chronic 

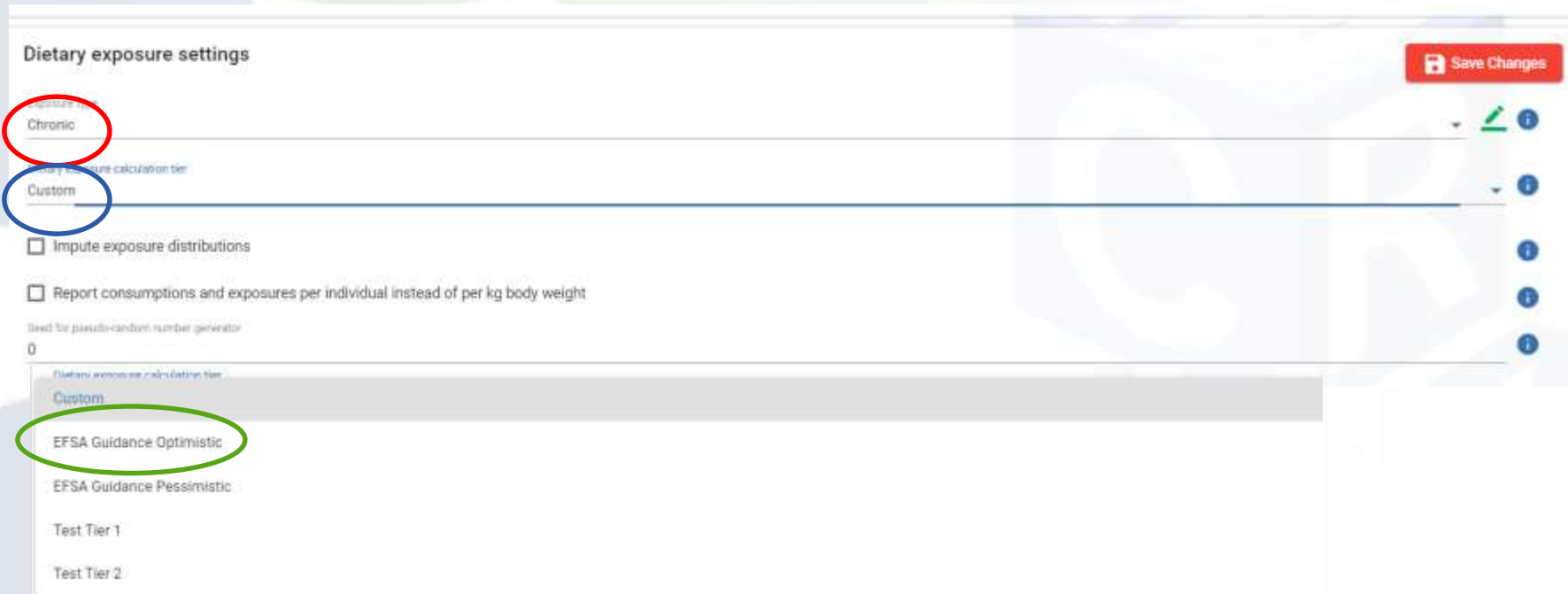


The screenshot shows the 'Dietary exposures training' interface. The 'Dietary exposure settings' section is visible at the bottom, with the 'Acute' option selected and circled in red. The interface includes a navigation bar at the top with the text 'MCRA 9 - EuroMix toolbox / Dietary exposure t... / Dietary exposures...' and a user profile 'EuroMixTraining01'. The main content area is divided into three sections: 'Scope' (Populations (optional), Foods, Substances), 'Inputs' (Consumptions per food as measured, Concentration models, Unit variability factors (optional)), and 'Dietary exposure settings' (Acute, Chronic). A 'Save Changes' button is located in the bottom right corner of the settings section.



# Adjust more settings

1. Scroll down to dietary settings
2. Make sure you selected chronic 
3. Click on custom 
4. A pop-up window appears on your screen. Select EFSA optimistic 



Dietary exposure settings

Chronic

Custom

Impute exposure distributions

Report consumptions and exposures per individual instead of per kg body weight

Seed for pseudo-random number generator  
0

Dietary exposure calculation tier

Custom

EFSA Guidance Optimistic

EFSA Guidance Pessimistic

Test Tier 1

Test Tier 2

Save Changes



# Check and save settings

1. Check the settings



2. Save the settings



## Dietary exposure settings

Exposure type

Chronic

Dietary exposure calculation tier

EFSA Guidance Optimistic

Impute exposure distributions

Report consumptions and exposures per individual instead of per kg body weight



Seed for pseudo-random number generator

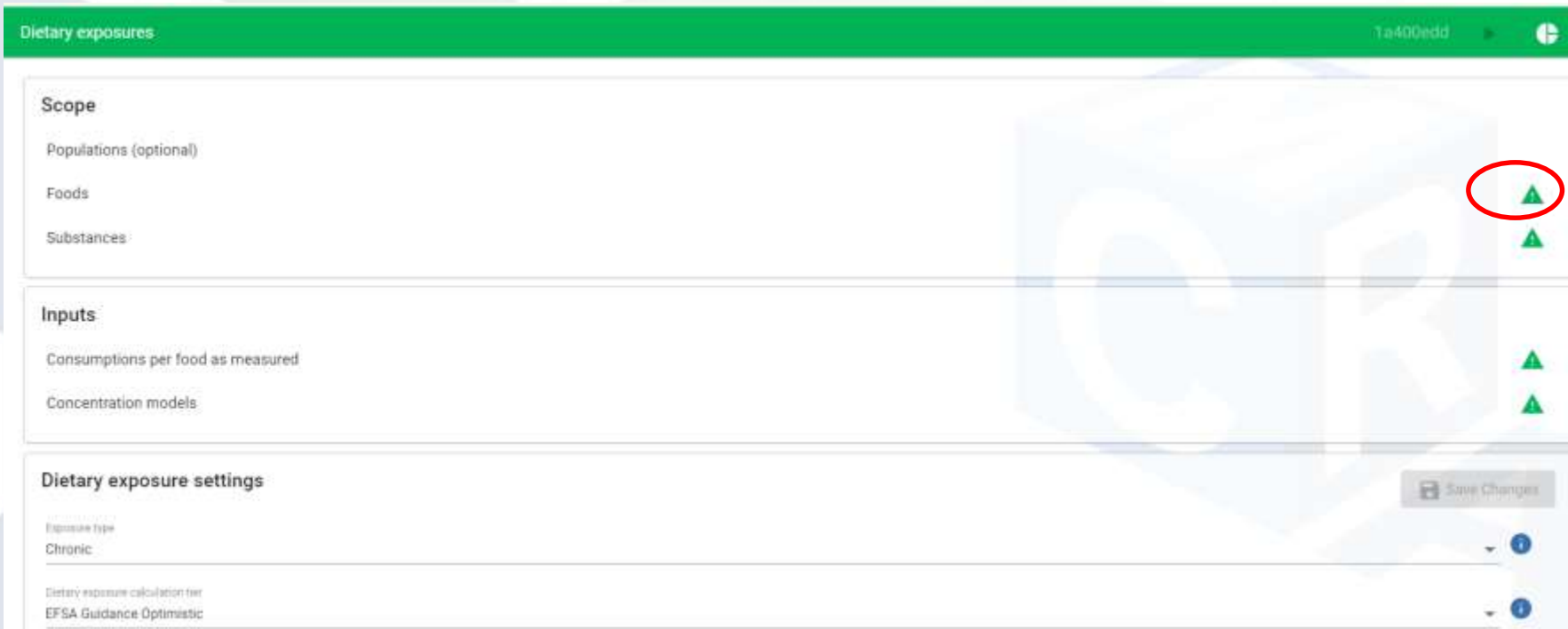
0

 Save Changes



# Go back to the scope and insert data


1. A  indicates that something needs to be done
2. If you are using the toolbox for the first time, we advise you to work from top of the screen. Start with inserting data for foods 




Dietary exposures Ta400edd


### Scope


Populations (optional)

Foods 


Substances 


### Inputs

Consumptions per food as measured 

Concentration models 




### Dietary exposure settings

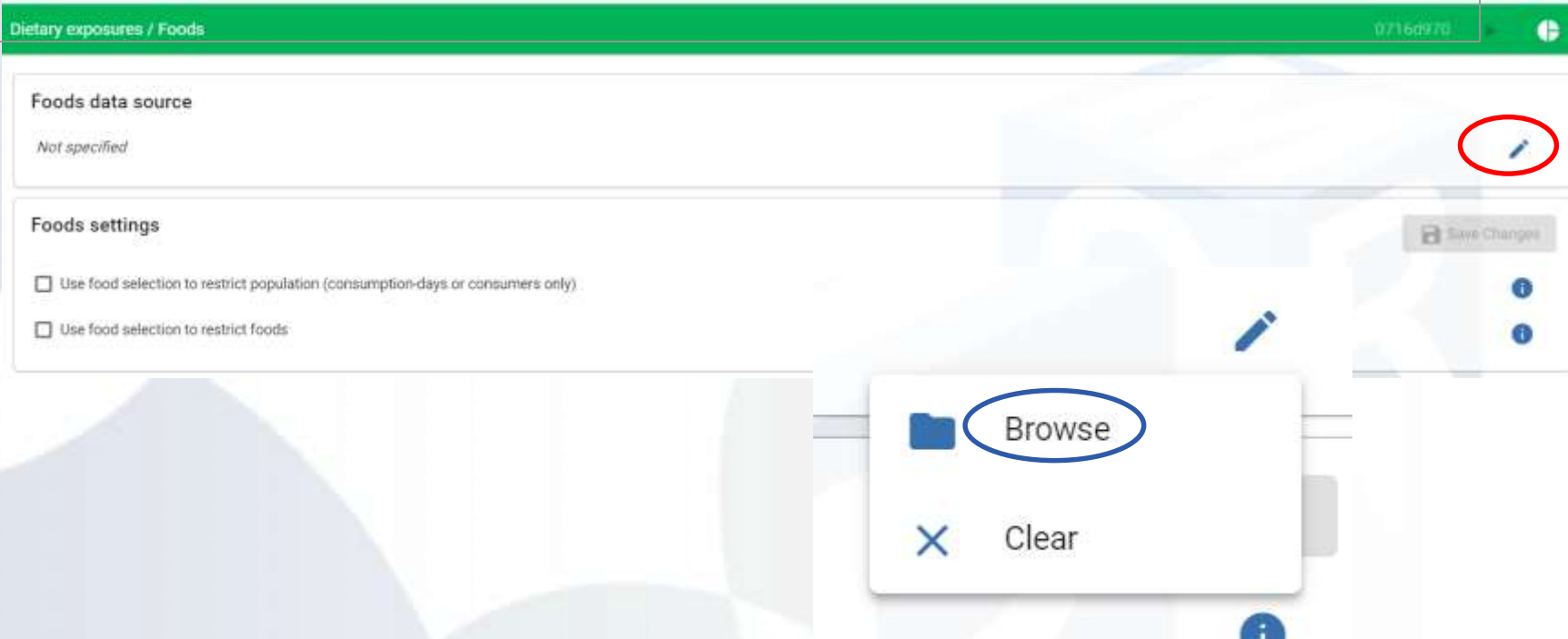
Exposure type  
Chronic 

Dietary exposure calculation tier  
EFSA Guidance Optimistic 

[Save Changes](#)



# Specify data sources

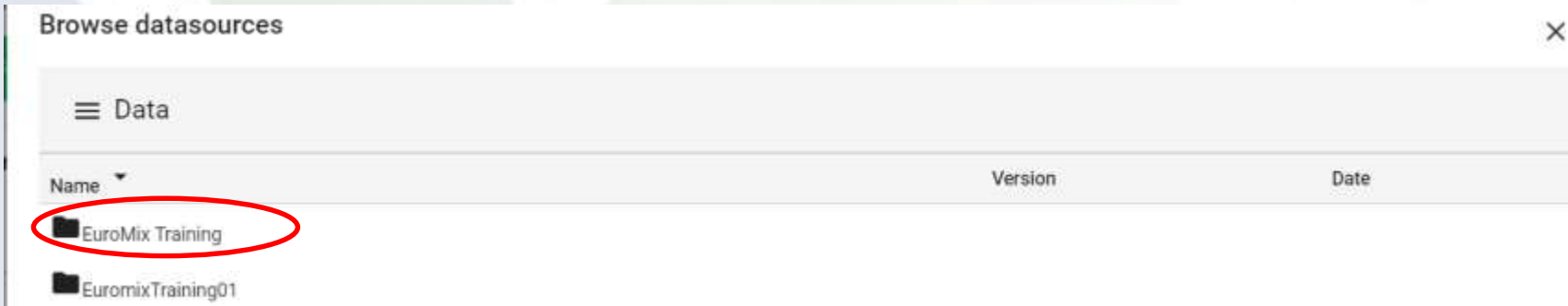
1. A  indicates that you can insert data or names
2. Click on pencil 
3. After you clicked on pencil a window pop-up, select Browse  and you will be connected to your data folders



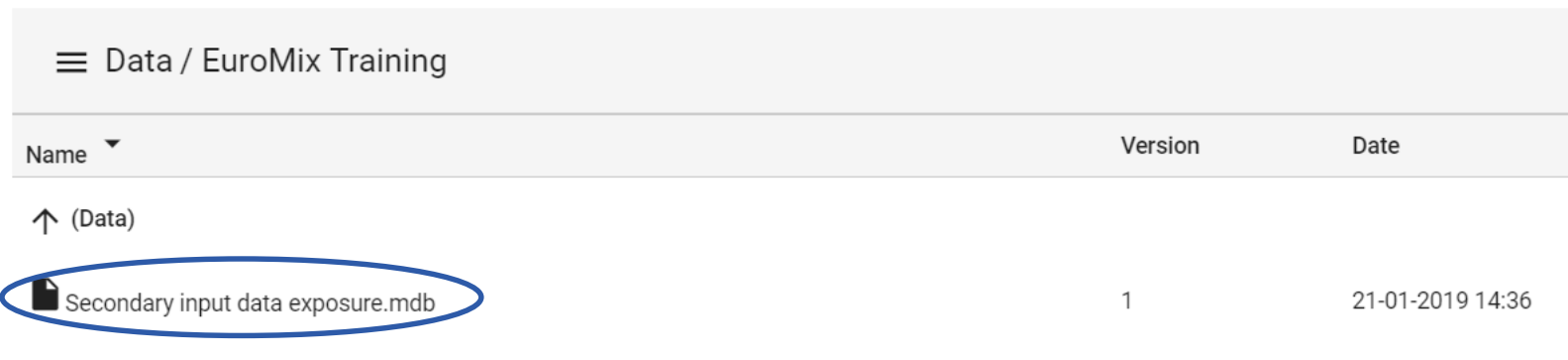
The screenshot shows the 'Dietary exposures / Foods' interface. The 'Foods data source' section displays 'Not specified' with a pencil icon circled in red. Below it, the 'Foods settings' section has two checkboxes: 'Use food selection to restrict population (consumption-days or consumers only)' and 'Use food selection to restrict foods'. A 'Save Changes' button is visible. A dialog box is overlaid with 'Browse' circled in blue and 'Clear' below it.

# Specify data sources

1. Click on EuroMix training 
2. A second window will open and select secondary data 



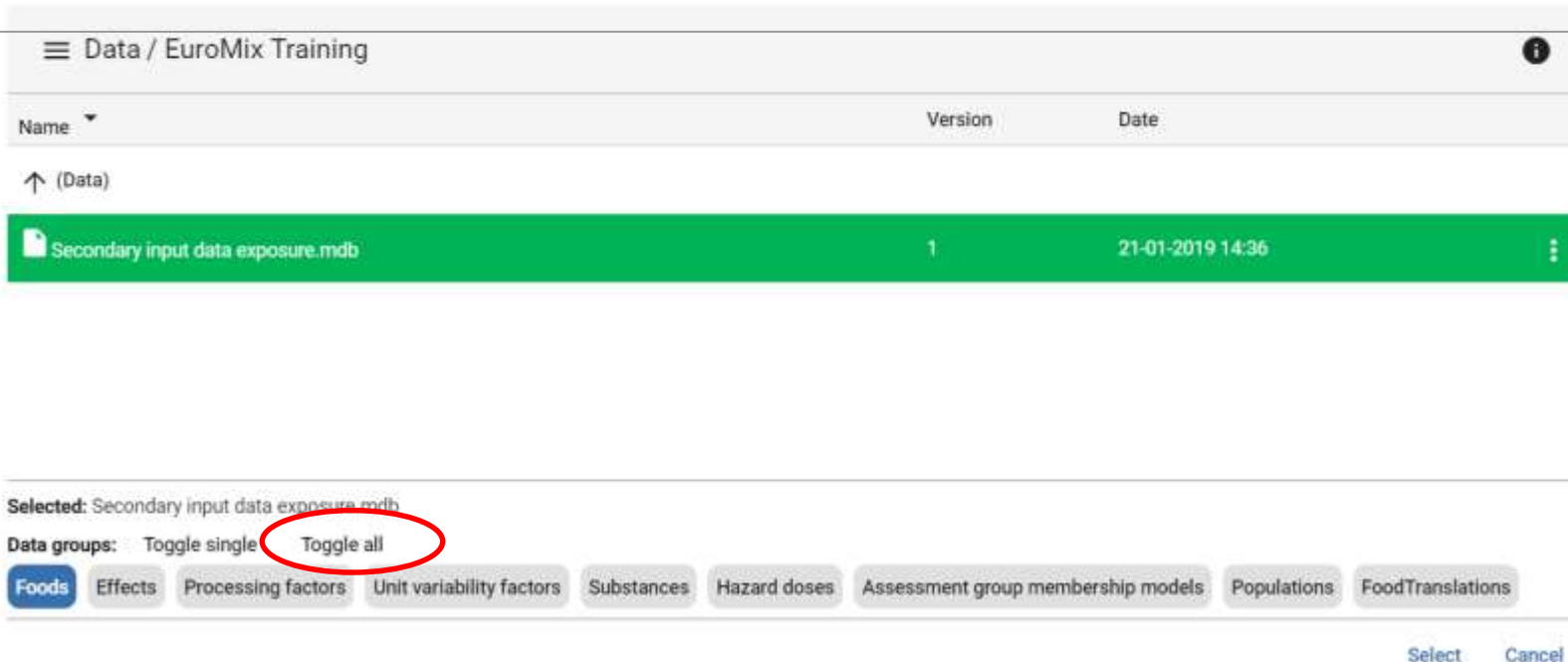
## Browse datasources



# Specify data sources

1. The secondary input data exposure.mdb (database) contains a food table, but it includes more information also on effects, processing factors etc. Toggle all to get all data connected in one step 

## 3. Browse datasources



☰ Data / EuroMix Training ⓘ

Name ▾	Version	Date
↑ (Data)		
Secondary input data exposure.mdb	1	21-01-2019 14:36

Selected: Secondary input data exposure.mdb

Data groups: Toggle single **Toggle all**

Foods Effects Processing factors Unit variability factors Substances Hazard doses Assessment group membership models Populations FoodTranslations

Select Cancel




# Select all database at once

1. Select all data by clicking on select 

Browse datasources ×

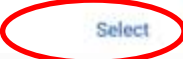
☰ Data / EuroMix Training i

Name ▾	Version	Date
↑ (Data)		
 Secondary input data exposure.mdb	1	21-01-2019 14:36




**Selected:** Secondary input data exposure.mdb

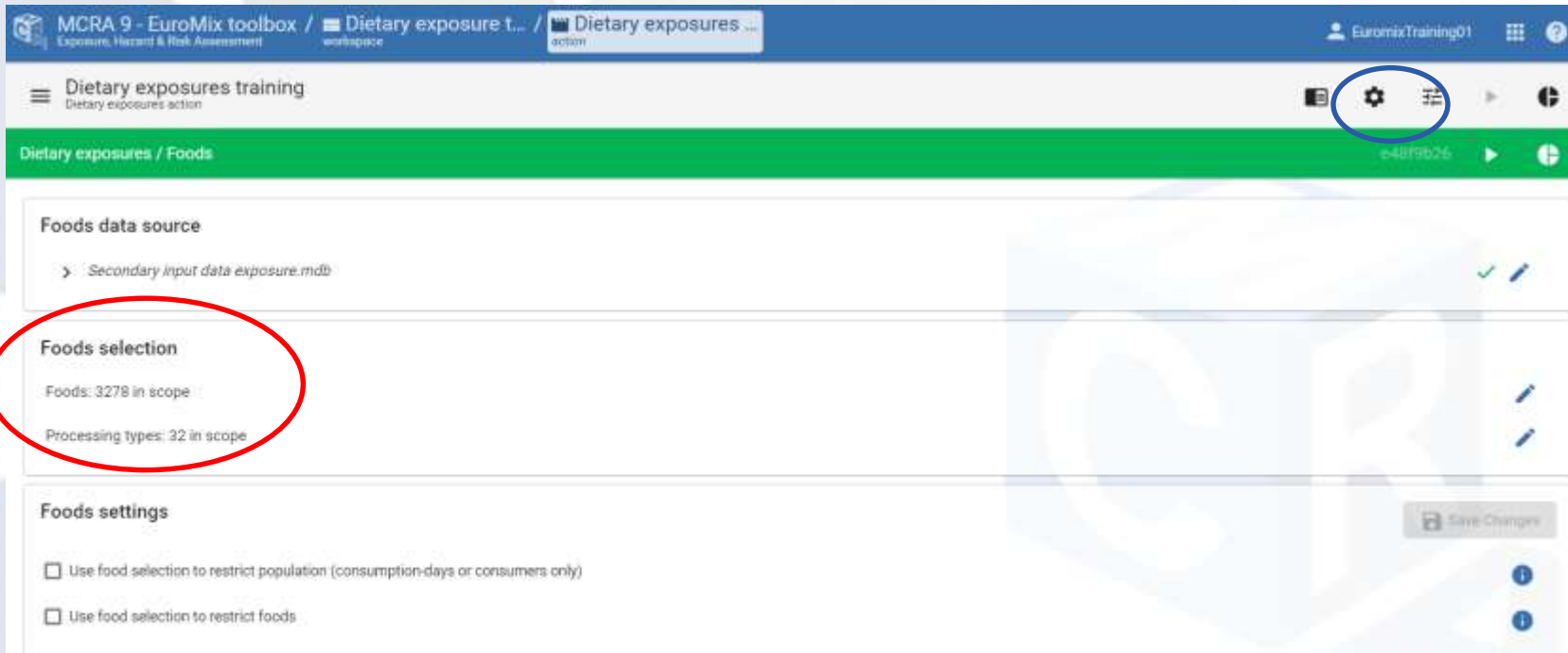
Data groups: Toggle single Toggle all

Foods Effects Processing factors Unit variability factors Substances Hazard doses Assessment group membership models Populations FoodTranslations

 Select Cancel

# Select all database at once

1. A  means that the data connection is ok
2. Foods 3278 in scope means that your database contains 3278 food items and 32 processing types (e.g. juicing) no action required 
3. Go back to action in the navigation 



MCRA 9 - EuroMix toolbox / Dietary exposure t... / Dietary exposures ...

Diary exposures training

Diary exposures / Foods

Foods data source

Secondary input data exposure.mdb

Foods selection

Foods: 3278 in scope

Processing types: 32 in scope

Foods settings

Use food selection to restrict population (consumption-days or consumers only)

Use food selection to restrict foods

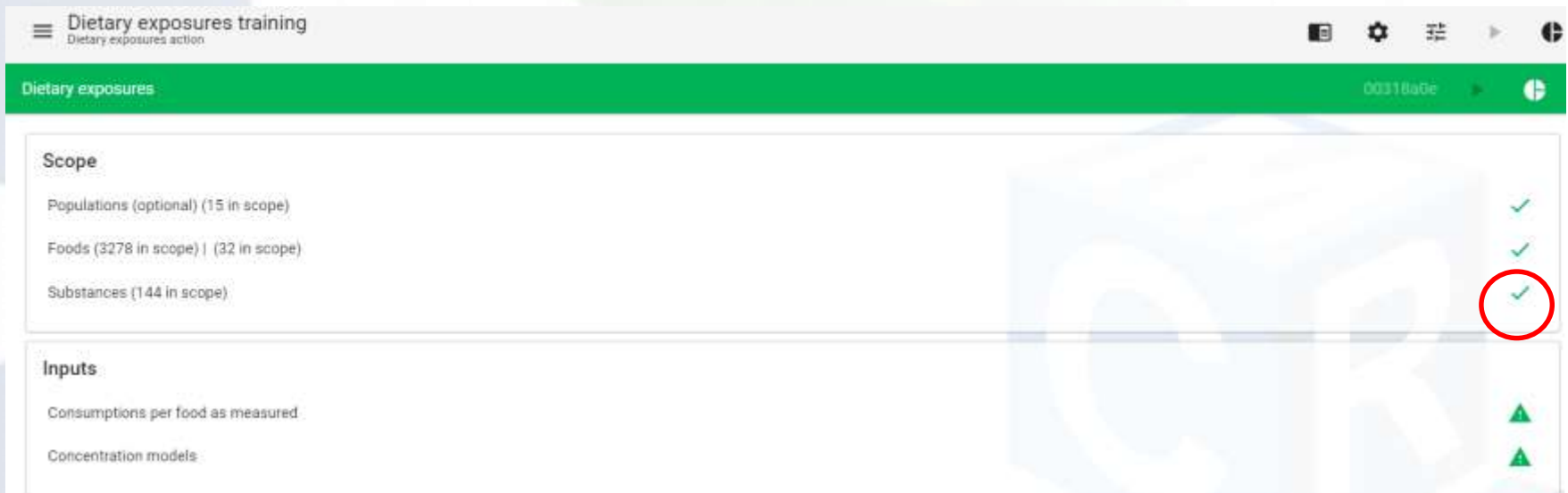
Save Changes

# Which substances should be in the scope of your assessment

1. A  **does not** mean that all settings are ok

2. The user can either chose to do a single chemical (substance) exposure assessment or a exposure assessment for multiple substances. This selection can be made under substances.




3. Click on substances  

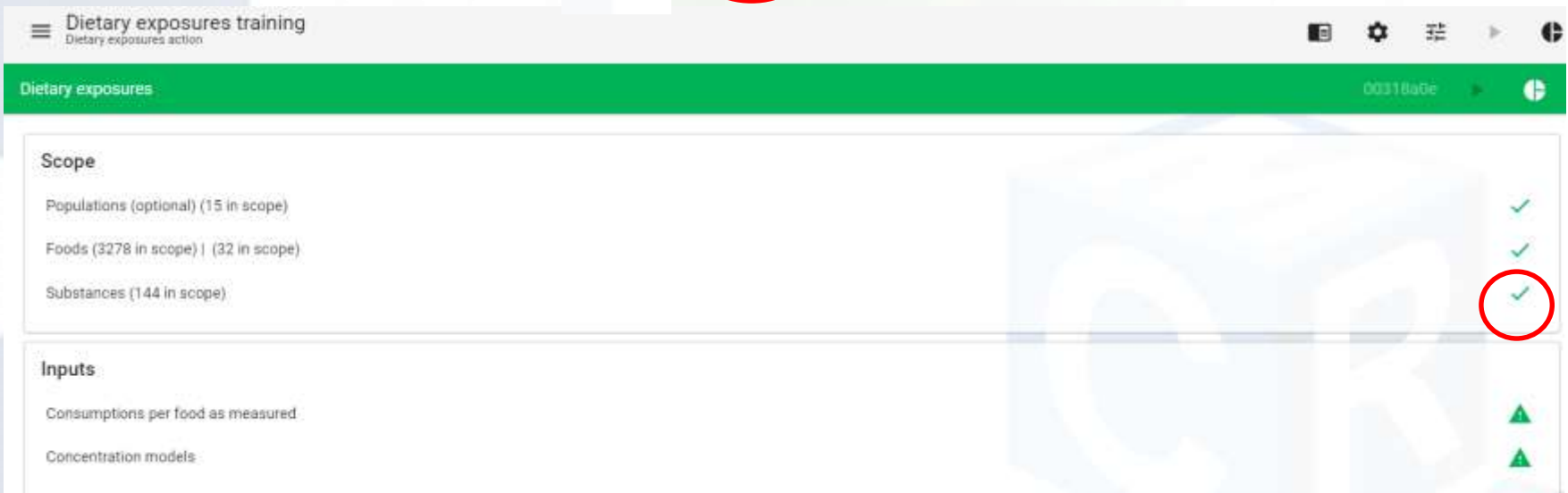


The screenshot shows the 'Dietary exposures training' interface. The top bar includes the title 'Dietary exposures training' and 'Dietary exposures action'. Below this is a green header with 'Dietary exposures' and a user ID '00318a0e'. The main content area is divided into two sections: 'Scope' and 'Inputs'. The 'Scope' section lists three items: 'Populations (optional) (15 in scope)', 'Foods (3278 in scope) | (32 in scope)', and 'Substances (144 in scope)'. Each item has a green checkmark icon to its right. The checkmark for 'Substances' is circled in red. The 'Inputs' section lists 'Consumptions per food as measured' and 'Concentration models', each with a green upward-pointing triangle icon to its right.





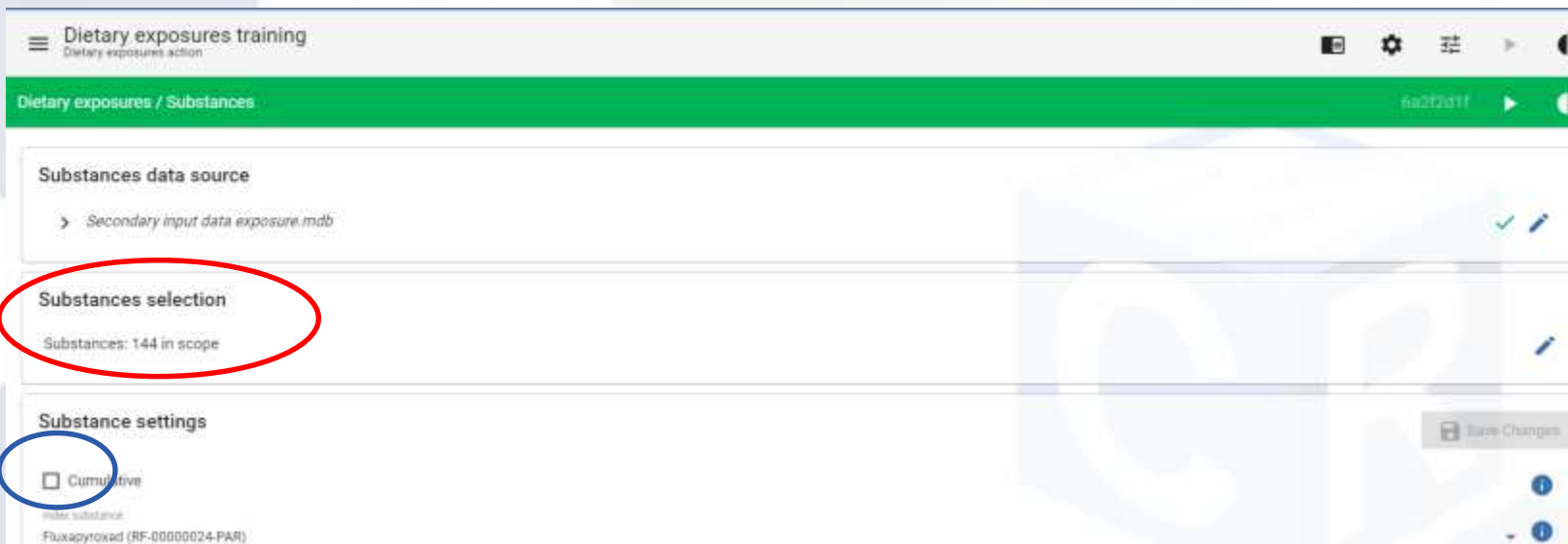
# Which substances should be in the scope of your assessment

1. A  means that data are ok, but it **does not** mean that all settings are ok
2. The user can either chose to do a single chemical (substance) exposure assessment or a exposure assessment for multiple substances. This selection can be made under substances.
3. Click on substances  



# Which substances should be in the scope of your assessment

1. Please note that you have 144 substances in your scope. In this example these are 144 pesticides grouped together in the cumulative assessment group liver steatosis. No action required 
2. In this exercise you are going to include 144 substances in a cumulative exposure assessment. Click on cumulative 



Dietary exposures training  
Dietary exposures action

Dietary exposures / Substances

Substances data source  
> Secondary input data exposure.mdb



Substances selection  
Substances: 144 in scope

Substance settings  
 Cumulative  
Fluxapyroxad (RF-00000024-PAR)

Save Changes



# Identify a index chemical

1. Select and index substance by clicking on fluxapyroxqad 
2. A new window pop-up with a list of all substances grouped in the cumulative assessment group liver steatosis. You now have to select an index substance.. 

## Substance settings

Cumulative

Index substance

Fluxapyroxad (RF-00000024-PAR) 

 Save Changes



## Dietary exposures / Substances

Filter text 

Fluxapyroxad (RF-00000024-PAR)

Isopyrazam (RF-00000025-PAR)

Penthiopyrad (RF-00002609-PAR)

Fenpyrazamine (RF-00002610-PAR)



# Which substances should be in the scope of your assessment

1. Type in flusilazole



2. Save changes



Flusilazole

Flusilazole (RF-0218-001-PPP)

## Substance settings

Cumulative

Index substance

Flusilazole (RF-0218-001-PPP)

Save Changes

## Substance settings

Cumulative

Index substance

Flusilazole (RF-0218-001-PPP)

Save Changes



# Identify an index chemical

1. Type in flusilazole



2. Save changes



Flusilazole

Flusilazole (RF-0218-001-PPP)

## Substance settings

Cumulative

Index substance

Flusilazole (RF-0218-001-PPP)

Save Changes

## Substance settings

Cumulative

Index substance

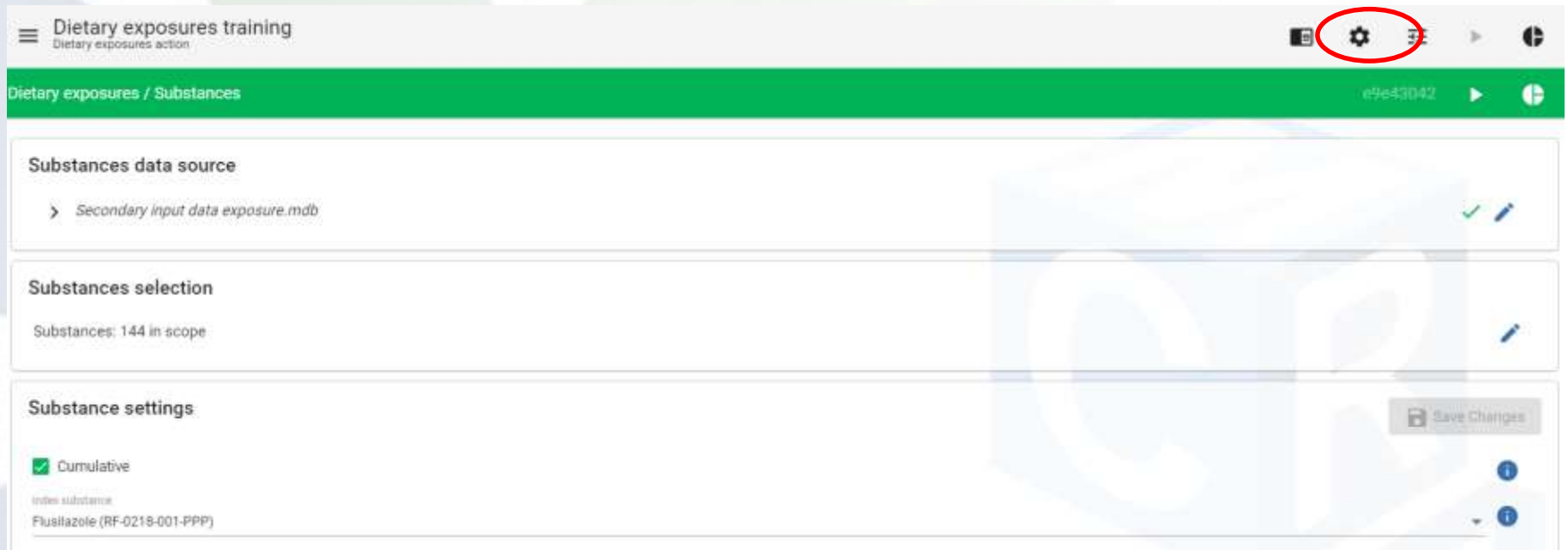
Flusilazole (RF-0218-001-PPP)

Save Changes



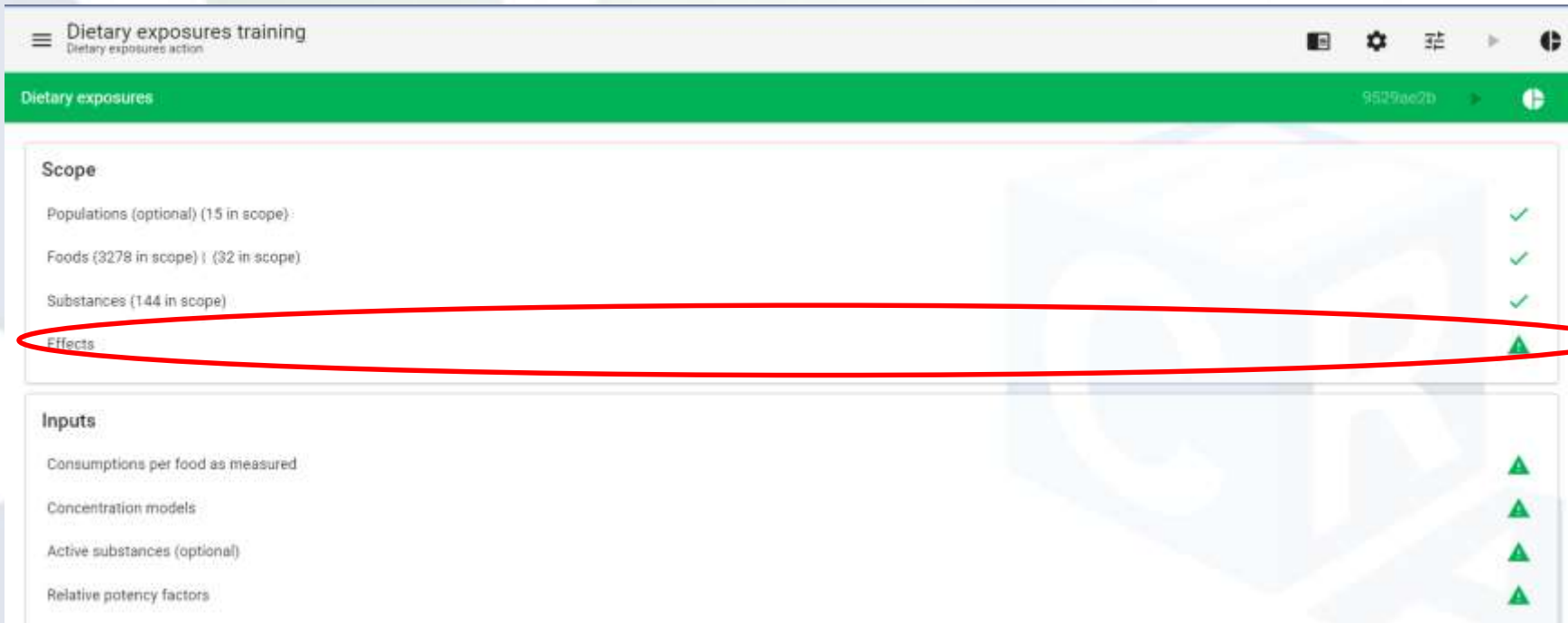
# Go back to action

1. Go back to action to select more data and settings



# Select an effect





1. Because you selected multiple substances you need to select an effect. Click on

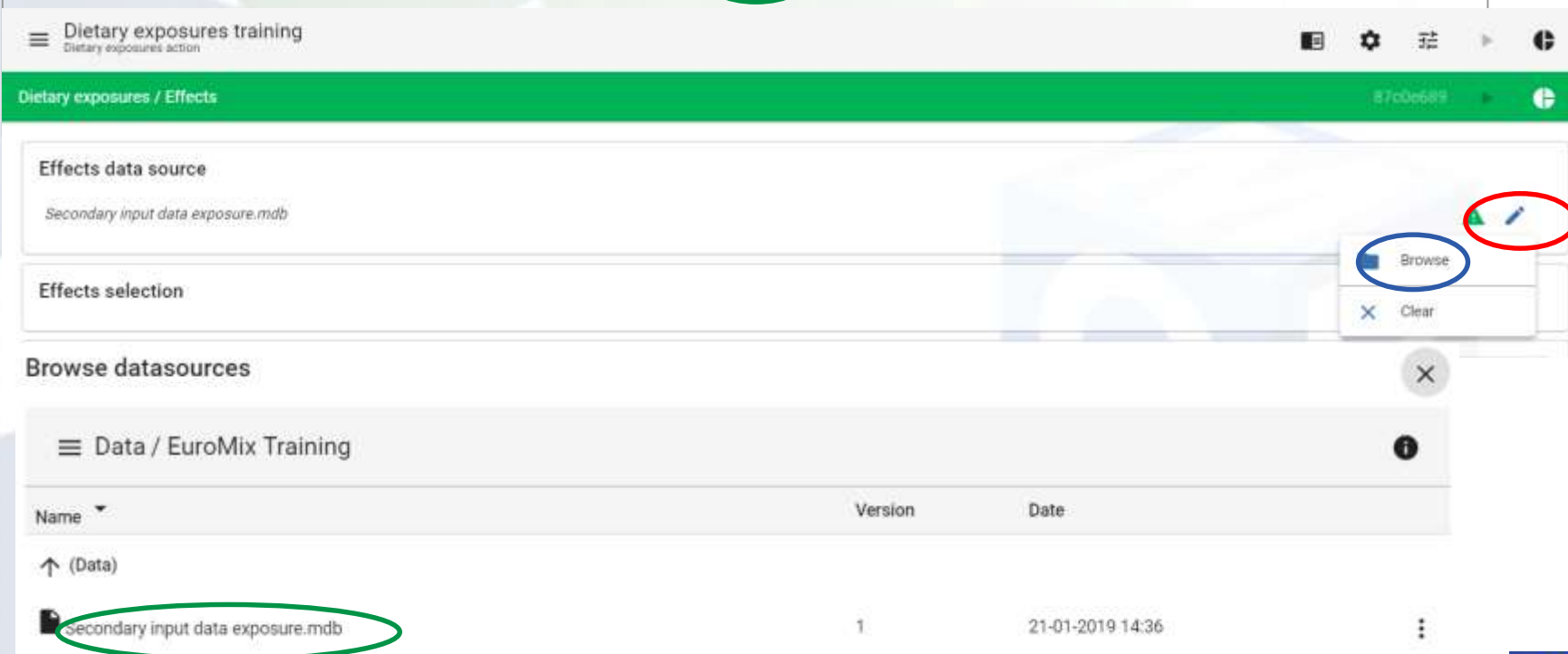


The screenshot shows the 'Dietary exposures training' interface. The title bar includes a hamburger menu, the text 'Dietary exposures training' and 'Dietary exposures action', and icons for a video, settings, list, play, and refresh. Below the title bar is a green header with 'Dietary exposures' and a unique ID '9529ac2b'. The main content is divided into two sections: 'Scope' and 'Inputs'. The 'Scope' section lists 'Populations (optional) (15 in scope)', 'Foods (3278 in scope) | (32 in scope)', and 'Substances (144 in scope)', each with a green checkmark. The 'Effects' row is circled in red and has a green triangle with an exclamation mark. The 'Inputs' section lists 'Consumptions per food as measured', 'Concentration models', 'Active substances (optional)', and 'Relative potency factors', each with a green triangle.



# Select an effect

1. Click on pencil  
2. A new window appears on your screen. Click on Browse 
3. You are then connected to your data repository. Select secondary input data exposure.mdb 



Dietary exposures training  
Dietary exposures action

Dietary exposures / Effects

Effects data source  
Secondary input data exposure.mdb

Effects selection

Browse datasources

Data / EuroMix Training

Name	Version	Date
↑ (Data)		
secondary input data exposure.mdb	1	21-01-2019 14:36



# Select effect

1. Select effect database



## Browse datasources



Data / EuroMix Training



Name

Version

Date

↑ (Data)

Name	Version	Date
Secondary input data exposure.mdb	1	21-01-2019 14:36

Selected: Secondary input data exposure.mdb

Data groups: Toggle single Toggle all

Foods **Effects** Processing factors Unit variability factors Substances Hazard doses Assessment group membership models Populations FoodTranslations

Select Cancel



# Select effect

1. Click on pencil  and see there is one effect in scope 

2. Click on focal effect 

3. Select Steatosis-liver 

**Dietary exposures / Effects** 87c0e689

---


**Effects data source**

Secondary input data exposure.mdb ✓ ✎

Effects: 1 in scope ✓ ☰

---

**Effects selection**

Effects: 1 in scope 

---

**Effect settings** Save Changes

Focal effect - ⓘ

Please select a health effect

Include key events (effects) of AOP network ⓘ

... ⓘ

Steatosis-liver (2) ⓘ



# Save changes

## 1. Save changes



Dietary exposures / Effects 870de689

**Effects data source**

Secondary input data exposure.mdb ✓ ✎

Effects: 1 in scope ✓ ☰

**Effects selection**

Effects: 1 in scope ✎

**Effect settings**

Focal effect

Steatosis-liver (Steatosis-liver) ☰ ✎ ⓘ

Please select a health effect

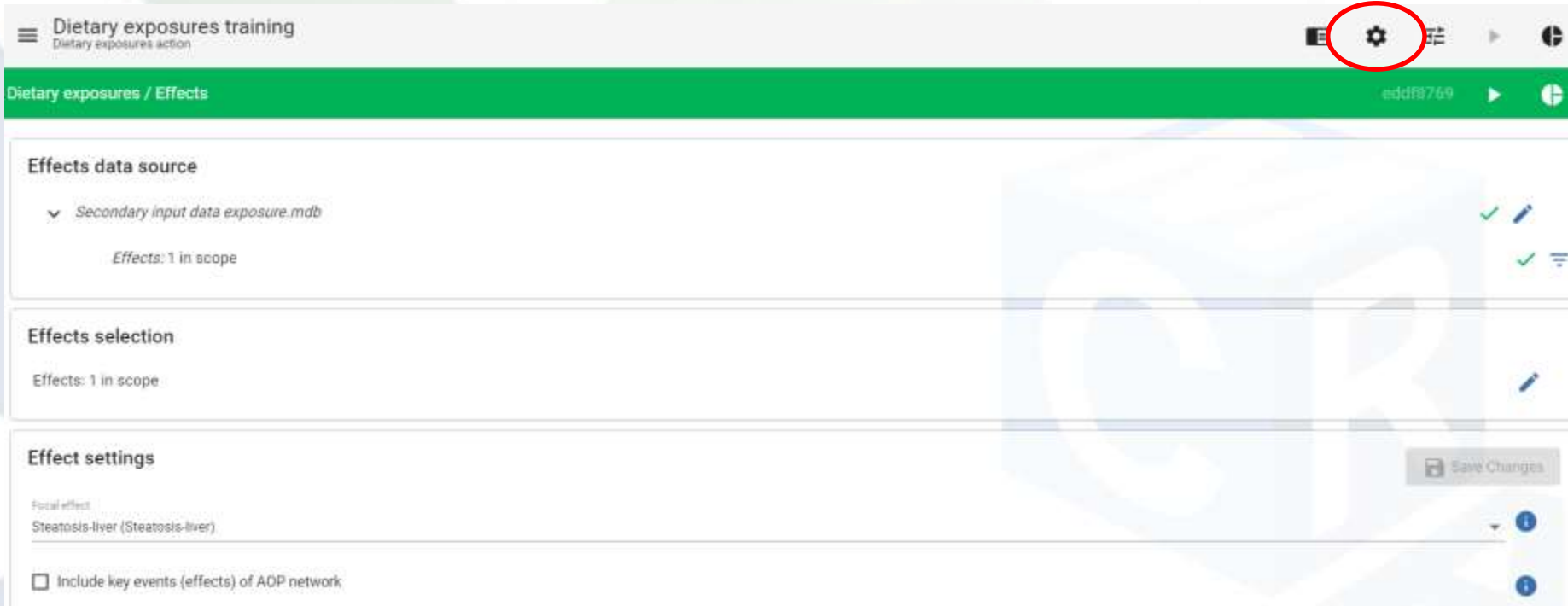
Include key events (effects) of ADP network ⓘ

**Save Changes**



# Go back to actions

1. Go back to actions



**Dietary exposures training**  
Dietary exposures action

**Dietary exposures / Effects** eddf8769

**Effects data source**

Secondary input data exposure.mdb

Effects: 1 in scope

**Effects selection**

Effects: 1 in scope

**Effect settings**

Focal effect  
Steatosis-liver (Steatosis-liver)

Include key events (effects) of AOP network

Save Changes



# Select more input

1. Go Consumptions per food as measured and click on



**Dietary exposures** a2ac3477

**Scope**

- Populations (optional) (15 in scope) ✓
- Foods (3278 in scope) | (32 in scope) ✓
- Substances (144 in scope) ✓
- Effects (1 in scope) ✓

**Inputs**

- Consumptions per food as measured ✓
- Concentration models ✓
- Active substances (optional) (1 assessment group membership models selected) ✓
- Relative potency factors ✓



# Select consumption data


1. Go to consumptions and click on 

Dietary exposures / Consumptions per food as measured 7cc3a6a6

**Scope**

- Populations (optional) (15 in scope) ✓
- Foods (3278 in scope) | (32 in scope) ✓
- Substances (144 in scope) ✓

**Inputs**

- Consumptions 
- Food conversions 



# Select consumption data

1. Select Consumption data source by clicking on 

Dietary exposures / Consumptions per food as measured / Consumptions c4610dcd

**Scope**



Populations (optional) (15 in scope) ✓

Foods (3278 in scope) | (32 in scope) ✓


**Consumptions data source**

Not specified 

**Consumption settings**

Food consumption survey  

Please select a food consumption survey from the list



# Select consumption data

1. Select Consumption data source by clicking on 
2. Click on Browse to get connected to your data repository 

Dietary exposures / Consumptions per food as measured / Consumptions c4610dcd

**Scope**



Populations (optional) (15 in scope) ✓

Foods (3278 in scope) | (32 in scope) ✓


**Consumptions data source**

Not specified 

**Consumption settings**

Food consumption survey  


Please select a food consumption survey from the list



**Consumption settings**

Not specified

**Consumptions data source**



# Select consumption data

1. Select EuroMix training

2. A new window pop-up. Select Consumptions data mdb

## Browse datasources

≡ Data

Name ▾

■ EuroMix Training

■ EuromixTraining01

## Browse datasources

≡ Data / EuroMix Training

Name ▾

Version

Date

↑ (Data)

■ Consumptions data.mdb

1

21-01-2019 14:00



# Select consumption data

1. Click on select



Browse datasources



≡ Data / EuroMix Training



Name

Version

Date

↑ (Data)

Name	Version	Date
Consumptions data.mdb	1	21-01-2019 14:00

**Selected:** Consumptions data.mdb

**Data groups:** Toggle single Toggle all

Consumptions

Select Cancel



# Select consumption data

1. Click on Food Consumption survey

2. Select VCP-basis

Dietary exposures / Consumptions per food as measured / Consumptions

3ab03c7d

## Scope

Populations (optional) (15 in scope) ✓

Foods (3278 in scope) | (32 in scope) ✓

## Consumptions data source

> Consumptions data.mdb ✓

## Consumption settings

Save Changes

Food consumption survey

Please select a food consumption survey from the list

Filter text

VCP-basis

Please select a food consumption survey from the list

# Select consumption data

1. Click on Food Consumption survey



2. Select VCP-basis



Dietary exposures / Consumptions per food as measured / Consumptions 3ab03c7d

---

**Scope**

Populations (optional) (15 in scope) ✓

Foods (3278 in scope) | (32 in scope) ✓

---

**Consumptions data source**

> *Consumptions data.mdb* ✓

---

**Consumption settings** Save Changes

**Food consumption survey** ?

Please select a food consumption survey from the list

Filter text

VCP-basis

Please select a food consumption survey from the list



# Select consumption data

## 1. Save settings



Dietary exposures / Consumptions per food as measured / Consumptions 3ab83e7d

**Scope**

Populations (optional) (15 in scope) ✓

Foods (3278 in scope) | (32 in scope) ✓

**Consumptions data source**

> *Consumptions data.mdb* ✓ ✎

**Consumption settings**

Food consumption survey

VCP-basis

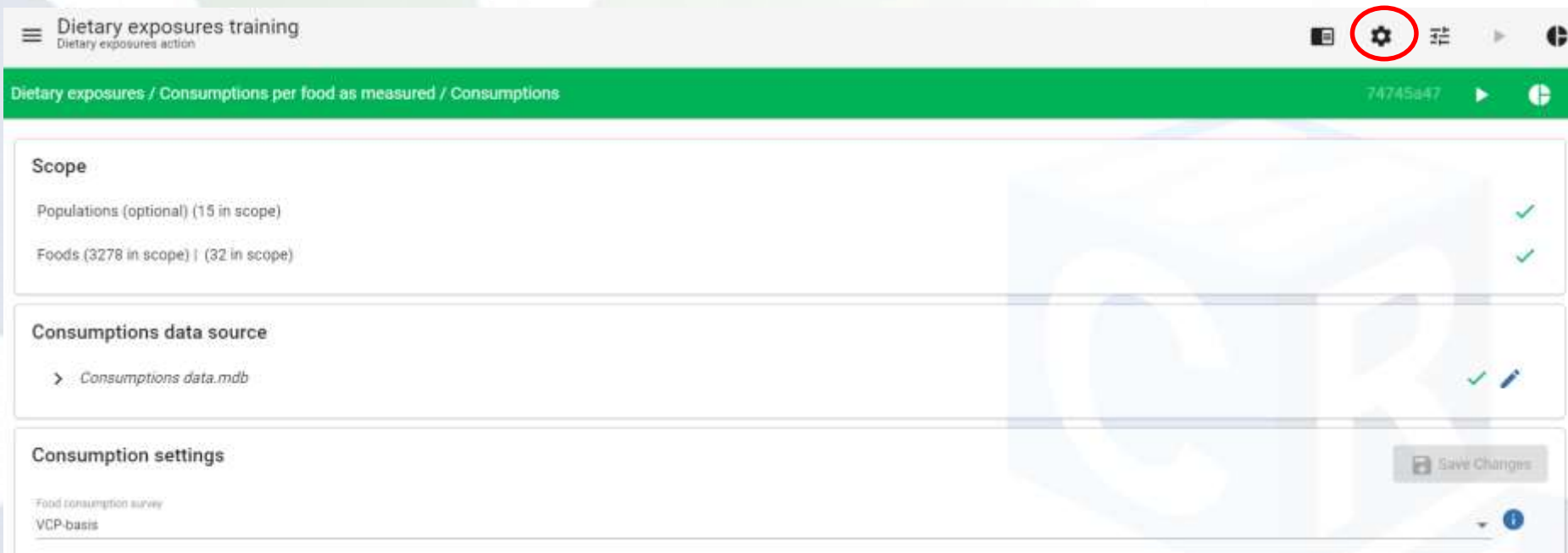
Please select a food consumption survey from the list.

**Save Changes**



# Select consumption data

1. Go back to actions



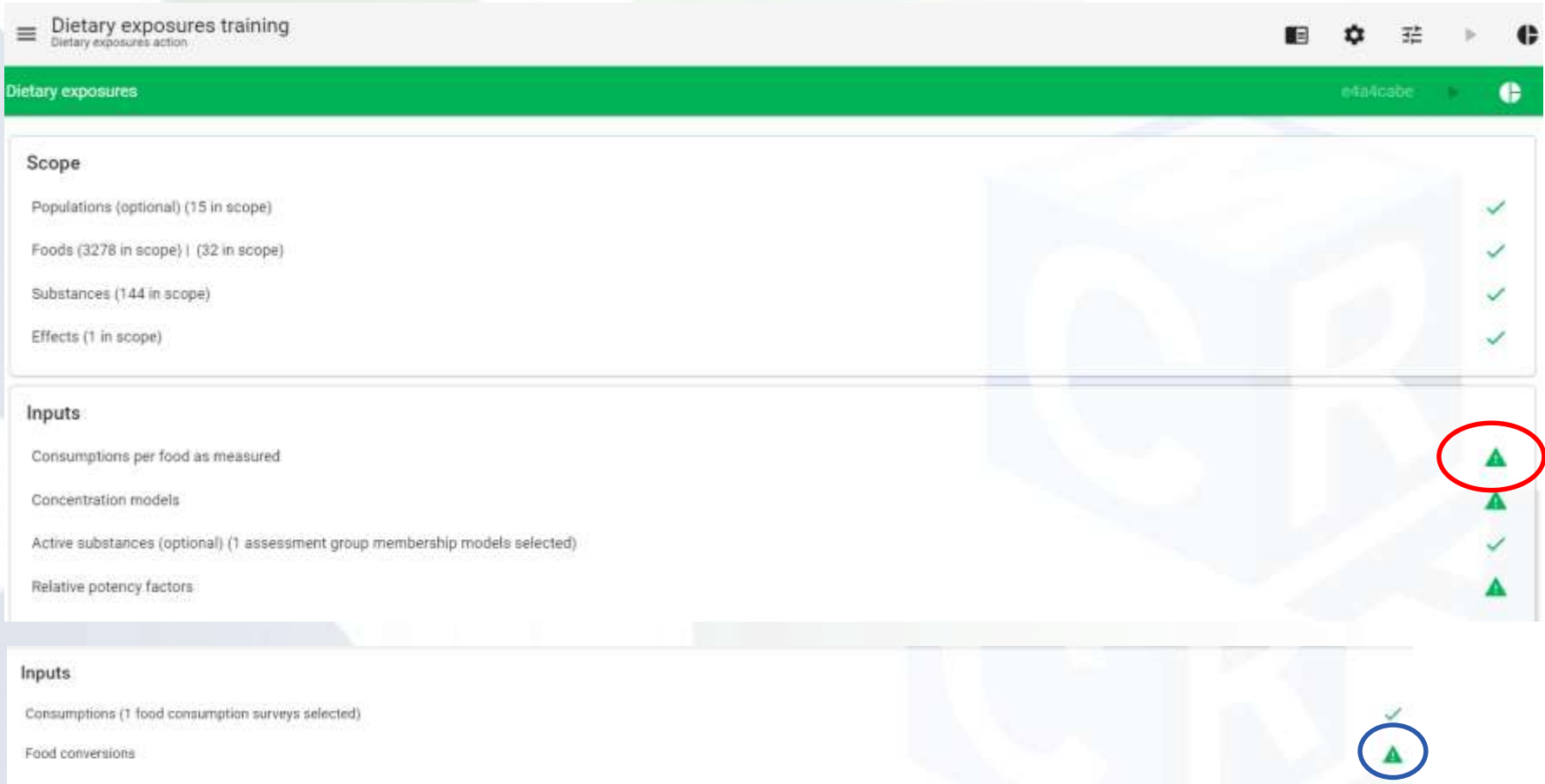
The screenshot shows the 'Dietary exposures training' interface. At the top, there is a header with a hamburger menu icon, the text 'Dietary exposures training' and 'Dietary exposures action', and a settings gear icon circled in red. Below the header is a green navigation bar with the text 'Dietary exposures / Consumptions per food as measured / Consumptions' and a user ID '74745a47'. The main content area is divided into three sections: 'Scope', 'Consumptions data source', and 'Consumption settings'. The 'Scope' section shows 'Populations (optional) (15 in scope)' and 'Foods (3278 in scope) | (32 in scope)'. The 'Consumptions data source' section shows '> Consumptions data.mdb'. The 'Consumption settings' section shows 'Food consumption survey' and 'VCP-basis'. A 'Save Changes' button is visible in the bottom right corner of the settings section.



# Select consumption data

1. Select Consumption per food as measured 


2. Select food conversion in the new window 




**Scope**

- Populations (optional) (15 in scope) ✓
- Foods (3278 in scope) | (32 in scope) ✓
- Substances (144 in scope) ✓
- Effects (1 in scope) ✓

**Inputs**

- Consumptions per food as measured 
- Concentration models ✓
- Active substances (optional) (1 assessment group membership models selected) ✓
- Relative potency factors ✓

**Inputs**

- Consumptions (1 food consumption surveys: selected) ✓
- Food conversions 



# Select consumption data

1. Go to food as measured 

Dietary exposures / Consumptions per food as measured / Food conversions

7001fa5b

## Scope

Foods (3278 in scope) | (32 in scope) ✓

Substances (144 in scope) ✓

## Inputs

Consumptions (1 food consumption surveys selected) ✓

Foods as measured (optional) 

Processing factors (optional) ✓

Food recipes (optional) ✓



# Select concentration data

## 1. Select concentrations



Dietary exposures / Consumptions per food as measured / Food conversions / Foods as measured 079e3f5d

---

**Scope**

Foods (3278 in scope) | (32 in scope) ✓

Substances (144 in scope) ✓

---

**Inputs**

Concentrations ▲

---

**Foods-as-measured settings** Save Changes

- Include foods with only non-detect measurements i
- Include substances with only non-detect measurements i
- Include foods with maximum residue limits i



# Select concentration data

## 1. Select concentrations



Dietary exposures / Consumptions per food as measured / Food conversions / Foods as measured 079e3f5d

---

**Scope**

Foods (3278 in scope) | (32 in scope) ✓

Substances (144 in scope) ✓

---

**Inputs**

Concentrations ▲

---

**Foods-as-measured settings** Save Changes

- Include foods with only non-detect measurements i
- Include substances with only non-detect measurements i
- Include foods with maximum residue limits i



# Select concentration data

1. Click on pencil



2. A new window pops-up. Click on Browse



The screenshot shows the 'Concentrations data source' field in the EuroMix interface. The field is currently set to 'Not specified'. A red circle highlights the pencil icon in the top right corner of the field. Below the field, a pop-up window is visible with two buttons: 'Browse' (circled in blue) and 'Clear' (with an 'X' icon).



# Select concentration data

1. Select EuroMix training

2. A new window pop-up. Select Concentration-klein data mdb

## Browse datasources

≡ Data

Name ▾

■ EuroMix Training

■ EuromixTraining01

## Browse datasources

≡ Data / EuroMix Training

Name ▾

Version

Date

↑ (Data)

■ Concentrations-klein.mdb

1

21-01-2019 13:59



# Select concentration data

1. Click on select



Browse datasources



≡ Data / EuroMix Training



Name ▾

Version

Date

↑ (Data)

 Concentrations-klein.mdb

1

21-01-2019 13:59



**Selected:** Concentrations-klein.mdb

**Data groups:** Toggle single Toggle all

Concentrations

Substances

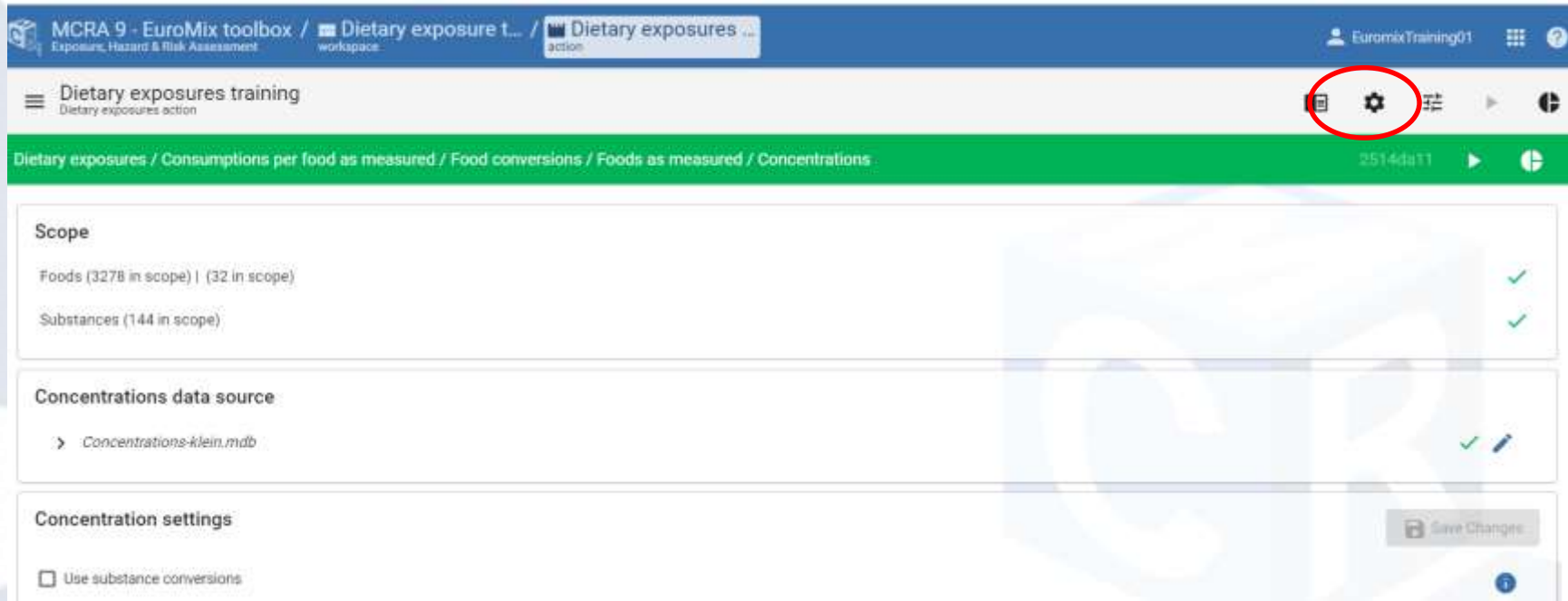
Select

Cancel



# Select concentration data

1. The consumption and concentration data (primary data) are selected.  
Go back to actions



MCRA 9 - EuroMix toolbox / Exposures, Hazard & Risk Assessment

Dietary exposure t... / workspace

Dietary exposures ... / action

EuromixTraining01

Dietary exposures training / Dietary exposures action

Dietary exposures / Consumptions per food as measured / Food conversions / Foods as measured / Concentrations

2514da11

**Scope**

Foods (3278 in scope) | (32 in scope)

Substances (144 in scope)

**Concentrations data source**

> Concentrations-klein.mdb

**Concentration settings**

Use substance conversions

Save Changes



# Select hazard data

1. Click on Concentration model



Dietary exposures e4a4cabe

---

**Scope**

- Populations (optional) (15 in scope) ✓
- Foods (3278 in scope) | (32 in scope) ✓
- Substances (144 in scope) ✓
- Effects (1 in scope) ✓


---

**Inputs**

- Consumptions per food as measured ✓
- Concentration models **▲**
- Active substances (optional) (1 assessment group membership models selected) ✓
- Relative potency factors ▲



# Select hazard data

1. Get connected to a database with hazard information (relative potency factors) by clicking on 

Dietary exposures / Concentration models f4aded14 

---

**Scope**

- Foods (3278 in scope) | (32 in scope) 
- Substances (144 in scope) 
- Effects (1 in scope) 

---

**Inputs**

- Concentrations (14 analytical methods selected) 
- Foods as measured 
- Relative potency factors 

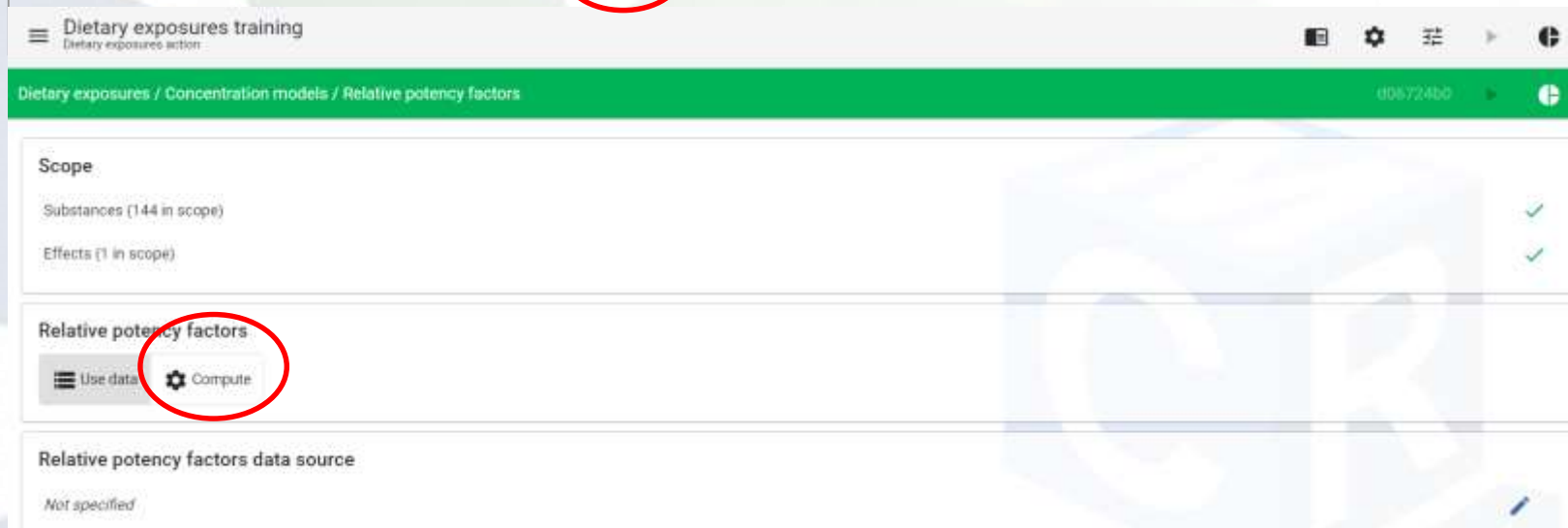




# Use or compute hazard data

1. Sometime you have a table with Relative Potency Factors (RPFs), but usually a table with No-Effect-Level (NO(A)EL) or BMDLs information is provided. Such information needs to be transferred to a table with RPFs by using the Compute function.

2. Click on compute

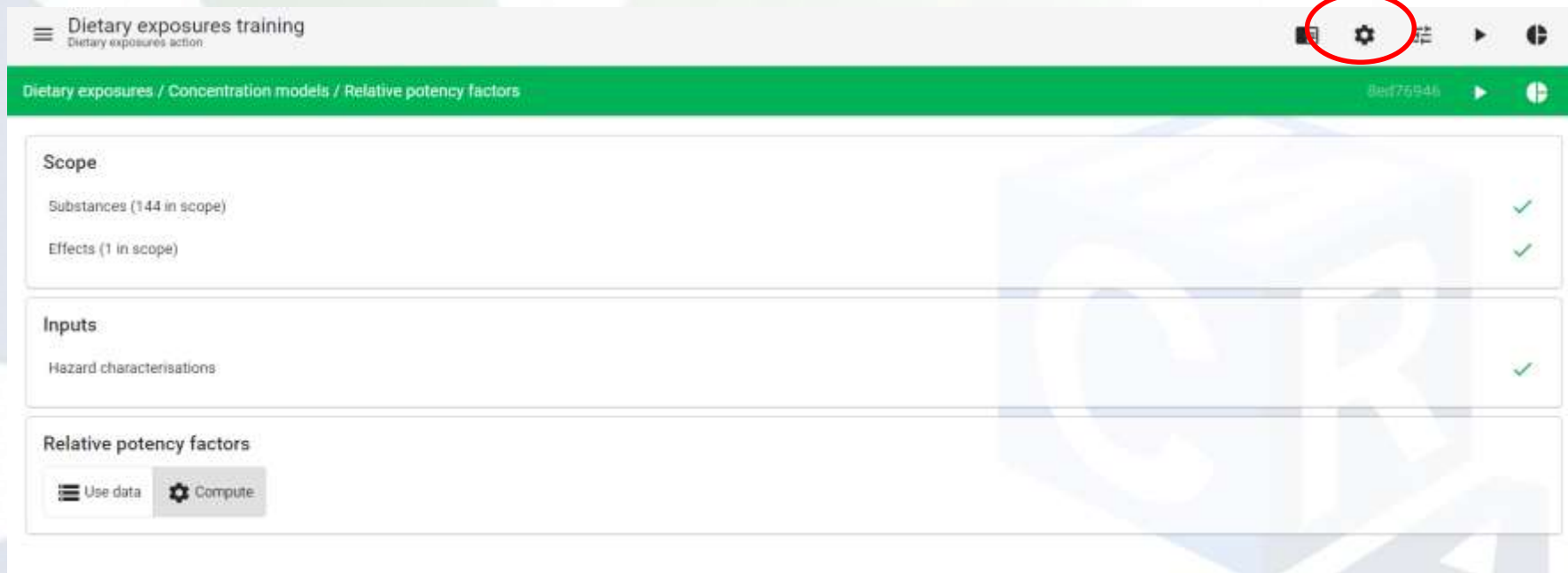


The screenshot shows the 'Dietary exposures training' interface. The breadcrumb trail is 'Dietary exposures / Concentration models / Relative potency factors'. The 'Scope' section shows 'Substances (144 in scope)' and 'Effects (1 in scope)', both with green checkmarks. The 'Relative potency factors' section has two buttons: 'Use data' and 'Compute'. The 'Compute' button is highlighted with a red circle. Below this is the 'Relative potency factors data source' section, which is currently 'Not specified'.



# Go back to action

1. Go back to action



Dietary exposures training  
Dietary exposures action

Dietary exposures / Concentration models / Relative potency factors

8ed75546

**Scope**

Substances (144 in scope) ✓

Effects (1 in scope) ✓

**Inputs**


Hazard characterisations ✓

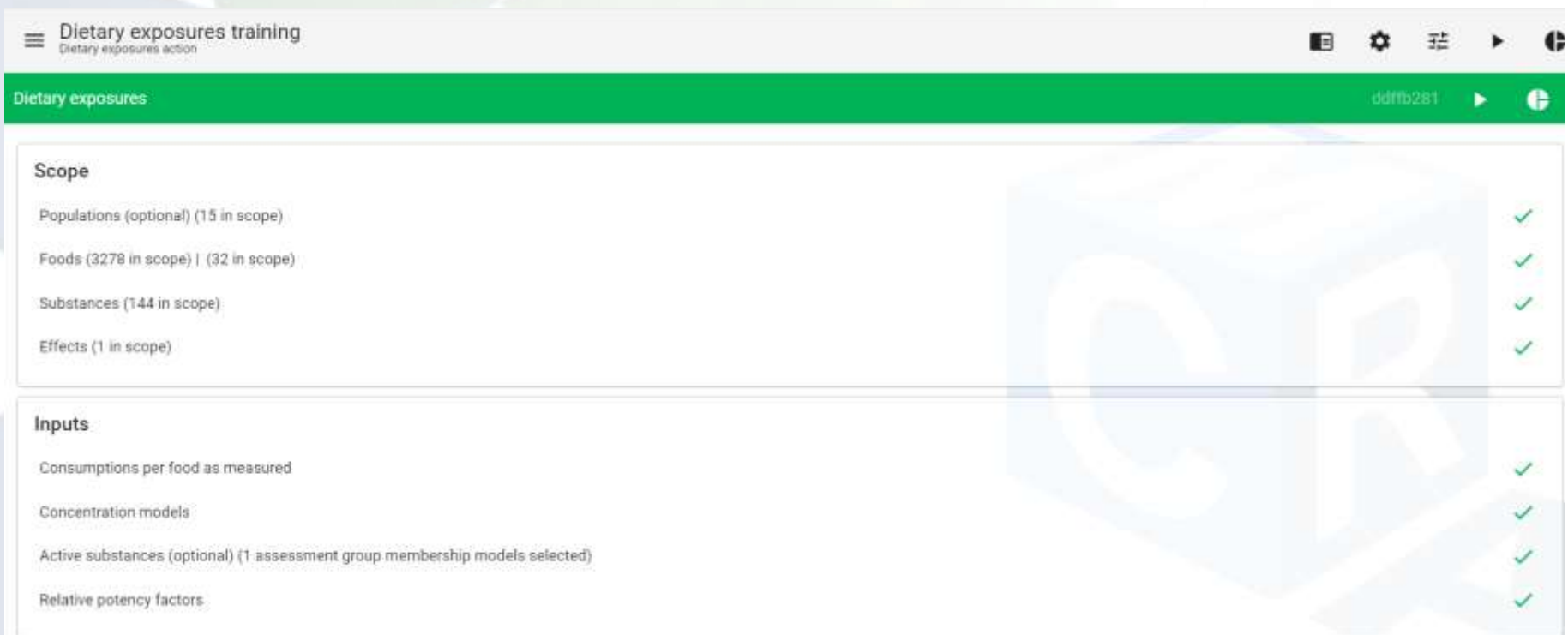
**Relative potency factors**

Use data Compute



# Overview of inputs


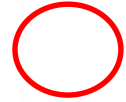

1. At this stage all relevant secondary, consumption, concentration and hazard data are correctly linked to the model.
2. However, a  **does not mean** that all settings are correct.
3. Scroll down to see more settings

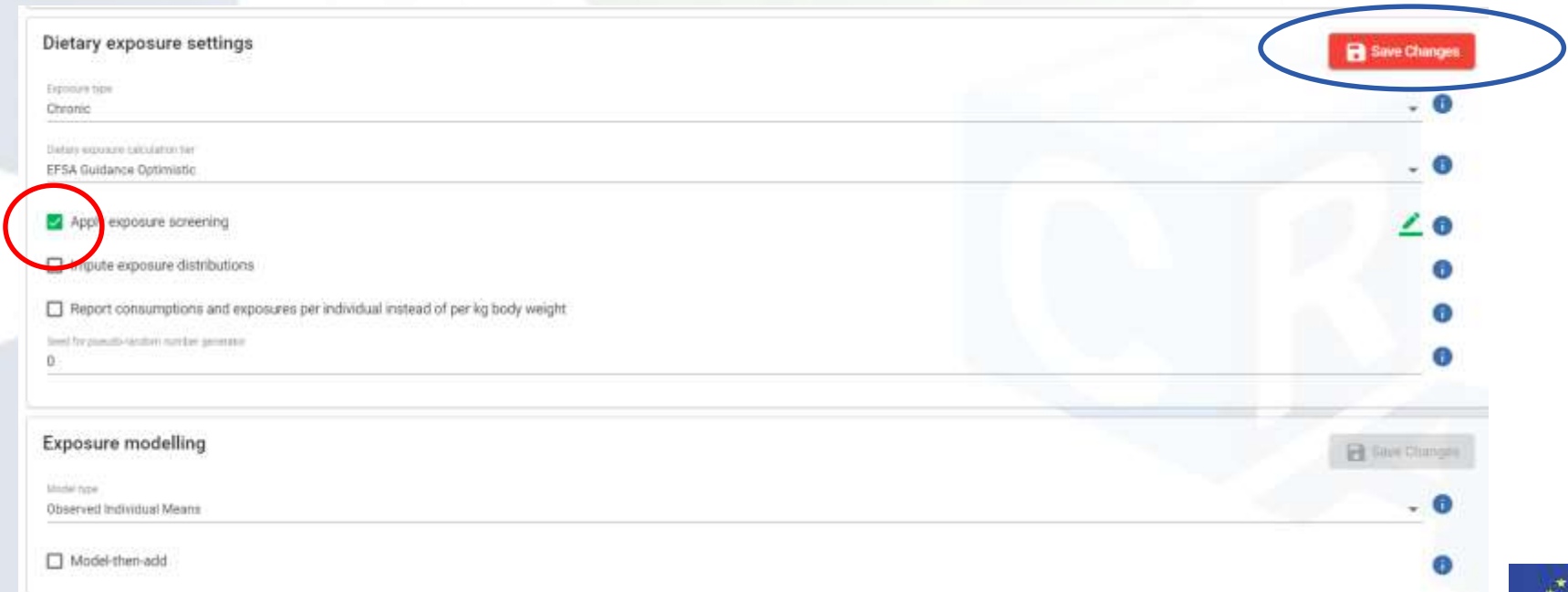


The screenshot shows a web interface for 'Dietary exposures training'. The main content area is divided into two sections: 'Scope' and 'Inputs'. Each section contains a list of configuration items, each with a green checkmark on the right side, indicating that the settings are correct.

Section	Item	Status
Scope	Populations (optional) (15 in scope)	✓
	Foods (3278 in scope)   (32 in scope)	✓
	Substances (144 in scope)	✓
	Effects (1 in scope)	✓
Inputs	Consumptions per food as measured	✓
	Concentration models	✓
	Active substances (optional) (1 assessment group membership models selected)	✓
	Relative potency factors	✓

# Change setting

1. At this stage all relevant secondary, consumption, concentration and hazard data are correctly linked to the model.
2. However, a  **does not mean** that all settings are correct.
3. Scroll down to see more settings. Click on apply screening 
4. Save Changes 



**Dietary exposure settings** Save Changes

Exposure type  
Chronic

Dietary exposure calculation tier  
EFSA Guidance Optimistic

Apply exposure screening

Input exposure distributions

Report consumptions and exposures per individual instead of per kg body weight

Seed for pseudo-random number generator  
0



**Exposure modelling** Save Changes

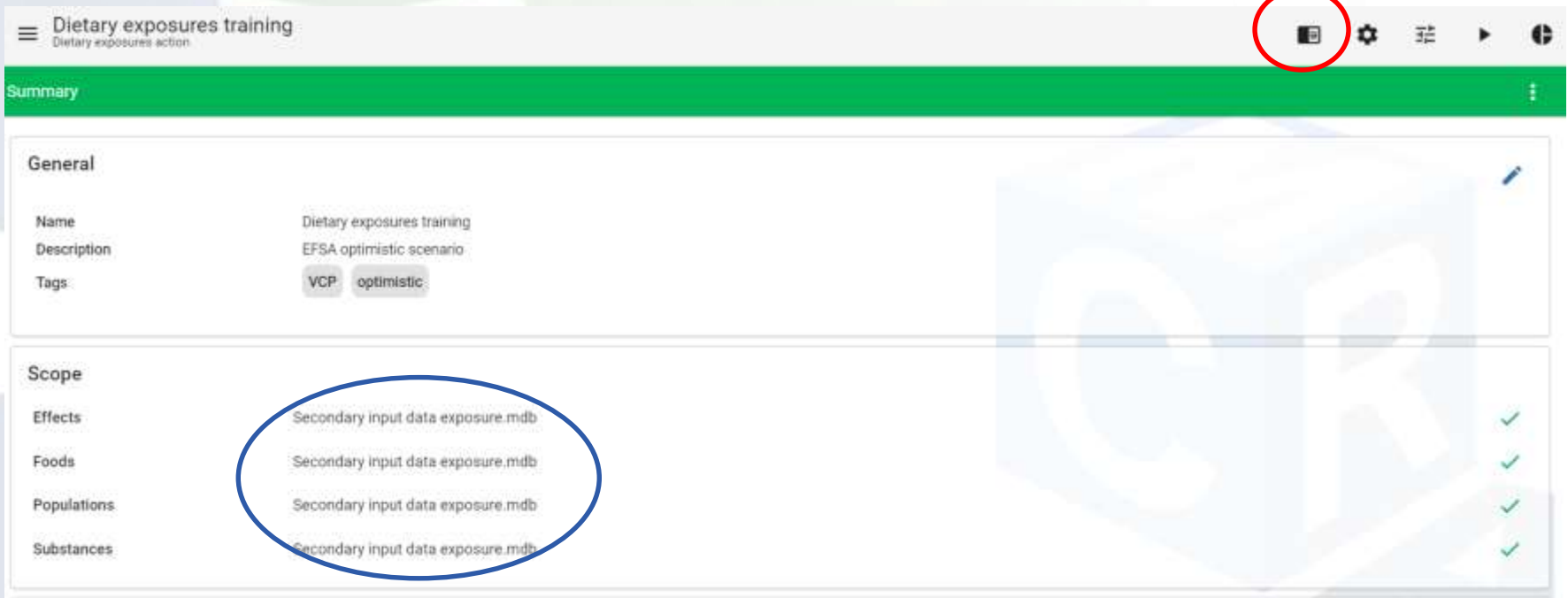
Model type  
Observed Individual Means

Model-then-add



# Summary overview

1. Click on summary symbol to overview the data and settings before you start running the simulation 
2. Check if your data selection corresponds with the information on these slides 
3. Scroll down to see more (see next slide)



Dietary exposures training  
Dietary exposures action

Summary

**General**

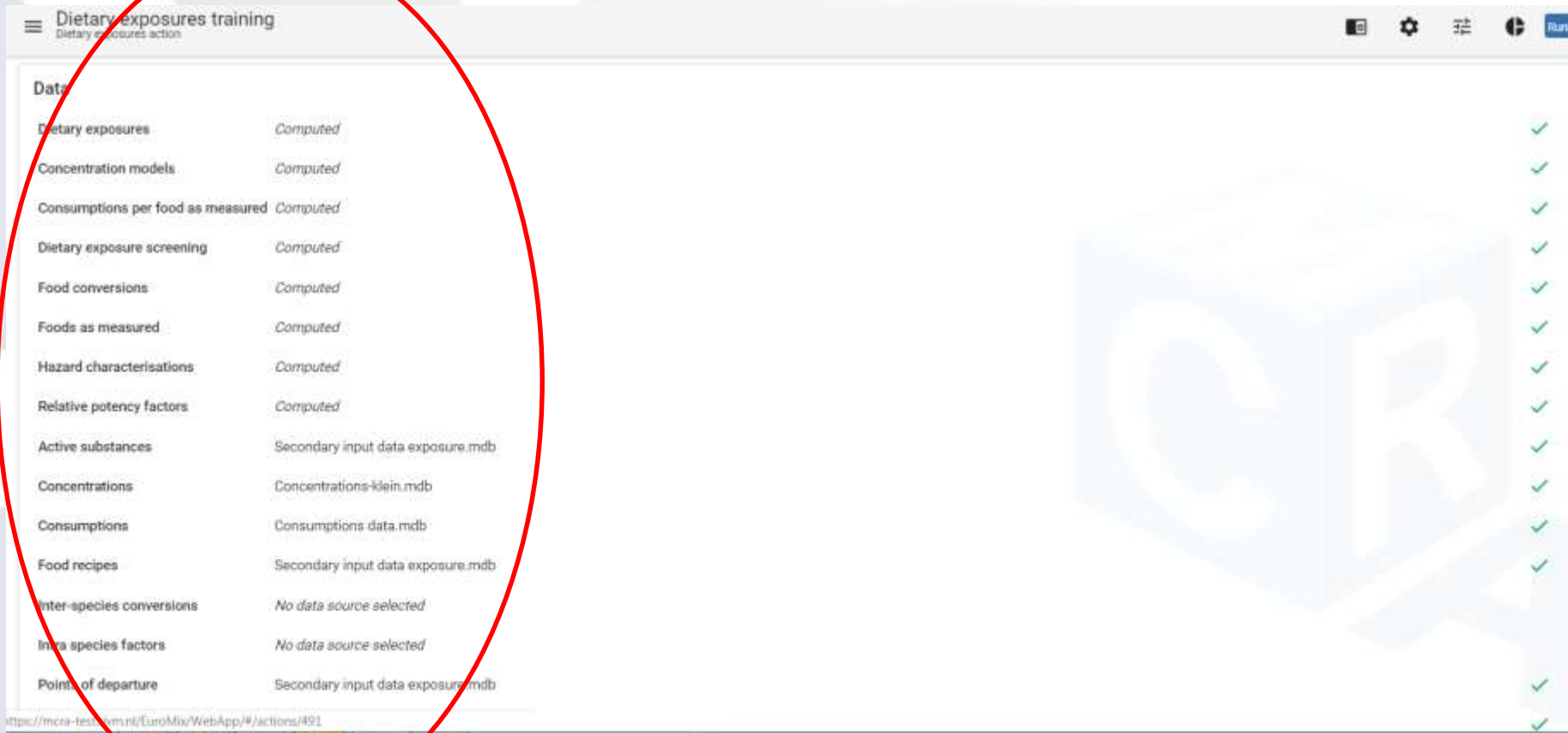
Name: Dietary exposures training  
Description: EFSA optimistic scenario  
Tags: VCP optimistic

**Scope**

Effects	Secondary input data exposure.mdb	✓
Foods	Secondary input data exposure.mdb	✓
Populations	Secondary input data exposure.mdb	✓
Substances	Secondary input data exposure.mdb	✓

# Summary overview



1. Check data and input settings
2. Scroll down



Dietary exposures training		
Dietary exposures action		
<b>Data</b>		
Dietary exposures	Computed	✓
Concentration models	Computed	✓
Consumptions per food as measured	Computed	✓
Dietary exposure screening	Computed	✓
Food conversions	Computed	✓
Foods as measured	Computed	✓
Hazard characterisations	Computed	✓
Relative potency factors	Computed	✓
Active substances	Secondary input data exposure.mdb	✓
Concentrations	Concentrations-klein.mdb	✓
Consumptions	Consumptions data.mdb	✓
Food recipes	Secondary input data exposure.mdb	✓
Inter-species conversions	No data source selected	✓
Intra species factors	No data source selected	✓
Points of departure	Secondary input data exposure.mdb	✓



# Summary overview

1. Check data and input settings 
2. If all data and settings are ok, then go up and start running the simulation 



Settings	
Exposure type	Chronic
Dietary exposure calculation tier	EFSA Guidance Optimistic
Apply processing factors	Yes
Processing factor model	Fixed
Apply exposure screening	Yes
Report consumptions and exposures per individual instead of per kg body weight	No
Covariate modelling	No
Model type	Observed Individual Means

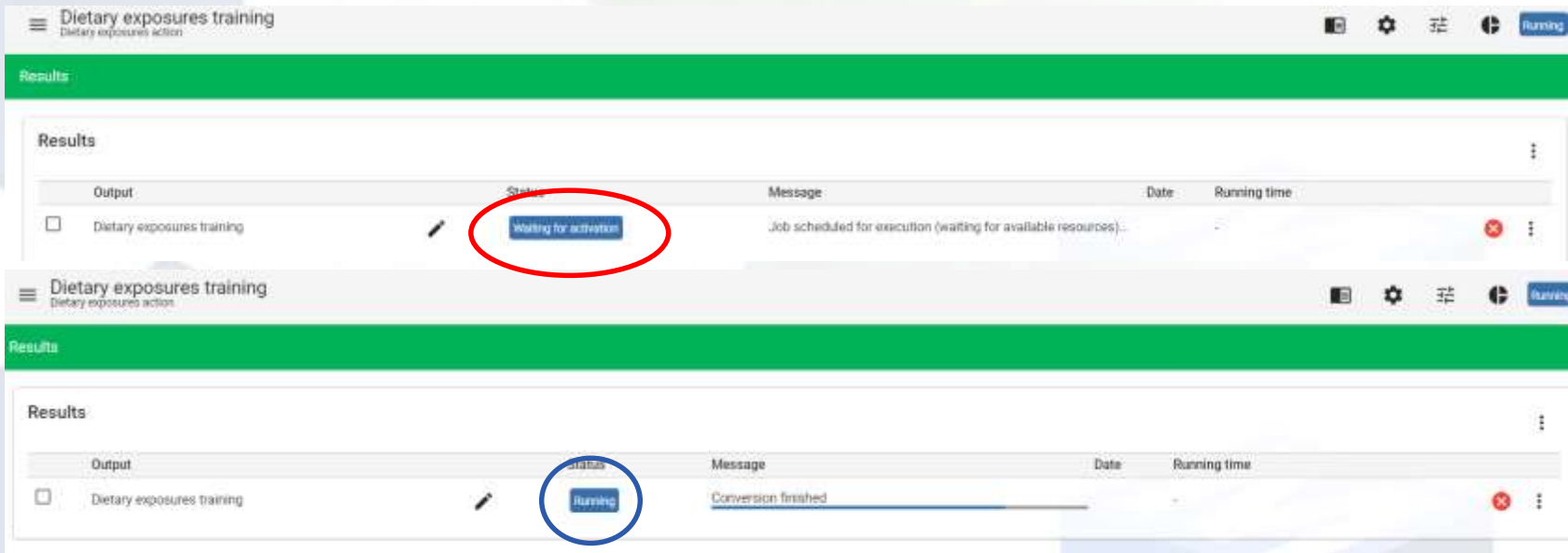
summary

☰ Dietary exposures training



# Run the simulation

1. After you start running the simulation, you see a screen with waiting for resources. This takes 10-20 seconds 
2. Then waiting for resources changes into running (second screenshot) 
3. This might take 3-4 minutes. If it takes longer than 10 minutes abort the job




The image shows two screenshots of the 'Dietary exposures training' interface. The top screenshot shows a table with a row for 'Dietary exposures training' where the status is 'Waiting for activation', circled in red. The bottom screenshot shows the same table where the status is 'Running', circled in blue. The message for the 'Running' job is 'Conversion finished'.

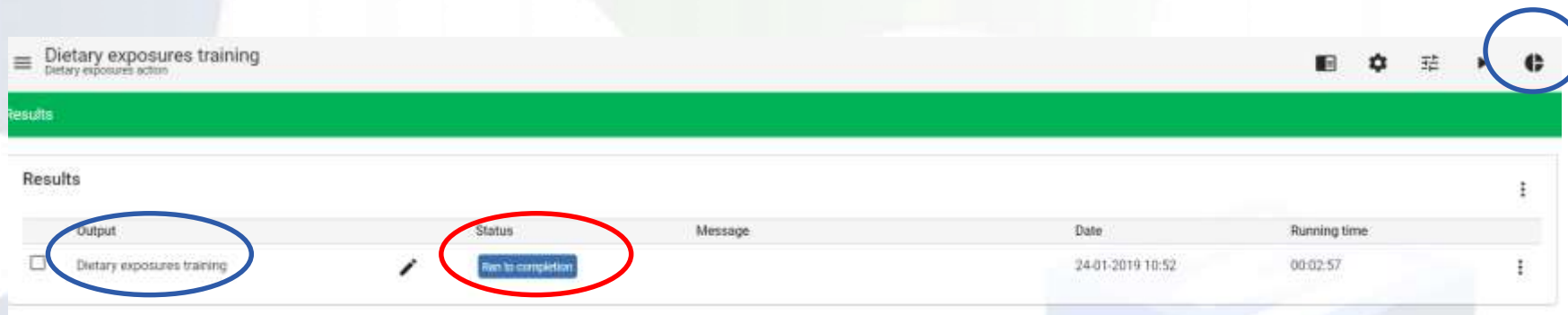
Output	Status	Message	Date	Running time
<input type="checkbox"/> Dietary exposures training	Waiting for activation	Job scheduled for execution (waiting for available resources)...		
<input type="checkbox"/> Dietary exposures training	Running	Conversion finished		





# Run the simulation

1. After 3-4 minutes you see Run to completion 
2. Navigate to view the output results or click on Dietary exposure training





Dietary exposures training  
Dietary exposures action

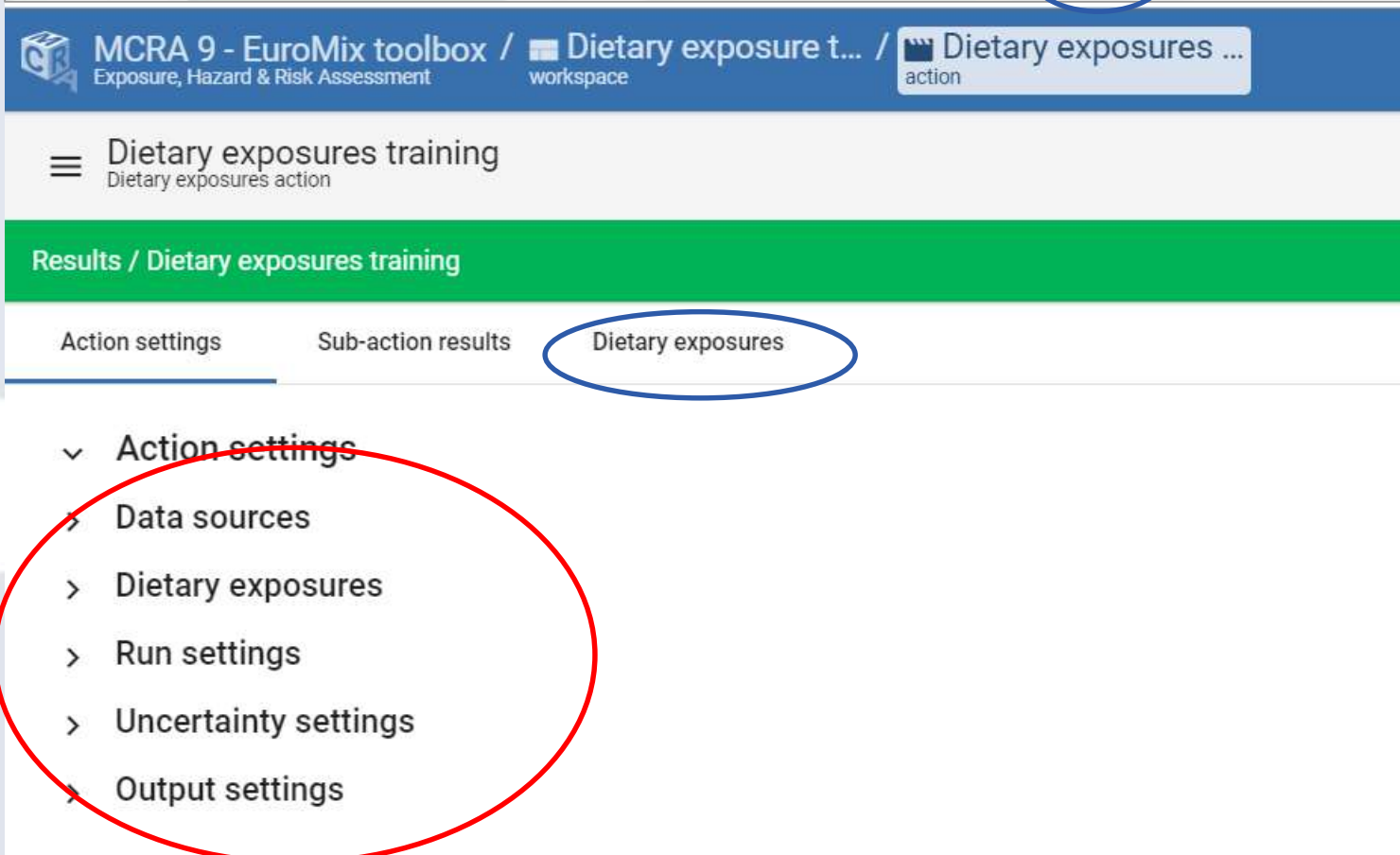
Results

Output	Status	Message	Date	Running time
<input type="checkbox"/> Dietary exposures training	Run to completion		24-01-2019 10:52	00:02:57



# View the output

1. You can check, and store the settings of your simulation. You can click on the options one by one 
2. Go to dietary exposure to view the results 



The screenshot shows the MCRA 9 - EuroMix toolbox interface. The breadcrumb trail at the top reads: "MCRA 9 - EuroMix toolbox / Exposure, Hazard & Risk Assessment" (workspace) / "Dietary exposure t..." (workspace) / "Dietary exposures ..." (action). Below this, the main heading is "Dietary exposures training" (Dietary exposures action). A green bar indicates the current view is "Results / Dietary exposures training". The navigation tabs are "Action settings", "Sub-action results", and "Dietary exposures" (circled in blue). A dropdown menu is open under "Action settings", listing: "Data sources", "Dietary exposures", "Run settings", "Uncertainty settings", and "Output settings". The "Action settings" dropdown menu is circled in red.



# View the output


1. Click on Observed individual means 

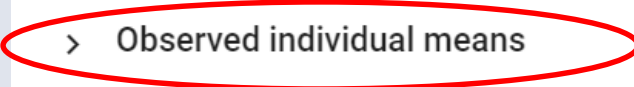
≡ Dietary exposures training  
Dietary exposures action

Results / Dietary exposures training

Action settings

Sub-action results

Dietary exposures 

- ✓ Dietary exposures
  - > Dietary exposure distribution (daily intakes)
  - > Exposures by food
  - > Exposures by substance
  - > Exposures by food and substance
  - > Observed individual means 



# View the output

## 1. Click on percentile



Action settings

Sub-action results

Dietary exposures

- ✓ Dietary exposures
  - > Dietary exposure distribution (daily intakes)
    - > Exposures by food
    - > Exposures by substance
    - > Exposures by food and substance
  - ✓ Observed individual means
    - > Graph total
    - > Graph upper tail
    - > Percentiles
    - > Percentages



# View the output

1. Look at Margin of Exposure at the 99.9 percentile
2. Study the other percentile

## ▼ Percentiles

Reference: Flusilazole, PoD = 530 µg/kg bw/day




Mean exposure: 0,2789 (µg/kg bw/day)

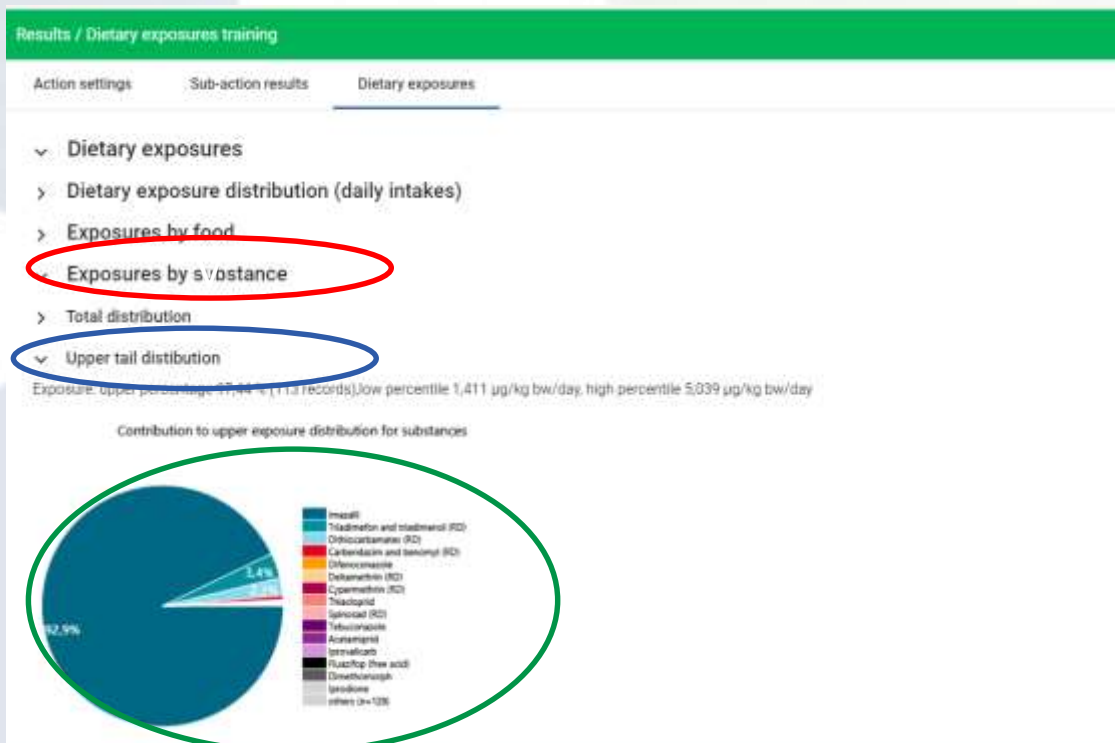


Percentage	Exposure (µg/kg bw/day)	Percentage of PoD (%)	Margin of exposure
50.00	0.1067	0.02	4968
90.00	0.7635	0.14	694.2
95.00	1.073	0.20	493.8
99.00	1.88	0.35	281.9
99.90	3.058	0.58	173.3
99.99	4.403	0.83	120.4



# View the output

1. Check Exposure by substance 
2. Chose total distribution or upper tail 
3. Study the results and conclude that Imazalil is a very important contributor 
4. What if you didn't had hazard data for Imazalil?



# EuroMix participants

22 beneficiaries from 16 countries linked to international organisations including WHO, FAO and EFSA.  
EuroMix is coordinated by RIVM.



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