EFSA's Catalogue browser user guide

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Abstract

The Catalogue browser is a Java® based application developed with the ECLIPSE® environment, which allows the browsing, analysis and maintenance of EFSA's catalogues. It is directly connected with the Data Collection Framework, a platform through which data are submitted to EFSA. It consists of a number of catalogues, in which individual entries are aggregated within a hierarchical parent-child structure. A collection of descriptive facets are also available in the Catalogue browser. The facets are additional information that can be added to the initial selected record. One of the catalogues hosted by the EFSA Catalogue browser is the MTX (FoodEx2 Matrix) catalogue. This is EFSA's food classification and description system. This user guide is a supporting document for the installation of EFSA's Catalogue browser software. As the installation process is dependent on both the operating system and the Catalogue browser version being installed, errors outside the framework of this document may occur.

Key words: EFSA, Catalogue browser software, FoodEx2

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Summary

The EFSA Catalogue browser is a Java® based application developed with the ECLIPSE® environment, which allows the browsing, analysis and maintenance of EFSA's catalogues. This software is directly connected with the Data Collection Framework (DCF), a platform through which data are submitted to EFSA. This facilitates the download of the latest available catalogue and data collection configurations.

The EFSA Catalogue browser system consists of a number of catalogues, in which individual entries are aggregated within a hierarchical parent-child structure. The core of the system is comprised of a list of generic items, also called base terms that represent the minimum level of detail required. Within this list of generic items, more specific terms can be found in the 'extended list'. The terms of the core and extended list may be aggregated in various ways according to the needs of each domain.

In order to expand on the core terms, a collection of descriptive facets are available in the Catalogue browser. Facets are used to provide additional information and context to the core terms, and may be related to a wide array of characteristics.

One of the catalogues hosted by the EFSA Catalogue browser is the MTX (FoodEx2 Matrix) catalogue. This is EFSA's food classification and description system. This system includes seven different hierarchies for different food and feed safety domains; five domain-specific hierarchies (Zoonoses hierarchy, Feed hierarchy, Exposure hierarchy, VetDrugRes hierarchy, Botanicals); a general (Reporting hierarchy) purpose hierarchy available to all users, and a master hierarchy (MTX FoodEx2 Matrix) for the management of terminology. The system also includes facets related to different food characteristics including physical state, source-commodity, processing etc.

Additional information related to catalogues and DCF can be found in the 'Guidance on Data Exchange' report or on the GitHub openefsa platform.

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Requirements for the installation

- **EFSA folder**: Create a local folder named 'EFSA' in the main directory of the C drive. The Catalogue browser installation files will be stored here (C:\EFSA)[1]

- **Installer**: Download the appropriate Catalogue browser zip file for your operating system

- **32-bit Operating system** https://github.com/openefsa/catalogue-browser/releases/download/1.2.5/EFSA-catalogues-browser-onlyapp-win-32bit.zip

- **64-bit Operating system** https://github.com/openefsa/catalogue-browser/releases/download/1.2.5/EFSA-catalogues-browser-onlyapp-win-64bit.zip

- **File extraction program**: Required to extract the content of the Catalogue browser software (e.g. 7zip, WinRAR etc.)

- **Internet connection**: Required to allow the software to scan for updates and to connect with the database.

General Tips

- Ensure that your computer meets the requirements of the Catalogue browser program

- Check the operating system architecture of your computer from the *control panel*. In the tab *System and security* search for *System* and click on it. A list of information will appear displaying the architecture version next to the *System type* (32bit or 64bit)

- Read the 'readme' files when you encounter them if surfing the software's directories

- Close or remove previous versions of the Catalogue browser in order to facilitate a clean installation

- Install the latest version of the software when available as this will prevent bugs and provide new features which will improve the software

- The software is available for Windows OS users only

- The software may require a large amount of memory, particularly when downloading sizeable databases (>1GB of RAM), therefore, please ensure that you have sufficient capacity before downloading the Catalogue browser.

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[1] For EFSA internal users only: To avoid issues with antivirus create a folder in the following path D:\PortableApps and install the tool in this location.

1.   Installation

The installation process of the latest version of the Catalogue browser has been improved to require less input from the user.

After downloading the Catalogue browser specific to the operating system (view the requirements section for further information) in the local EFSA folder, the following steps should be followed.

1.1.   External EFSA users

- Extract the file 'EFSA-catalogues-browser-installer-win-32bit' or 'EFSA-catalogues-browser-installer-win-64bit' into the EFSA folder (C:\EFSA)
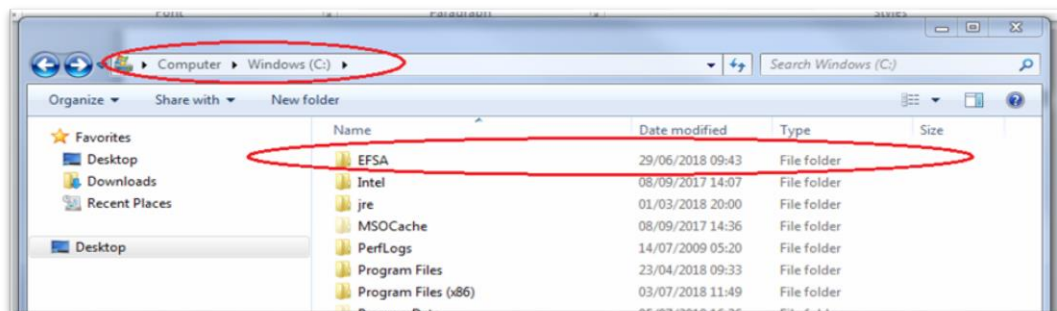
- Once the extraction procedure is complete, remove the zip file and enter into the extracted folder. You will see three files inside as shown in the figure below.
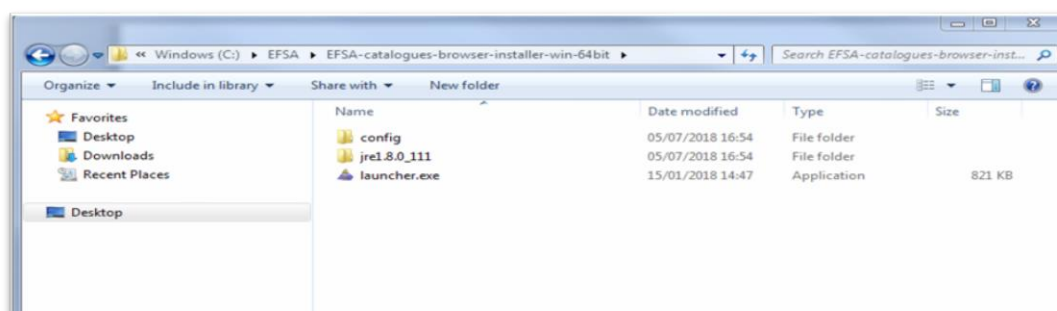
- Double click on the launcher.exe application, which will download the latest version of the Catalogue browser (if an updated version is available). Once complete, the program will automatically open (allow up to 5 minutes for this depending on the operating system). The main page will look as following:
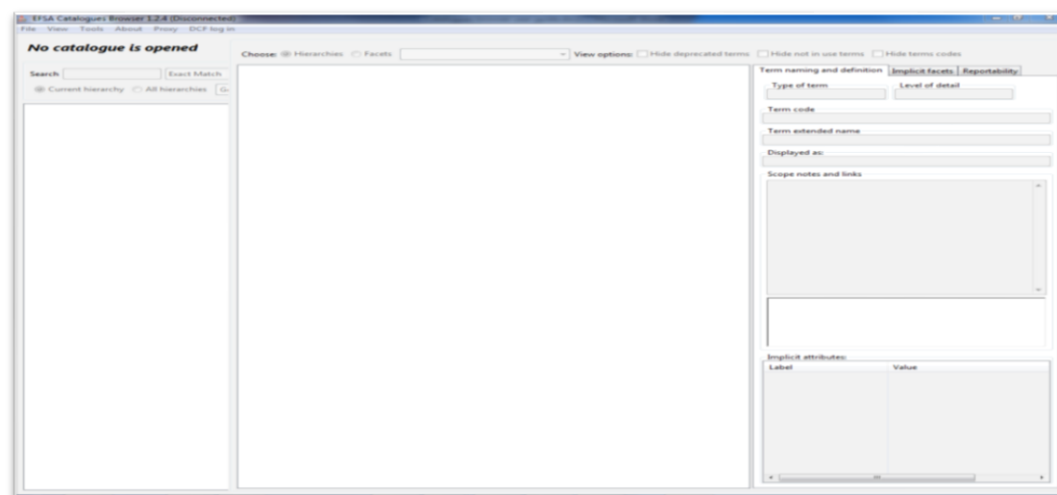
- If the following error message appears after launching the application then you do not have admin rights to your computer. You can either try to install the software in the D drive as explained in the following section (Internal EFSA users), or refer to the Information Technology (IT) colleagues in your organisation.
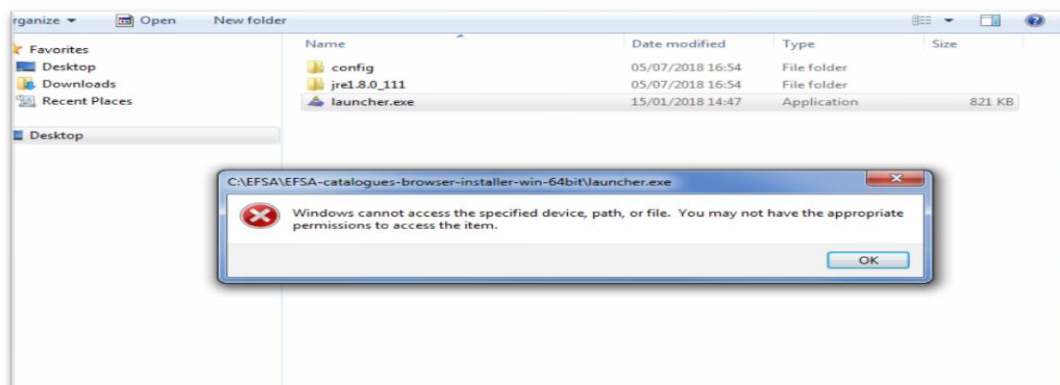
1.2.   Internal EFSA users

- Extract the file 'EFSA-catalogues-browser-installer-win-32bit' or 'EFSA-catalogues-browser-installer-win-64bit' into the EFSA folder (D:\PortableApps)
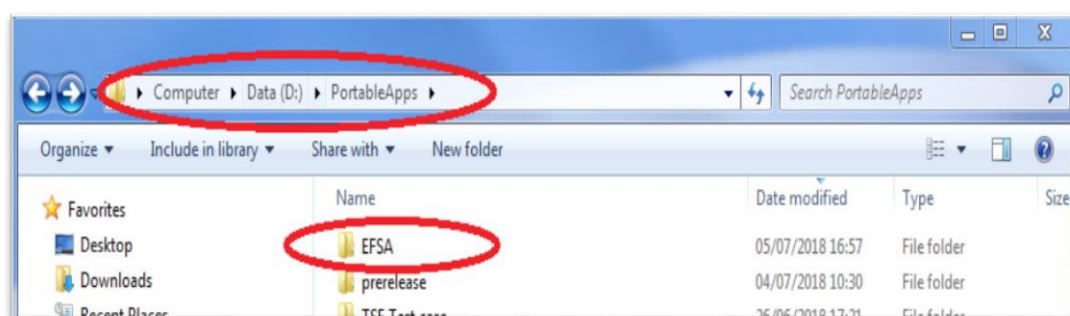
- Once the extraction procedure is complete, remove the zip file and enter into the extracted folder. You will see three files inside as shown in the figure below.
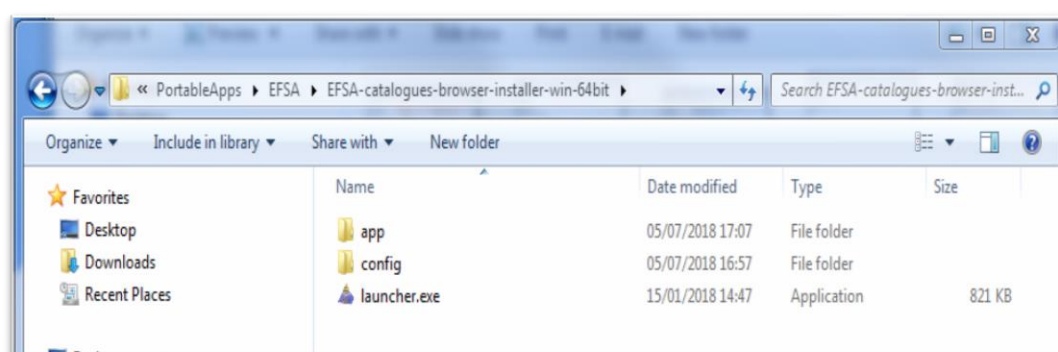
- Double click on the launcher.exe application, which will download the latest version of the Catalogue browser (if an updated version is available). Once complete, the program will automatically open (allow up to 5 minutes for this depending on the operating system). The main page will look as following:
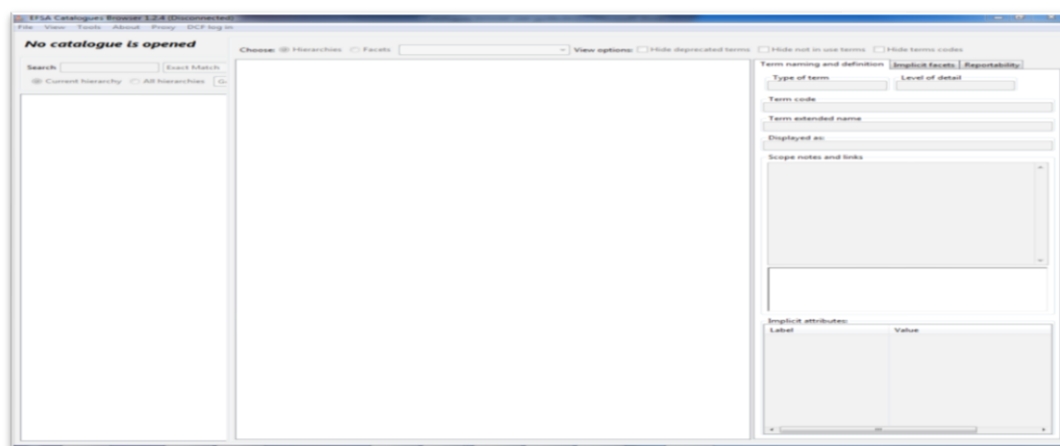
2.   MTX (FoodEx2 Matrix) Catalogue

The ability to capture all the useful details of food groups in exposure assessments by EFSA is a crucial requirement for the process of risk assessment. For this reason, a food and feed classification and description system named FoodEx2 was launched by EFSA in 2011(EFSA, 2011) and further revised in 2015 (EFSA, 2015). The system was built in order to support several food safety-related activities. In particular, it has been developed to provide a detailed tool for performing exposure assessment from food and feed and to collect the data needed to this purpose. Additionally, the classification is suitable to collect data in domains like Pesticide residues, Zoonoses, residues of Veterinary medicinal products, potentially hazardous botanicals. The catalogue containing the FoodEx2 classification is called MTX (FoodEx2 Matrix) catalogue and is hosted by the EFSA Catalogue browser.

3.   First configuration

Once the Catalogue browser software is installed, it is essential to ensure that the network proxy is correctly configured in order to allow the application to interface with the various databases provided by EFSA.

In the main menu located at the top left, click on the Proxy item. A window will appear allowing modifications to the parameters which define the connection between the application and the proxy network.

By clicking on the 'Test the connection' button you request the software to send a message to the server. If a response message is sent back then a subsequent window will be opened, which will inform you that the connection is successfully enabled. In this case you are ready to login in the application (Login and first interaction).
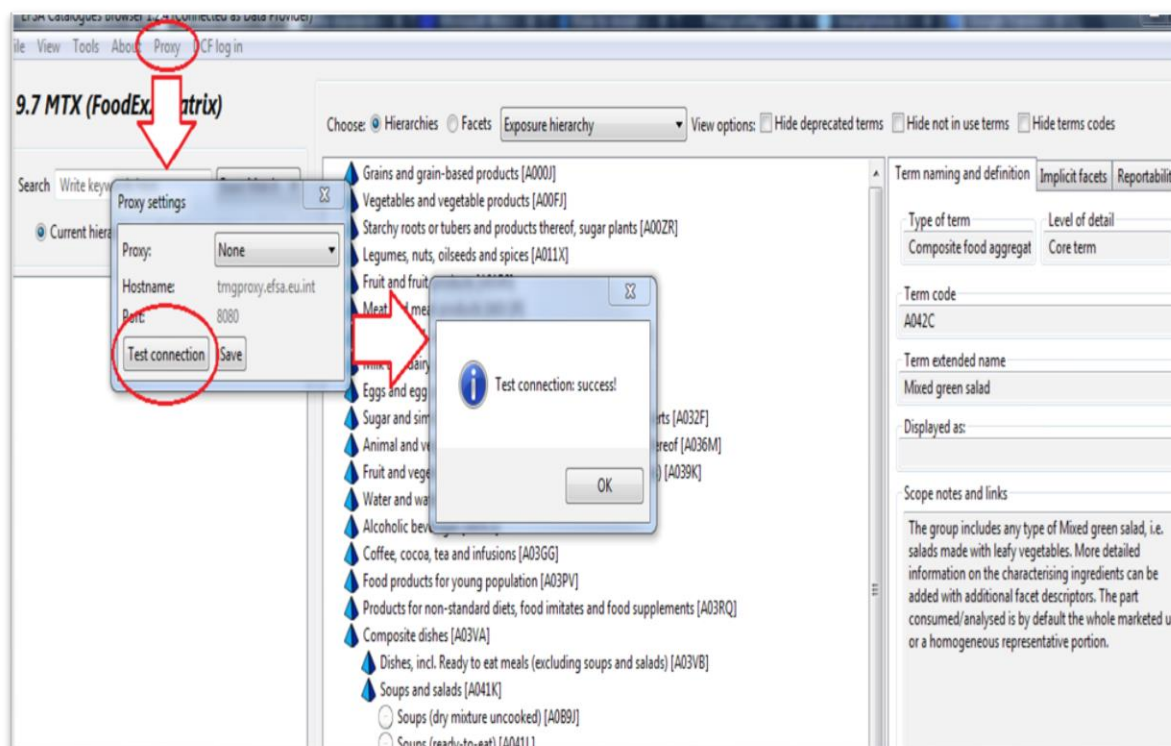
In the opposite case, please, follow the instruction provided in the following section to configure the proxy network yourself.

3.1. Proxy Configuration

The proxy configuration window allows setting a customised proxy address, which will be used by the EFSA Catalogue browser to open internet connection. Note that by default the tool does not use any proxy; therefore, if a proxy is indeed present in your network, you will receive a connection error, even if your machine is correctly connected to internet. In this case the proxy configuration is needed.

3.1.1. Manual Configuration

The proxy host name and port can be set in the EFSA-catalogues-browser-installer-win-64\config\proxyConfig.xml file, which is contained in the directory, where the application was installed (EFSA-catalogues-browser-installer-win-32\config\proxyConfig.xml for 32-bit versions). This file contains the 3 entries in .xml format. Modify them so that the final configuration should appear as the following:

<entry key="Proxy.Mode">*MANUAL*</entry>
<entry key="Proxy.HostName">*your.proxy.hostname*</entry>
<entry key="Proxy.Port">*yourport*</entry>

3.1.2. Automatic Configuration

It is also possible to set the Proxy.Mode property to AUTO. In this case other settings will be ignored and the tool will try to identify proxy settings automatically[2].

4. Login and first interaction

The EFSA Catalogue browser communicates directly with the Data Collection Framework (DCF) to work with the last catalogues releases. It is therefore, required to log in to the DCF with valid DCF

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[2] For more information refer to the GitHub specific section: https://github.com/openefsa/catalogue-browser/wiki/ProxyConfiguration

credentials to download the catalogues. A login can be performed in the tool by clicking the *DCF log in* button in the main menu.
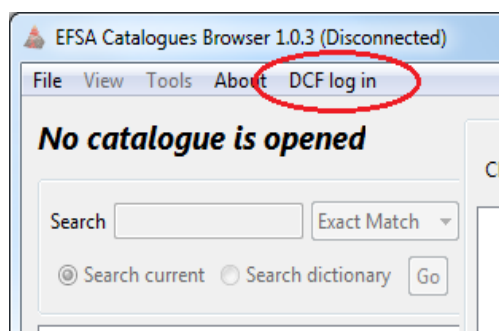
Once the button is pressed the following window will appear:
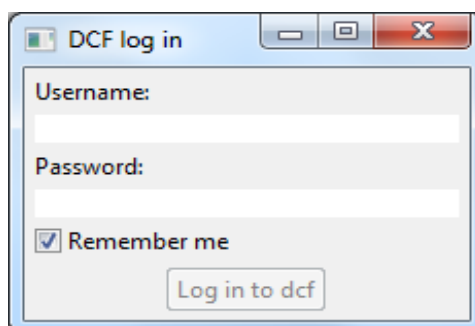
The DCF username and password should be inserted. The **remember me** flag allows to store the credentials within the tool, in order to automatically perform the login each time the tool is launched.[3]

It is possible to log in by clicking the '**Log in to DCF**' button. You will be notified if the log in has been successful or if the log in credentials are incorrect[4].

Once logged in, it is possible to download the EFSA catalogues and data collection configurations.

If you do not have a DCF account, it is not possible to download the last versions of the EFSA catalogues directly from the EFSA Catalogue browser. For this reason, catalogues may also be imported in the tool by using '.ecf' files, without DCF credentials. The procedure to import an '.ecf' file is described in section 4.1.1.4 Import catalogue.

5. Main Page Components

In the following chapter some of the most important components of the main page of the Catalogue browser will be introduced. From the latest version of the software (1.2.5) and on, it will be possible to browse the main page in concomitance with additional windows[5]. This new functionality has been requested as the main page contains the most important information required to describe a specific food term.

In general, the main page is divided into 3 main components:

1. The **main menu** (top-left part of the page), which contains all the drop-down buttons, which allow the interaction with the software

2. The **search panel** (left part of the page) that allows you to perform searches by terms and then view the list of results in a special interactive section

3. The **tree term panel** (right part of the page) dedicated to the hierarchical display of terms following a tree structure accompanied by several tabs at the right that allow viewing various information related to the selected term on the tree.

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[3] Note: this will store your user name and password in plain text in the database, exposing them to possible external malicious software. Please see the EFSA catalogue browser disclaimer.
[4] Verify if you are logged in correctly by checking that the login button is not activated.
[5] Note that not all the windows give the ability to surf the main page.
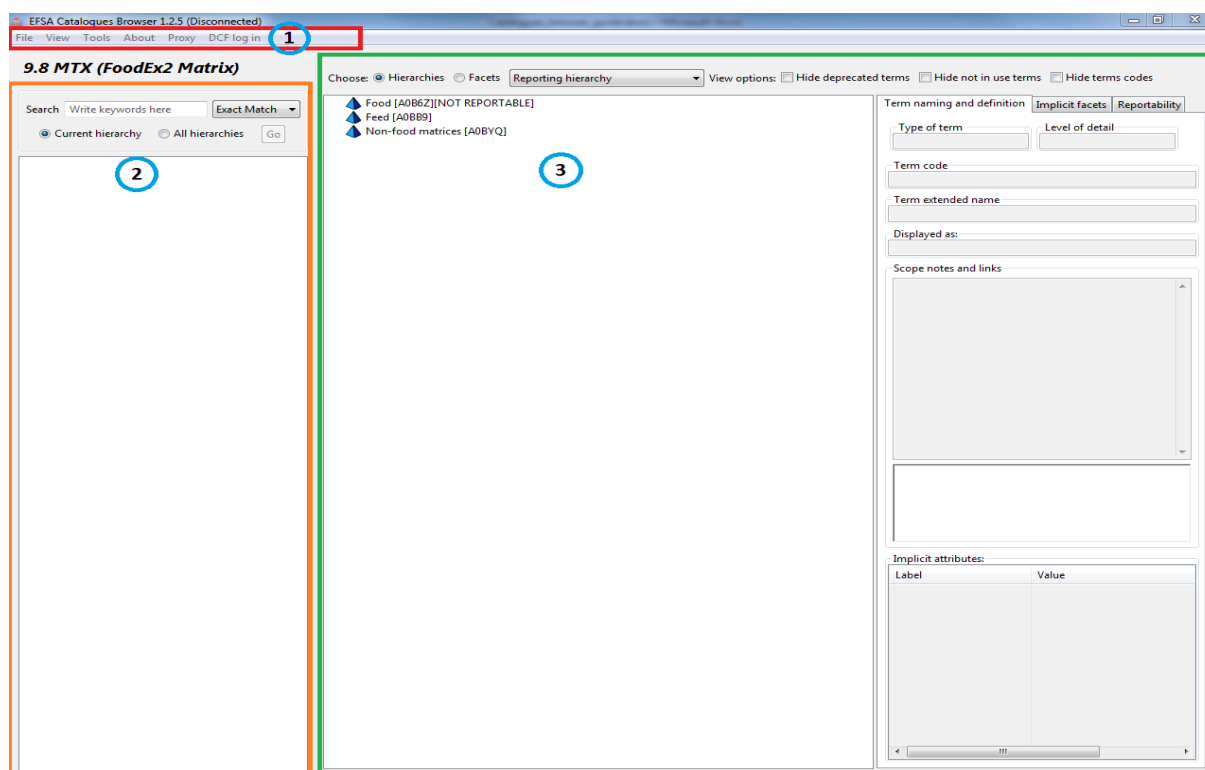
5.1.   Main Menu

The main menu consists of a list of drop-down buttons that allow you to interact with the most important components of the system. These buttons are accessible from the majority of windows, excluding windows that display errors and require input from the user.
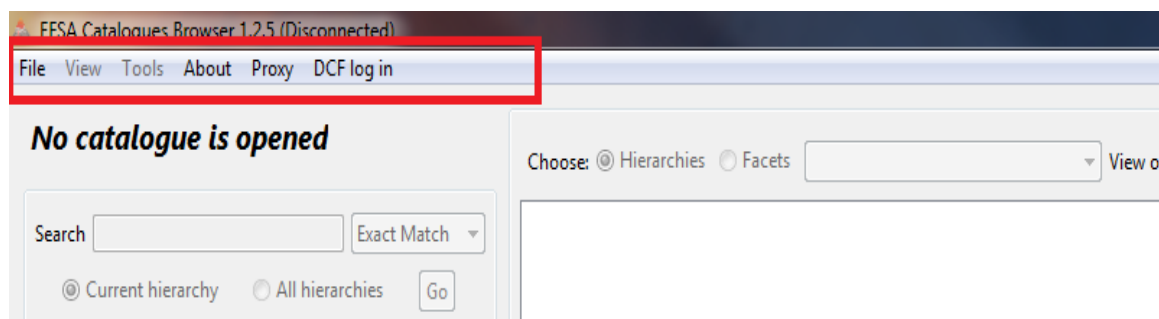
5.1.1. File

The 'File' menu item is a graphical control element, which contains all the commands relating to the handling of catalogues.
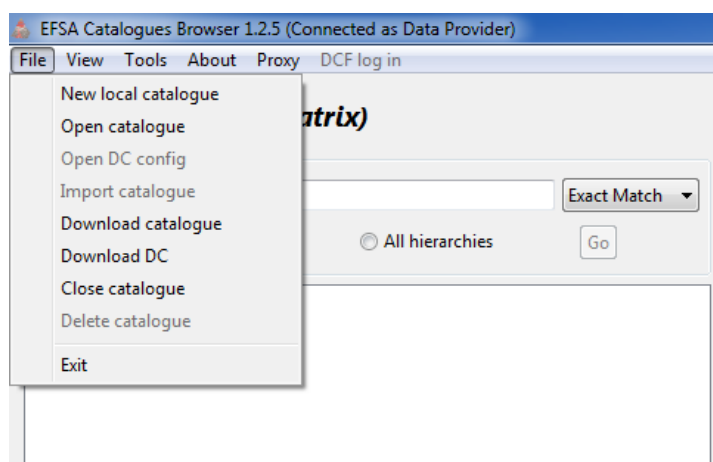
5.1.1.1. New local catalogue

The EFSA Catalogue browser allows you to create your own catalogue for personal uses. These catalogues are named **local catalogues**, and they can be created by clicking in the main menu **File → New local catalogue**. The following window will be opened asking to type the catalogue name needed for the new local catalogue.
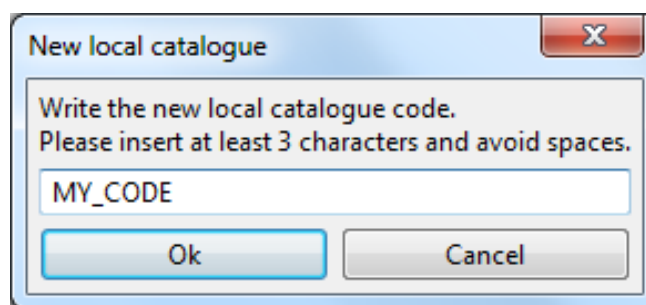
Note that it is necessary to type at least three characters to create a valid catalogue name. It is also suggested to avoid spaces for simplicity (spaces will be replaced by underscores if they are inserted). Once the catalogue name is chosen, press the Ok button to create it.

The new local catalogue will subsequently be available in the list of openable catalogues. Before a specific catalogue has been downloaded, the local catalogue will contain the master hierarchy without any extended terms.

5.1.1.2. Open catalogue

Opening a catalogue related to loading data into the tool user interface, in order to browse it using the tool functions.

You can open a catalogue by clicking **File → Open catalogue**.

From the appearing list of catalogues, select the catalogue you want to open and press the 'Open' button. Both official and local catalogues are present at this stage. Local catalogues are marked by a 'Not applicable' version and a 'Local catalogue' status.

Once a catalogue is opened, its data will load and the catalogue label will reflect the catalogue code and version[6].

5.1.1.3. Open DC config

The tool allows the visualisation of a previously downloaded Data Collection Configuration (DCC). This means that all the tables and variables involved in each downloaded data collection can be checked.

A DCC can be opened by clicking in the main menu **File → Open DC config**.

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[6] Note that a catalogue can be opened only if it was previously downloaded or imported.

A new window opens, listing all the downloaded data collections.

Clicking the '**Open**' button will open the selected DC configuration. Another window will be opened, displaying the DCC tables and variables.

In this window it is possible to directly open the catalogue and the hierarchy related to the variables of the data collection, by selecting a variable and clicking the '**Open**' button.

5.1.1.4. Import catalogue

This command allows you to import an EFSA catalogue into the software when you do not have a DCF account.
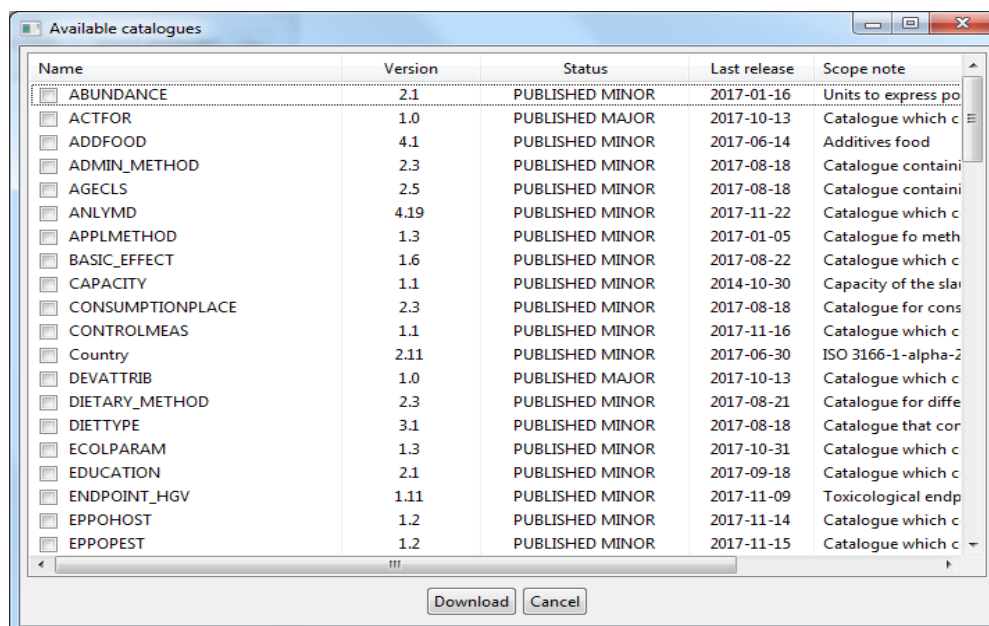
In particular, you must have an .ecf file on your computer. This is a customised file released exclusively by EFSA and contains a catalogue in a special format, which can be imported into the tool by clicking from the main menu **File → Import Catalogue**[7].

A browsing window opens allowing you to select the .ecf file you want to import. A notification will be displayed when the process is successfully completed.

Currently, the FoodEx2 catalogue is the only catalogue available in .ecf form. This can be downloaded from the following page: https://github.com/openefsa/catalogue-browser/wiki/Use-the-tool-without-DCF-account.

5.1.1.5. Download catalogue

You can see which catalogues are available in DCF by clicking on the main menu **File → Download catalogue**. The following window opens showing the catalogues with their scope note and version number:

Name	Version	Status	Last release	Scope note
ABUNDANCE	2.1	PUBLISHED MINOR	2017-01-16	Units to express po
ACTFOR	1.0	PUBLISHED MAJOR	2017-10-13	Catalogue which c
ADDFOOD	4.1	PUBLISHED MAJOR	2017-06-14	Additives food
ADMIN_METHOD	2.3	PUBLISHED MINOR	2017-08-18	Catalogue containi
AGECLS	2.5	PUBLISHED MINOR	2017-08-18	Catalogue containi
ANLYMD	4.19	PUBLISHED MINOR	2017-11-22	Catalogue which c
APPLMETHOD	1.3	PUBLISHED MINOR	2017-01-05	Catalogue fo meth
BASIC_EFFECT	1.6	PUBLISHED MINOR	2017-08-22	Catalogue which c
CAPACITY	1.1	PUBLISHED MINOR	2014-10-30	Capacity of the sla
CONSUMPTIONPLACE	2.3	PUBLISHED MINOR	2017-08-18	Catalogue for cons
CONTROLMEAS	1.1	PUBLISHED MINOR	2017-11-16	Catalogue which c
Country	2.11	PUBLISHED MINOR	2017-06-30	ISO 3166-1-alpha-2
DEVATTRIB	1.0	PUBLISHED MAJOR	2017-10-13	Catalogue which c
DIETARY_METHOD	2.3	PUBLISHED MINOR	2017-08-21	Catalogue for diffe
DIETTYPE	3.1	PUBLISHED MINOR	2017-08-18	Catalogue that cor
ECOLPARAM	1.3	PUBLISHED MINOR	2017-10-31	Catalogue which c
EDUCATION	2.1	PUBLISHED MINOR	2017-09-18	Catalogue which c
ENDPOINT_HGV	1.11	PUBLISHED MINOR	2017-11-09	Toxicological endp
EPPOHOST	1.2	PUBLISHED MINOR	2017-11-14	Catalogue which c
EPPOPEST	1.2	PUBLISHED MINOR	2017-11-15	Catalogue which c

Select which catalogues should be downloaded by checking the boxes located on the left of the catalogues names. Then, press the '**Download**' button to start the catalogues downloading process (the download progresses are tracked by progress bars)[8].

5.1.1.6. Download DC

A data collection configuration (DCC) is a list of tables (fact tables), which contain the variables that a data provider should report to EFSA. In particular, each variable can be related to a specific EFSA catalogue.

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[7] Note that before importing a new catalogue it necessary to close the current catalogue.
[8] Catalogues can be downloaded only if you are successfully logged in to the DCF.

The EFSA Catalogue browser allows downloading the configurations of the data collections the user is interested in, in order to directly visualise them into the tool. Moreover, the tool automatically detects all the catalogues involved in the chosen data collection, and downloads them into the users' computer.

A data collection configuration can be downloaded by clicking in the main menu **File → Download DC**.

It is possible to download the selected data collection by pressing the 'Download' button. As described above, the tool will also download the catalogues involved in the selected data collection. To keep the user updated on the download progress, a window with the download progress will appear[9].

5.1.1.7. Close catalogue

Closing a catalogue means to unload all its data from the tool user interface. A catalogue can be closed simply by clicking **File → Close catalogue**.

5.1.1.8. Delete catalogue

A catalogue can be deleted by clicking in the main menu **File → Delete catalogue**. A window listing all download catalogues will appear, in order to select a subset of catalogues you want to delete[10].

5.1.1.9. Exit

In order to exit the application, click in the main menu **File → Exit**.

5.1.2. View

The 'View' item contains all the commands relating to how the items inside the tree should be displayed.
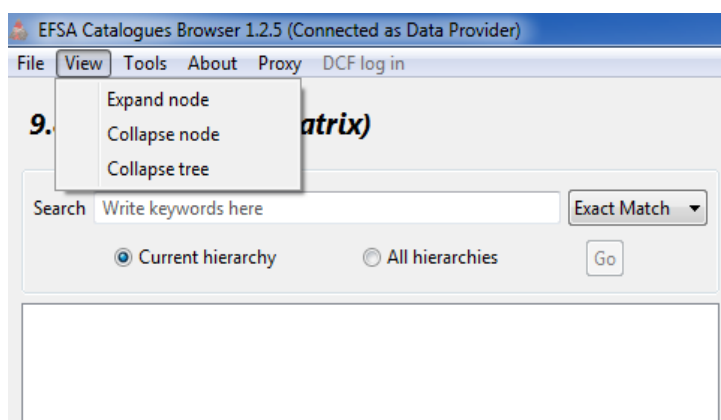
5.1.2.1. Expand node

Expand a tree node i.e. all terms under a selected term in the tree will be opened.

5.1.2.2. Collapse node

Collapse a tree node i.e. all terms under a selected term in the tree will be closed.

5.1.2.3. Collapse tree

Collapse the navigation shaft i.e. all open elements of the main shaft will be closed.

5.1.3. Tools

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[9] If the download process is not finished, then no action can be performed in the Tool.
[10] It is allowed to delete catalogues only if no catalogue is opened. If a catalogue is opened, then it is necessary to close it before making deletions.

The 'Tools' item handles all the commands regarding import/export excel file and other user customisations.

5.1.3.1. Import Excel

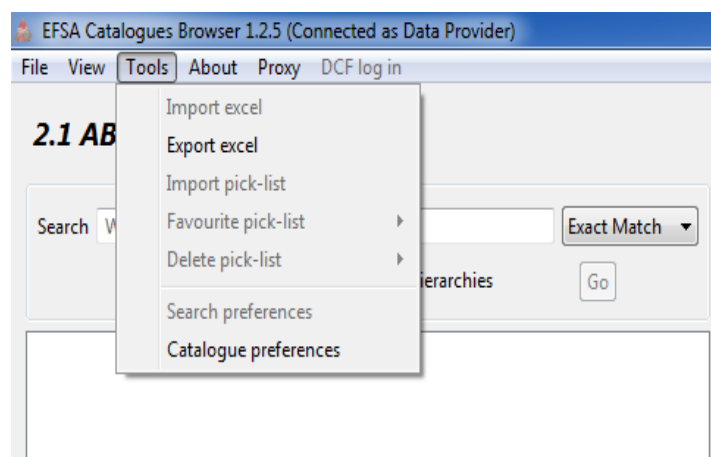It is possible to import a catalogue into the tool also through an .xlsx file. The use of this method is not supervised by EFSA; therefore, it should be used only by expert users. In particular, this import method works only with local catalogues. To import an '.xlsx' file, open a local catalogue and click in the main menu **Tools → Import excel**. An explorer window will appear, in order to select the '.xlsx' file to import. A notification will be shown as the import process finishes.

5.1.3.2. Export Excel

Sometimes it is easier to perform general operations using an Excel worksheet, since it has some built-in functions. The EFSA Catalogue browser provides a way to export an '.xlsx' version of a catalogue, if there is need to explore it using Excel. More precisely, open the catalogue to export and click in the main menu **Tools → Export excel**. An explorer window will appear, in order to select where to save the '.xlsx' file. A notification will appear as soon as the export process finishes.

Please, note that it is possible to use the export '.xlsx' and import '.xlsx' together to easily modify the contents of a **local catalogue**.

5.1.3.3. Import pick-list

Once a pick-list is created (e.g. by saving as .CSV a spreadsheet with the appropriate structure and content), it is sufficient to click in the main menu **Tools → Import pick-list**. An explorer window will be opened, in order to select the .csv file to import.

5.1.3.4. Favourite pick-list

In order to use a pick-list, it is necessary to define first, which is the 'favourite' one. This can be done by selecting in the main menu **Tools → Favourite pick-list**. This way the software will use the selected pick-list. The pick-list terms can be visualised by simply right clicking anywhere in the tree main panel and selecting the menu item 'Favourite picklist'. This will open a new window very similar to the one used for the recently described terms. The search bar works exactly in the same way as the one used in the recent terms window (i.e. it uses the term names to filter the results). Here, either the term codes can be copied or the term can be loaded into the describe window in order to modify their predefined facets. This functionality helps saving time and avoiding encoding errors, since it's using standardised codes.

5.1.3.5. Delete pick-list

If an imported pick-list is not needed any more, it is possible to delete it by clicking in the main menu **Tools → Delete pick-list**.

5.1.3.6.   Search preferences

The Catalogue browser allows a customisation of search results. More precisely, it is possible to filter which type of terms should be included in the results and which implicit attributes of the terms have to be taken into consideration while searching keywords inside the terms. Please, note that the catalogue should have either the type of term attribute or at least one implicit attribute defined in its structure, in order to be able to use the search preferences. The search preferences can be accessed by clicking in the main menu **Tools → Search preferences**.
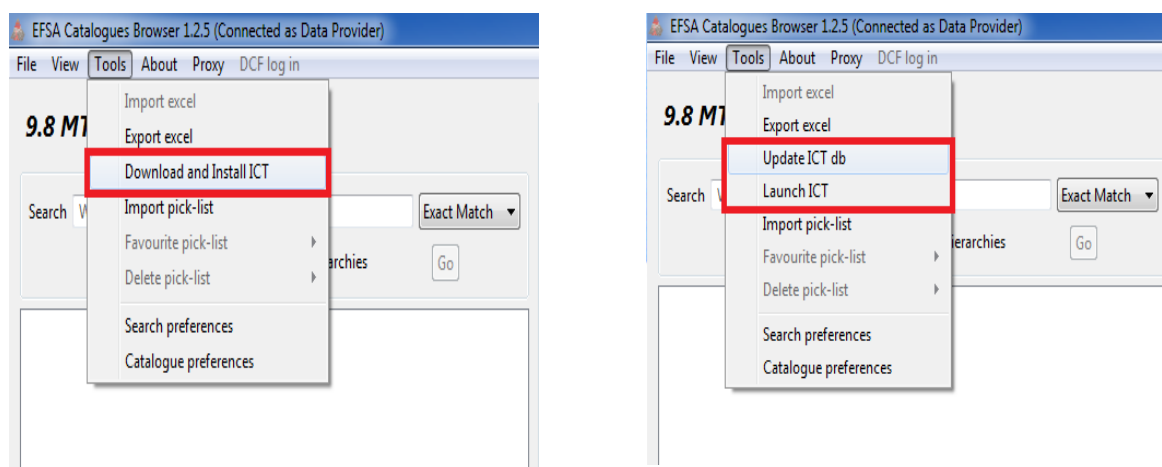
5.1.3.7.   Catalogue preferences

These preferences are general preferences related to the current catalogue. They can be accessed by clicking in the main menu **Tools → Catalogue preferences.** The following preferences can be customised:

- **Min search chars**: this value is the minimum number of characters that has to be inserted in a search panel in order to execute the search. The default value is set to 3, since searching terms using only two letters could return too many, not related, results

- **Logging**: this value can be either set to TRUE or to FALSE. A TRUE value means that a log file will be created while the Catalogue browser is working with the current catalogue. This is needed only for de-bugging purposes and should be avoided during normal operations, since a new file is created each time the browser is opened. A FALSE value means that a log file will not be generated by the system

- **Copy implicit facets**: this value can be either set to TRUE or to FALSE. A TRUE value means that implicit facets codes will be shown in the full codes in the Describe window. Unless there are specific needs, the value should be set at FALSE, since while reporting data the implicit facets shall not be reported. This preference is ignored if the catalogue does not support implicit facets

- **Max recent terms**: the maximum number of recently described terms recorded by the tool. This preference is ignored if the catalogue does not support implicit facets

- **Enable business rules**[11]: This value can be either set to TRUE or to FALSE. A FALSE value means that the business rules checks will be disabled in the Describe window. Domains which are related to consumption should set this value to TRUE, since these rules were created specifically for consumption data.

5.1.4.   Tools for MTX (FoodEx2 Matrix) catalogue

The 'Tools' item provide additional functions when the MTX (FoodEx2 Matrix) catalogue is open in the browser.

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[11] Preference allowed only for the MTX catalogue

5.1.4.1. Download and Install ICT

This item (visible only in special conditions)[12], allows the user to download and install the Interpreting and checking tool (ICT) inside the Catalogue browser. Please, be sure that you are properly connected to internet before installing the tool. After the download process, an extraction of the zip file will be performed followed by a setting up process, which will move all the needed files in each proper folder. Please, note that once the tool has been correctly installed the download and install item will be replaced with two more items under the tools drop-down list in the main menu (Update ICT db and Launch ICT).

5.1.4.2. Update ICT db

This item (visible only in special conditions)[13], allows the user to update the ICT's database. This new feature (introduced in version 1.2.5 of the Catalogue browser) allows exporting the current opened version of the MTX catalogue in a customised mode. This will be exported as an .xlsx format file in which will reside all the information used by tool. Please, note that the .xlsx file will be stored in the following path: '**../app/Interpreting_Tool/Foodex2.xlsx**'

5.1.4.3. Launch ICT

This item (visible only in special conditions)**Error! Bookmark not defined.**, allows the user to launch the ICT directly from the Catalogue browser. Please, note that if the tool is open and the launch button is pressed then the excel file will be just refreshed since just one instance of the tool can exists per time. Before launching the tool, please, be sure that you have the latest database version or, in case you want to update it then close the tool, update the database and then restart the ICT.

5.1.5. About

From this item you can access the commands that allow you to view all the information regarding the latest software and catalogues updates as well as license of usage.
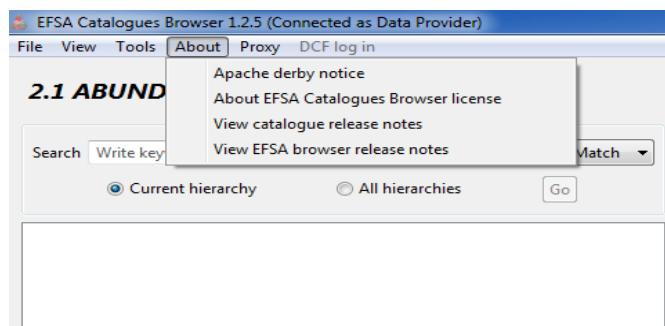
5.1.5.1. Apache derby notice

Open the Apache Derby licence. Apache derby is the SQL database used within the application.

5.1.5.2. About EFSA Catalogue browser licence

The EFSA Catalogue browser is subject to a software licence, which can be also visualised in the Tool interface. The licence can be visualised simply by clicking in the main menu **About → About EFSA Catalogue browser licence**.

5.1.5.3. View catalogue release notes

Each catalogue version comes with new changes in the catalogue contents. The Catalogue browser allows viewing the changes, which were made between the second-last and the last catalogue version. In particular, it is sufficient to open the catalogue of interest and then to click in the main menu **About → View catalogue release notes**. A window will appear showing all the operations

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[12] The button is visible only when there are not ICT's folders inside the "app" folder.
[13] The button is visible only when the ICT tool is correctly installed.

which were made on the catalogue. Moreover, a description and a note which summarise the changes are also displayed.

5.1.5.4. View EFSA browser release notes

In this window, accessible from **About → View EFSA browser release notes**, it is possible to check every time all the information regarding the current installed version of the Catalogue browser (i.e. new added features and resolved bugs).

5.2. Search panel

The tool provides a powerful and flexible search function to quickly find specific terms through a catalogue. The principle search function is accessible from the main page of the Catalogue browser and it allows searching several fields related to the terms. A search can be executed in different ways, but the most common one consists in searching a term through its name or a part of it. Remember that terms can be searched through any names, codes and implicit attributes values (or a substring of them) related to them but not through the scope notes. The search can also be restricted to just some fields (e.g. code and name) by setting the options in the Search Options window.
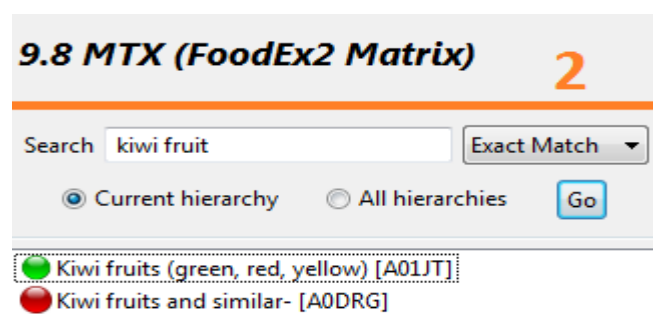
Another core feature which is provided by the search function is the search methodology. More precisely, three different search strategies are available:

- **Exact Match**: the tool searches the given keywords as a single string, exactly as they are written; in this case, the order of the keywords is relevant

- **Any Word**: the tool searches all the terms which contain at least one of the written keywords. Please, note that the order of keywords is not relevant

- **All Words**: the tool searches all the terms, which contain all the written keywords. Please, note that the order of keywords is not relevant.
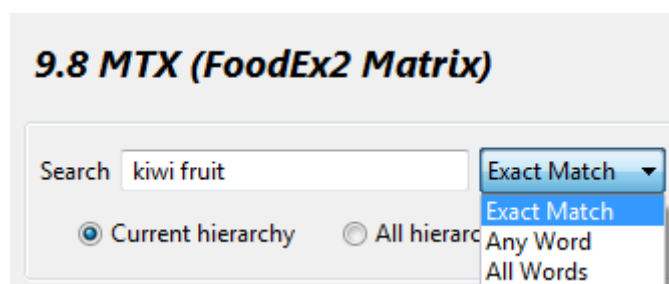

Moreover, it is possible to customise also the search scope using the highlighted radio buttons near the bar:

- **Current hierarchy**; search in the currently opened hierarchy, this is the default

- **All hierarchies**; search in all the available hierarchies and facets lists (the search is performed on the complete terminology).

The search results will be listed in the table below the search panel. If a term contained in the search results box is selected, then the tree will show it in the current hierarchy (if present). If the term is not present in the current hierarchy, no automatic action is performed. Nonetheless, a term in the

search results box can be right clicked, in order to open a contextual menu, which will allow opening the term in any of the hierarchies/facet lists where it is in use.
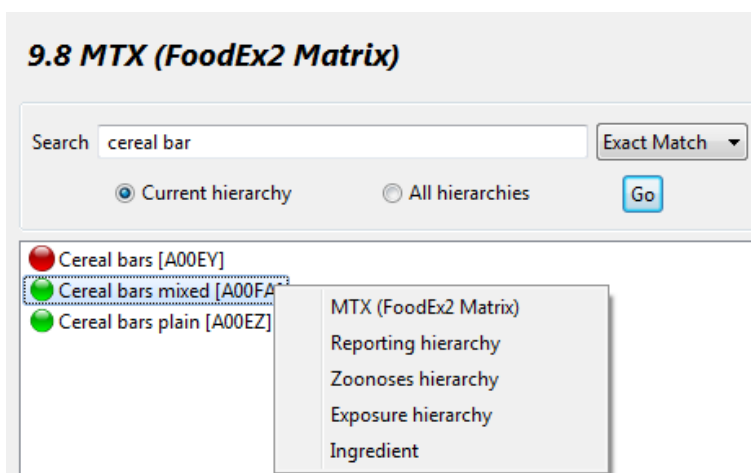
5.2.1. Search Preferences

The Catalogue browser provides the user with a way to customise the search results. More precisely, you can choose which type of terms should be included in the results, and which fields of the terms have to be taken into consideration while searching keywords inside the terms. For example, you can choose to display only results for raw primary commodities terms, and to search keywords only in a subset of additional fields of the term, as scientific names. You can access the search preferences through the main menu **Tools → Search Preferences**. You can choose which type of terms to visualise in the search results (Filter by type of term) and which additional fields should be analysed in the search (Search also in implicit attributes). Please, note that these are general search options; therefore, they will be used in each search panel of the Catalogue browser (except while searching picklists and recently described terms).
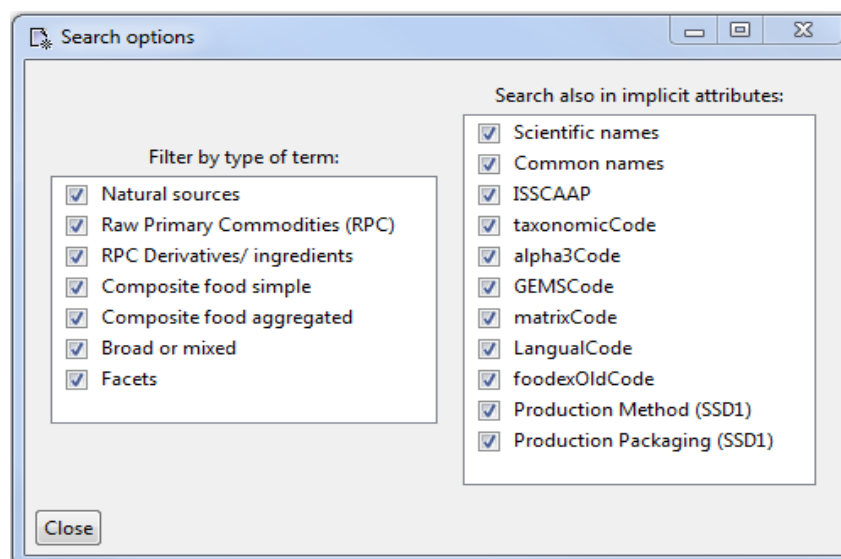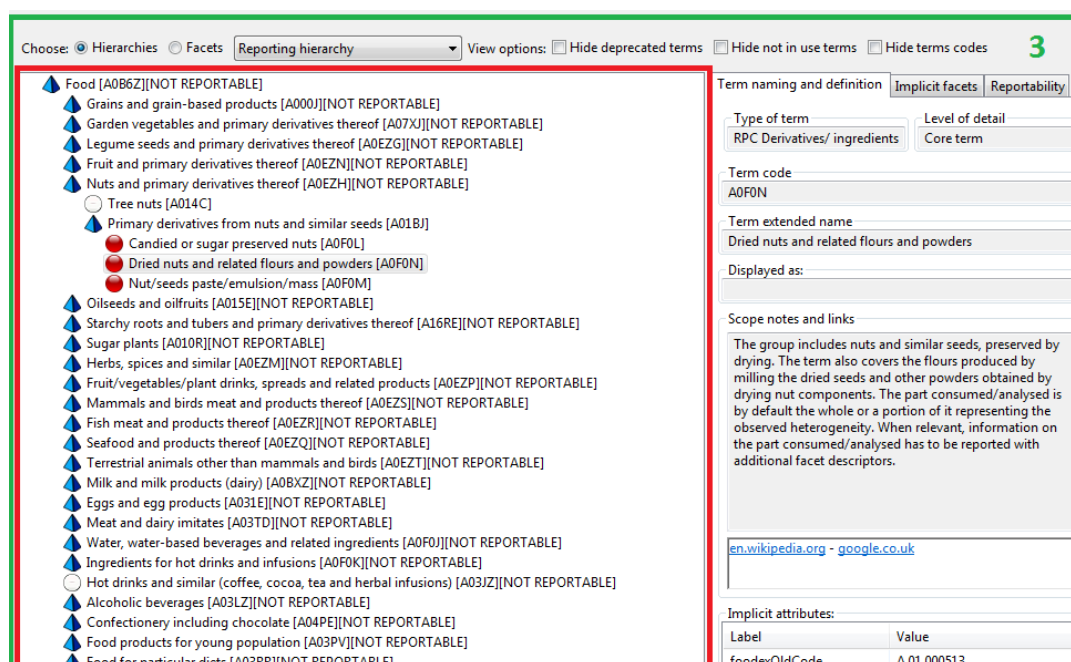

5.3. Tree Term Panel

The EFSA Catalogue browser displays the terms of a catalogue using a tree structure. The logic of this structure is simple and can be summarised in four points:

- A parent term is an element which includes one or more indented terms under it
- The indented terms are called children of the parent term
- A term could be both a parent and a child.

As the higher levels of the tree are opened (i.e. you go deeper in the 'branch'), then detailed terms will appear until the last level term is reached ('leaf').

5.3.1. Expanding and collapsing the tree

The catalogue terms can be browsed by expanding and collapsing the tree nodes, which means opening and closing branches of terms. The children of a parent term can be visualised simply by left clicking the white arrow placed in the left of the term name. Similarly, opened children of a parent term can be closed by left clicking again the black arrow.

5.3.2. Tree contextual menu

The tree provides also additional features through its contextual menu:

- **See in other hierarchies**: open the selected term in one of the hierarchies which contain it
- **Copy term code**: copy the code of the term in the clipboard,
- **Copy term code and name**: copy the term code and its name (tab-separated) in the clipboard.

If the opened catalogue contains facets terms, then these additional functions are enabled:
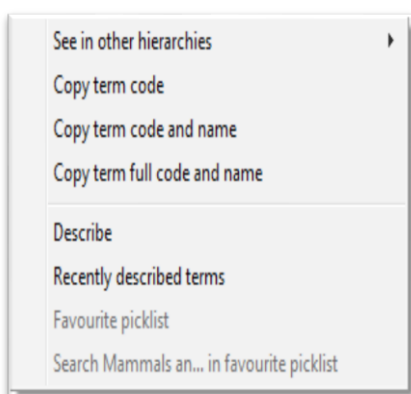
- **Copy term full code and name**: copy the term full code (i.e. the code also includes the implicit facets codes) and its name (tab-separated) in the clipboard

- **Describe**: describe a term by adding facets to it by clicking the 'Describe' button (see Describing terms)

- **Recently described terms**: open the recently described terms window (see Describing terms)

- **Favourite picklist**: open the favourite pick-list window (see Setting favourite pick-list)

- **Search** the selected term in the pick-list terms and facets.
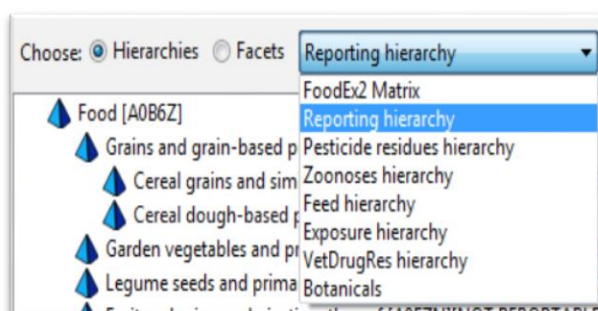
5.3.3. Hierarchy selector

The hierarchy selector is basically an object which allows changing the hierarchy to visualise in the terms tree. The 'Hierarchies' are selected to view a base hierarchy and the 'Facets' to display a facet hierarchy. Then, it is possible to open the list box to choose the desired hierarchy/facet.

5.3.4. Terms view setting

The visualisation of the terms in the main tree can be customised. These settings are located at the right of the hierarchy selector. In particular, three different visualisation settings can be enabled or disabled:

- **Hide deprecated terms:** if enabled the deprecated terms will not be shown in the tree

- **Hide not in use terms**: if enabled dismissed terms (i.e. non reportable terms which do not have reportable children) will not be shown in the tree

- **Hide terms codes**: if enabled the code of the terms will be removed from the tree, in order to make clearer the visualisation.

5.3.5. Term Information Panel

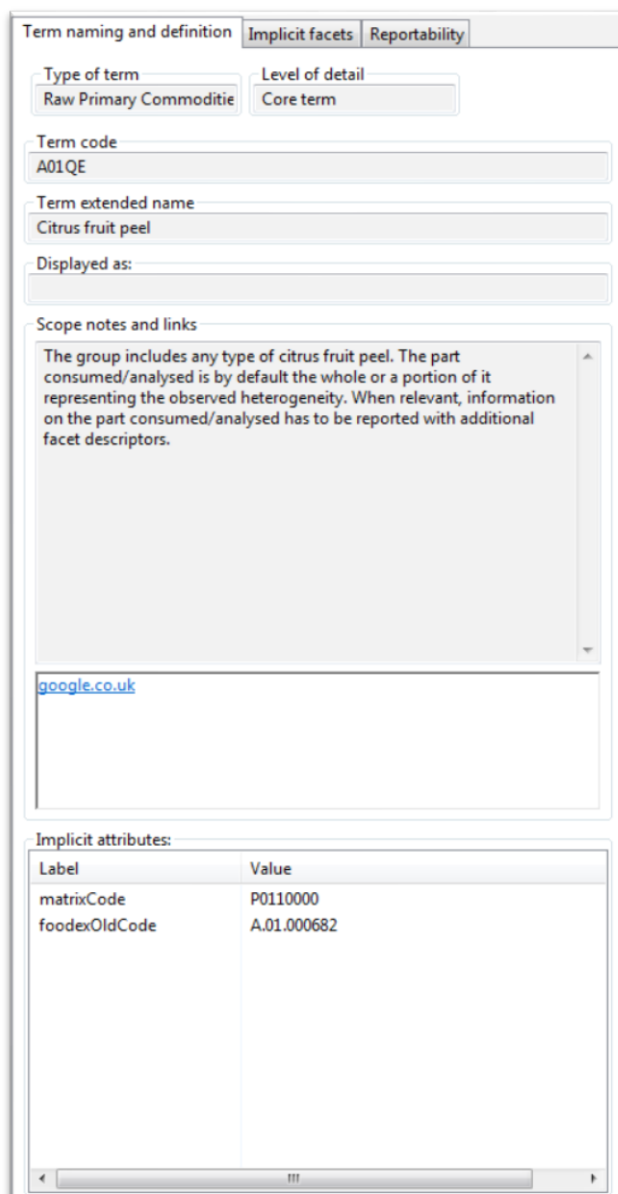The tool provides a way to read the information contained in each term. In particular, it is sufficient to select a term in the main tree and all the term information will be displayed in the right side of the tool. The data are subdivided into three tabs, which are:

- **Term naming and definition**: general information about the selected term, as its name, scope notes and its implicit attributes

- **Implicit facets**: if the catalogue contains implicit facets, then you can see the implicit facets of the selected term in this tab

- **Reportability**: information about the parent child relationship of the selected term among all the hierarchies in which it is present.

5.3.5.1. Term naming and definition tab

The term naming and definition tab is the most important part of the term information, it shows:

Type of term: if the type of term attribute is defined for the current catalogue, then its value will be shown in the text box in the upper left. The type of term identifies the major category of the selected term

Level of detail: if the level of detail attribute is defined for the current catalogue, then its value will be shown in the text box in the upper right. Moreover, a representative icon near the terms names will be also shown in the tree panel. The level of detail identifies how much the term is accurate in describing the related object for report purposes

Term code: the code which identifies the term in the catalogue

Term extended name: the complete name of the term

Displayed as: this is a short version of the term name. If present, this is the name, which is displayed in the tree panel; otherwise the extended name will be shown

Scope notes and links: a box that shows additional information related to the selected term subdivided in scope notes (i.e. a description of the term) and links (i.e. URLs which can be clicked to get further details of the term using your Internet Browser)

Implicit Attributes: a list of implicit attributes of the term. These fields are catalogue-dependent and they can contain several types of information. For example, considering the MTX (FoodEx2 Matrix) catalogue, the implicit attributes will contain scientific names, common names and additional codes.

5.3.5.2. Implicit facets tab

The implicit facets tab shows all the implicit facets of the selected term. In particular, both inherited facets and facets directly related to the selected term are shown. Please, note that if the catalogue does not contain any facet, this tab will be empty.

5.3.5.3. Reportability tab

The Reportability tab represents the parent-child relationship between a parent term and a child term in a specific hierarchy. Moreover, it defines if the related child term is reportable or not in the

considered hierarchy. All these information can be analysed in the 'Reportability' tab where the reportabilities of the selected term are displayed in the main tree. The reported information is:

Parent term: this is the term which is the parent of the child term in the related hierarchy. Note that the parent term could also be a hierarchy, in case of root terms (i.e. terms in the first level of the tree)

Hierarchy/Facet: this represents which hierarchy is considered for the current Reportability

Reportable: this is a flag which indicates if the child term is reportable or not in the related hierarchy

Order among siblings: this is an integer number which defines, given a parent term, the order of its children. In particular, in this table it is shown the order of the child term under the parent term in the related.

6.   Catalogue Updates

With the catalogue version verification tool, the user is notified instantly if the catalogue currently in use is not up to date. In fact, if a new version of the catalogue has been published on the DCF, a label will be displayed informing the availability of the new version, together with a download button that will allow the user to directly download and open the latest version of the catalogue with a single click. In addition, with the latest browser version of the Catalogue browser (1.2.5), after requesting an update to the latest version (of the open catalogue), a further notification will appear, asking the user to auto-update the related database for the interpreting and checking tool[14]. Please, note that this operation could be also performed manually as show in the section 5.1.3.2.

7.   Describe window

The describe feature is the most important function of the program as it allows you to create complex codes using facets. Therefore, this functionality is only enabled for catalogues that have facets available (such as the MTX (FoodEx2 Matrix) catalogue). In the following subsections some of the most important components of this feature will be presented together with a series of examples.

7.1.   Description starting from the base term

To be able to describe a term, go to the main page and referring to the tree structure, select the term you want to add facets to. In order to open the describe window, double-click directly on the term or right-click on it and then select the Describe item. Once the describe window is open the first thing that will be automatically done by the software is to load the term you have just selected and treat it as a base term of the whole code.

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[14] The confirmation message appears only if the MTX catalogue is currently open.

On the left of the window all the facets for the described term are listed grouped by their type (the implicit facets were automatically added by the Tool), while on the upper right the codes related to the described term are shown. In particular, the full code of the term is displayed, which is generated starting by the base term code, concatenated with the explicit facets codes with the following syntax:

BaseTermCode#FacetHeader1.FacetCode1$FacetHeader2.FacetCode2$...
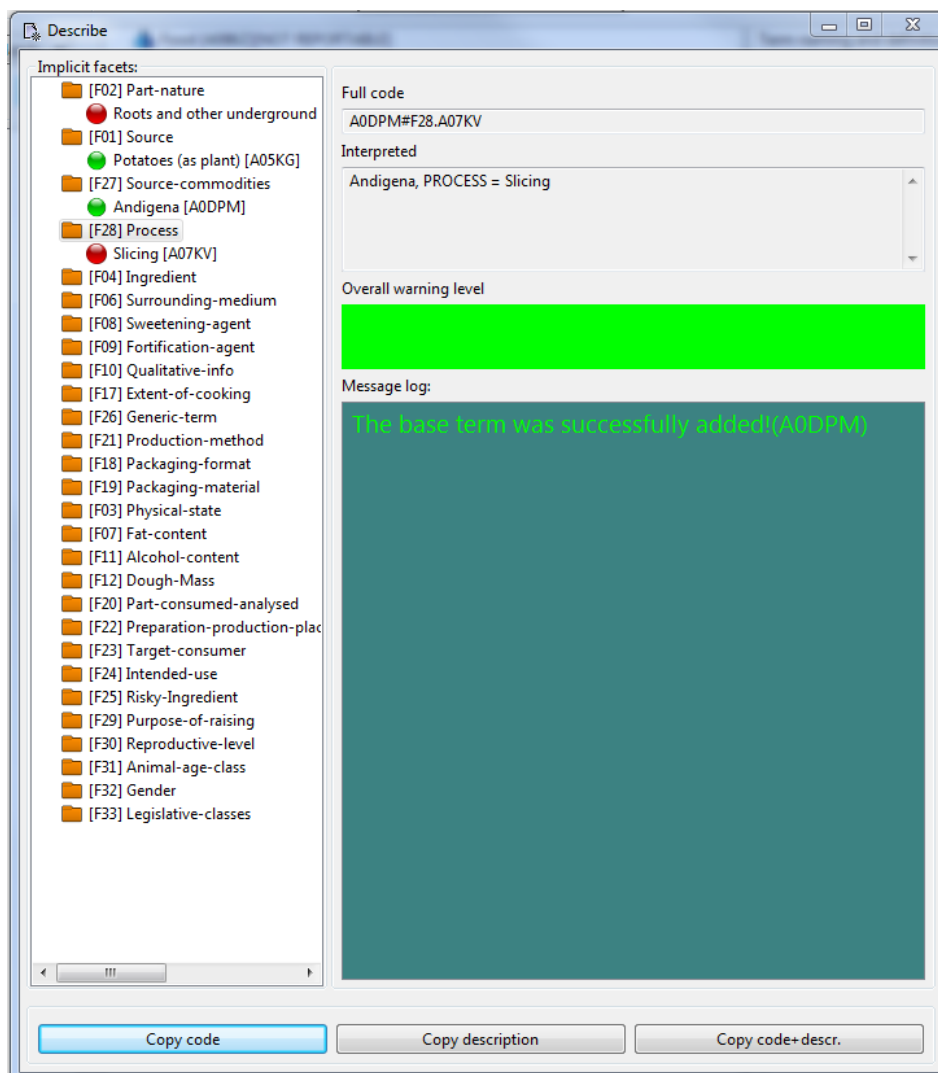
In the above figure, Andigena was chosen as base term and the Slicing process facet was added. Moreover, the software provides also an interpreted version of the full encoding. Please, note that if 'copy implicit facets' preference is set to TRUE (in the 'user preferences' entry of the menu 'Tools'), the full code and the interpreted code would include the implicit facets codes as well.

7.2.   Business rules for MTX (FoodEx2 Matrix) catalogue

The software communicates with the user through two graphical elements of the describe window. In particular, the window includes a 'semaphore', which is a canvas highlighting through its colour the eventual presence of potential errors and their severity (Overall warning level). Moreover, a log console (Message Log) shows messages explaining the possible issues encountered during the encoding until now. These messages usually suggest checking the attributed facets. Green messages and semaphores say that no known potential mistake was identified. Yellow and red colours instead, warn that a low level and a high level warning were raised respectively. In both cases, the user should check accurately the possible errors following the messages of the log console.

7.3.   Adding new facets
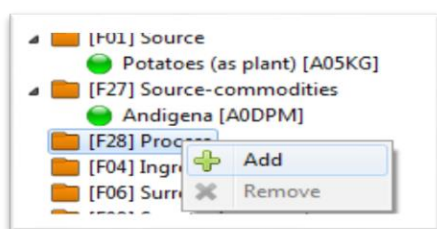
New facet descriptors can be added to the base term simply right clicking on a facet group, and then clicking the 'Add' menu item in the contextual menu.

Once the Add menu item is clicked a window will be opened, displaying all the facet descriptors related to the chosen facet category.

In this window the user can select which descriptors for the chosen facet to add to the base term. If the selected facet group allows adding more than one element, then the multiple selections will be enabled; the checkboxes located on the left of the terms names will appear. These checkboxes can be used to select multiple descriptors at a time for the facet (if allowed).
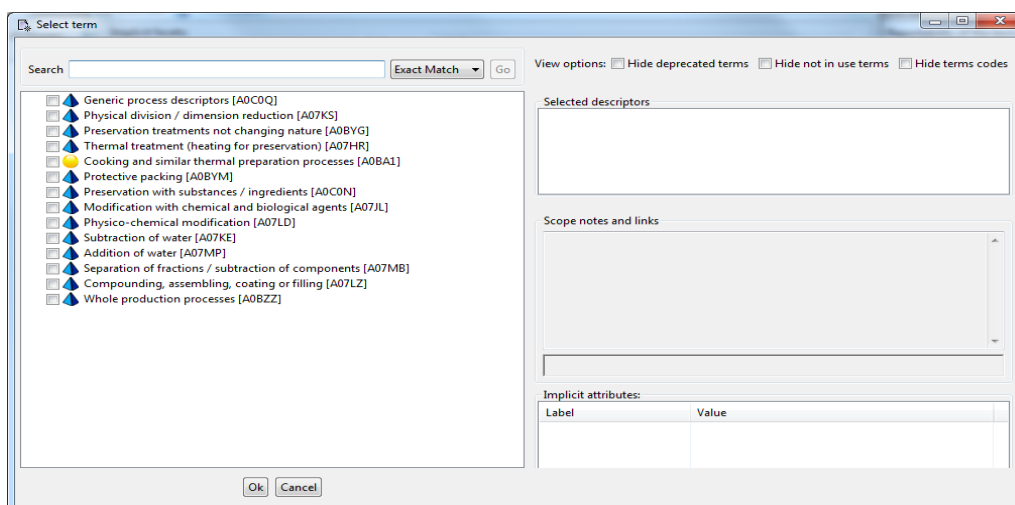
The interface of this window is very similar to the main page of the software. A tree that allows browsing the facet descriptors and a search box to search through them are provided (the global search options are used here as well as in the main page search). Moreover, all the relevant data related to the descriptors are reported (i.e. scope notes with links and implicit attributes). An additional box called Selected Elements is also present. This box is used only in the multiple selection case and it contains all the facets, which were selected until that moment and allows reading their information and possibly to remove them from the selection. The facet descriptors will be actually added only if the Ok button is clicked.

The search panel works similarly to the one in the main page. The only difference lies on how the results are shown; a simple search results window is opened when the Go button or the ENTER key from the keyboard are pressed. Here all the search results are listed with the possibility to double click the descriptor of interest to add it.
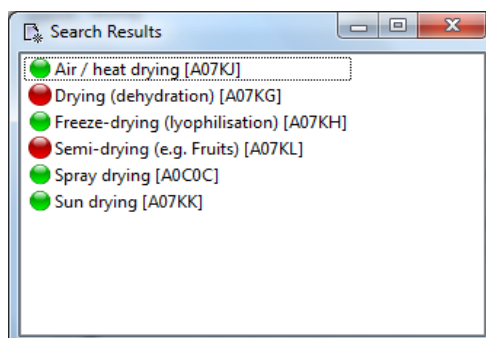

In the multiple selection case, the facet will be added into the Selected Elements box. In the single selection case, instead, the facet will be immediately added to the base term, and the application will return to the Describe window. At the end of this process the Describe window will be again shown,

where other facets can be added or the codes can be copied. In particular, once all the required facets are added and thus the final encoding is generated, the following actions can be performed from the describe window:

- Copying the full code with the '**Copy code**' button

- Copying only the interpreted code with the '**Copy description**' button

- Copying both the full code and the interpreted code (tab separated) with the '**Copy code+descr.**' button[15].

7.4.   Description starting from a recently created code

For several reasons it is useful to reuse the code of a term, which was already described recently. In this case, if the description is started from the base term, all the required facets need to be added each time, in order to reproduce the old code. This could be a relatively long procedure. The 'Recently described terms' function is a way to recover the codes of terms, which the user has described recently, in order to avoid the long procedure discussed above. Moreover, this functionality allows also extending their code adding other facets, if more specific encodings are needed. The recently described terms function can be accessed by right clicking anywhere in the main tree panel of the Tool. This will open the usual contextual menu, which allows selecting the 'Recently described terms' menu item. A new window will be opened, from which the recently encoded terms can be accessed and analysed.
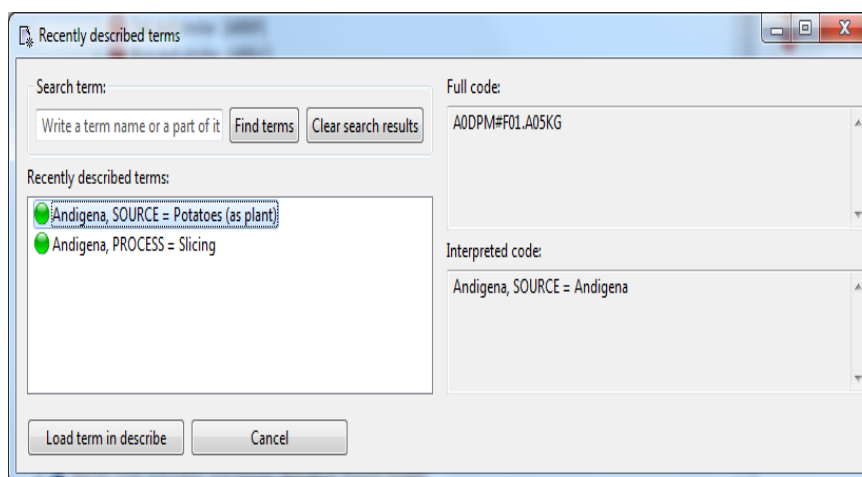
The window shows a list of the terms which were recently described with their full and interpreted codes; the list can be scrolled. Additionally, the terms can be filtered using the search bar on the upper left. This search function is particular, because it is not subjected to the search options. In fact, for efficiency reasons it relies only on term names and interpreted code. Once a recent term is selected, it is possible either to copy its codes or to load the term into the describe window using the 'Load term in describe' button. Describing a recent term allows adding new facet descriptors or removing the old ones. It is clear that this procedure saves a lot of time if many similar items with slightly different characteristics need to be described. Note that maintaining too many recent terms in memory could be useless and could hamper the efficiency of the tool, since the term list could be subjected to some slowdowns. For this reason, the default number of recently described terms which are stored is limited to fifteen. This number can be customised by accessing the Catalogue Preference window.

7.5.   Describe from a pick-list

Similarly to what explained before, sometimes several terms could be repeatedly encoded with the same or slightly different codes. In particular, each domain owns many complex terms, which are commonly used; therefore, it is convenient to allow personalised coding lists to help encoding common terms for a specific domain, and to standardise the encoding itself. The concept of 'pick-list'

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[15] The "Close window" button has been removed with the latest version 1.2.5. Please, use the "x" window's close button

is applicable in this case. This is a CSV file semicolon-separated, that may contain several complex terms, which are common in a particular domain. These terms were already described; therefore they can be loaded (in analogy to the recently described terms) into the describe window to easily use the standard encoding or modifying it. To understand how to import and set your pick-lists refer to section Import pick-list.

7.6.   Create my own pick-list

A pick-list is a CSV semi-colon separated file; therefore, it can be generated and easily edited by using a spreadsheet. In this section, it is explained how to create a correct pick-list by filling the right data into the right column of the CSV file. A pick-list contains three mandatory columns:

- **Level**: this is an integer, which can take any value greater or equal than 1. This column is used for visualisation purposes only. In fact, its value means 'how much should this term be indented in the pick-list?' This feature is useful to distinguish groups of terms with a sort of hierarchy. The default value is 1, which means no indentation.

- **Pick-list elements**: this is the name, which will be visualised in the Pick-list window to identify the term. This name is not only used for visualisation purposes, since the search inside the Pick-list window uses only this name as search field. Therefore, it could be useful to insert in the name keywords or codes which discriminate the terms, in order to be able to find what you need simply using the search bar function.

- **Pick-list code**: this is the encoding which contains the base term and all the explicit facet descriptors following the code standard pattern:

(BaseTermCode#FacetHeader1.FacetCode1$FacetHeader2.FacetCode2$...)

The implicit facet descriptors should not be included in this encoding, because they are already present in the classification system. This field is used to load the base term and all the added facet descriptors into the Describe window. Once the pick-list is created, it is possible to import it. Then, this pick-list should be set as the favourite one, in order to be used. If codes, which do not exist in the catalogue, are used, the Tool will not allow loading these terms into the describe window.

References

European Food Safety Authority; Report on the development of a food classification and description system for exposure assessment and guidance on its implementation and use. EFSA Journal 2011;9(12):2489. [84 pp.] doi:10.2903/j.efsa.2011.2489

European Food Safety Authority, 2015. The food classification and description system FoodEx2 (revision 2). EFSA supporting publication 2015:EN-804. 90 pp.

Abbreviations

DCC	Data Collection Configuration
DCF	Data Collection Framework
db	Database
DC	Data Collection
ICT	Interpreting and Checking Tool
IT	Information Technology
MTX	Matrix
OS	Operating System
URL	Uniform Resource Locator
SQL	Structured Query Language