National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

ConsExpo Web – Manual for Batch Assessments

Authors: Jordi Minnema, Christiaan Delmaar
                                      Wouter ter Burg

RIVM-project: E/124006

ConsExpo
consumer | exposure

1   Introduction

The batch assessment modus is a new functionality of ConsExpo Web introduced in version 1.1.0. The batch Assessment enables users to perform exposure evaluations for groups of substances, populations, products and/or scenarios in one run. It is helpful to screen a number of substance-product combinations for certain sub-populations in an organized way, e.g. calculating the exposure for a number of potential substance alternatives in a product range. This document aims to guide users through using the batch assessment functionality.

1.1   Workflow

Under the Assessments tab in ConsExpo Web, the workflow is organized using assessments. An assessment contains information for a substance and a population, to which certain product scenarios are linked. In the tab Batch Assessments, the fixed link between substance, product scenario and population is removed, allowing multiple combinations to be created in one batch assessment. The batch assessment does still require input for substance, population and product scenario in the designated windows 'substance', 'population' (under Batch Assessments tab) and 'product scenario' (under the Assessments tab). The required input needs to be inserted first. The product scenarios are still created under the Assessments tab as base scenarios are needed in the Batch Assessments.

The six required steps are:
Step 1: create assessments under the Assessments tab.
Step 2: create scenarios under Assessments tab
Step 3: create substance entries under Batch Assessments tab
Step 4: create batch assessment
Step 5: add batch lines to the batch assessment
Step 6: run the batch assessment

The workflow to perform batch assessments is explained below.

1.1.1   *Step 1: Create assessment(s)*

Create a new assessment by selecting the Assessments tab, and pressing 'New' in the 'Assessment' window. Here, you must specify an Assessment name, and you may provide additional information (optional) on substance, product of population characteristics. Once the information has been provided, make sure to save the assessment by selecting 'Save'. Note that substance and population information can be overwritten in a later stage, if multiple substances or populations are evaluated in the batch assessment. If needed, assessments can also be duplicated and subsequently adjusted to create assessments efficiently.

1.1.2   *Step 2: Create scenarios*

Once the assessment is created, it is necessary to add (multiple) exposure scenarios to that assessment. Scenarios are created as usual, i.e. by creating a new blank scenario, by duplicating an existing scenario or by creating a scenario from a fact sheet default scenario. Once all information has been provided, make sure to save the scenario by selecting 'Save'.

1.1.3   *Step 3: Create substance(s) under Batch substance*

Create a 'substance' for each substance to be included in the batch assessment. To create a substance, go to the Batch Assessments tab, select 'New' in the 'Batch substances' window and provide the required substance information. It should be noted that substance and related information provided under the Assessments tab is not forwarded to the Batch substance(s) entry fields.

1.1.4   *Step 4: Create batch assessment*

A batch encompasses all different substances and scenarios to be evaluated. To create a batch, select the 'Batch Assessments' tab and select 'New' in the 'Batch assessments' window. Here, choose a name for the batch assessment, and choose a population database. Note that only existing population databases can be chosen that are included in ConsExpo Web. It is not possible to provide custom population data. In addition, only one population database can be chosen for the entire batch assessment. In other words, to include populations from the EU and Canada, two separate batch assessments are needed.

1.1.5   *Step 5 Add batch lines to batch assessment*

In the context of batch assessments, each combination of a substance and a scenario is referred to as a batch line. Batch lines can be added to the batch assessment by selecting 'New' in the Batch lines window. This takes the user to a new window where the assessment needs to be chosen. After choosing the assessment (defined in step 1), the user specified which scenario (defined in step 2) needs to be evaluated. Note that it is only possible to choose scenarios that are added to the chosen assessments. Scenarios that are added to different assessments cannot be selected at that point. Then, the substance of interest (defined in step 3) and the exposed subpopulation is chosen.

The user may edit the parameter values taken from the selected combination of assessment, scenario and substance. Parameter values may be specified on two levels, i.e. the scenario and the substance levels. It may occur that input parameters specified at these different levels have conflicting values. ConsExpo Web defines the following hierarchy when it comes to choosing parameter values:

- values specified at batch line entry take precedence over values specified under Batch substance or in the exposure scenario in the Assessments tab.
- Values specified under Batch substance take precedence over values specified in the exposure scenario in the Assessments tab.
- If no values are provided under the batch assessment, calculations will be made using values specified in the exposure scenario in the Assessments tab.

Values that have been adopted from the Batch substance entry or from the exposure scenario in the Assessments tab are prefilled in the Batch line window and are used in the calculations. These values are presented in blue and can be overwritten and subsequently used in calculations.

A batch line needs to be created for every combination of scenario, substance, and population to be evaluated. Editing or deleting existing batch lines can be performed in the Batch lines window under 'Actions'. Also note that batch lines are provided with a label after creation. These labels are automatically generated and cannot be altered by the user. By duplicating, batch lines can be created efficiently if for example only the target population or substance needs to be changed.

1.1.6   *Step 6: Run the batch assessment*

Once all batch lines are created, one can run the batch assessment. To this end, select 'Run' in the Overview batch window. This will open a window 'Batch results'. The results are split into an Input

summary and Outcomes. The input summary is a brief overview of the input choices that make up the batch line. The Outcomes are the same outcomes that would have been calculated in the standard simulation of ConsExpo scenarios. For each batch line, the results are given. The 'Nr.' Column in the batch results corresponds with the label that was assigned to the batch line. Exporting of the batch results as a .csv file is possible by selecting 'Export' in the Batch results window.

1.2 General note

The batch assessment modus is limited in its features compared to the normal ConsExpo Web mode under the Assessments tab. Input of distributional data is not allowed and analytical tools such as sensitivity analysis is not possible. Additionally, graphical output is not supported in this mode. If this is desired for specific outcomes, the batch lines provide an easy link to the assessment and scenarios that have been used for the calculations. The user is then urged to perform the desired analyses using the Assessments tab and its features.

2