Information Integration Platform (IIP)

User Manual

Version 1.2 – Date May 17, 2025

Final

Preface

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2 Introduction

The Information Integration Platform (IIP) provided by CropLife Europe is a companion tool for IUCLID. IUCLID (International Uniform ChemicaL Information Database) is a software application to record, store, maintain and exchange data on chemical substances. IIP can be used for submissions in the context of crop protection, but also beyond, within the limits of supported IUCLID functionality.

2.1 Scope of this document

This manual serves as end user manual for the IIP tool. It is assumed that the reader of this document is already familiar with IUCLID, its frontend and the basic concepts; these are not explained in detail.

For other information about IIP, see chapter 2.6.

2.2 Purpose of the IIP

The IIP is an alternative web user interface to the IUCLID server and can be used in parallel to the IUCLID web frontend. Please note that the IIP - despite of requiring an IIP server installation - does not have its own database – what the IIP displays is 1:1 the content of a connected IUCLID instance, within the limits of the supported entities and functionality (see chapter 5.3 for further information about constraints and limitations).

Both interface types can coexist and can be used in a best-of-breed approach.

The IIP supports the following main use cases:

- Content creation and editing in the IIP interface, with the focus on usability and ease of data entry. A lot of usability features have been implemented to make data entry easy, e.g. the copy/pasting of data from existing inhouse sources like Excel, without the need to known IUCLID internals like picklist codes.
- Import of data from inhouse systems via the IIP Exchange format (IEF), with similar usability features as in the user interface
- Easy navigation in and review of IUCLID content
- Preview of attachments
- Search with UUIDs

2.3 Relation between IIP and IUCLID

When a user opens the IIP user interface and connects to the IIP server via the public REST API, the IIP server connects to a running IUCLID instance as defined in the settings of the user. Multiple users can work in parallel on one IIP server and can connect to different IUCLID instances at the same time.

Central to the understanding of the relation between IIP and IUCLID is the so-called IUCLID format. The IUCLID format is the definition of all IUCLID entities and documents, and more. It is managed by ECHA using the IUCLID Template Manager (ITEM) tool (not accessible to industry or end users). In a somewhat simplified statement, both IUCLID and the IIP can be considered a “runtime” to generate web display forms based on the IUCLID format definitions.

IIP does not contain code for specific entities or document types, it “executes” the format definition based on the IUCLID field types as atomic building blocks (see chapter 4.8 for more information). IIP does not alter the IUCLID format nor does it have its own database, what you see via IIP is live IUCLID data presented in a different manner.

Consequently, IIP is compatible with upcoming IUCLID versions if ECHA does not change the syntax of the IUCLID format nor the public REST API.

For performance reasons, the IIP server manages a cache of a machine-readable representation of the IUCLID format. For every new IUCLID version, a new cache is being downloaded once from the IUCLID server during the first connection by a user and is then used for all new connections to all IUCLID instances of the same version.

The IIP interface and the IUCLID web interface are not communicating with one another, nor can the IUCLID server actively inform IIP about changes. Hence, if you create or change something in IUCLID, after saving

you would need to refresh the other interface to see the change – and vice versa. This is not different compared to multiple IUCLID web interfaces – if the interface is not actively refreshed it will not display any changes made since its content was last loaded.

2.4 Current IIP version

The present document describes the IIP version 1.9.0 that was developed and tested with early versions of IUCLID6 v9, planned for release in May 2025.

2.5 IUCLID Terminology

In order to ease the further description of the IIP functionality, please make sure you are aware of the following IUCLID terms:

Term	Description
Entity	Entities in IUCLID are software objects that are used to store data that has a particular purpose, which depends on the type of entity. The types of supported entity in IIP are: *Substance, Mixture/Product, Template, Reference substance, Test materials, Literature reference*. IUCLID entities that are not supported in IIP are: *Dossier, Annotation.*
Dataset	A dataset is a collection of documents that relate to a particular chemical substance, or grouping of chemical substances. It can be of the following types: *Substance, Mixture/Product, Template.*
Document	A document is a page that contains functionality for creating, viewing or modifying an entity, a record, or a summary. The term document is also used to mean a standardized set of data that exists in a dataset in a particular section.
Field	A field is a location within an entity or document in which a specific piece of data is stored. The type of data is the same throughout an individual field, for example, the field could contain free-text, a text value chosen from a drop-down menu, a number, or a date. There can be many fields in one document.

Table 1 – IUCLID Terminology

2.6 Additional information

Next to this user manual, please note the following further information sources about IIP available on the CLE eSubmission website (accessible after registration):

- The IIP section on the CLE website (please also note the subsections)
- IIP Release Notes (updated for every IIP release)
- IIP Installation Manual
- IIP Exchange Format (IEF) manual
- IEF templates (not for all IUCLID versions)

If you have a technical and non-environment related issue with IIP you can contact the CLE esubmission team. However, please note that the support cannot assist for your installation and IT environment issues, but only with generic and completely IIP-related support. Please see the respective part of the CLE EULA:

> "Basic technical support is available for part of the programs and the submission standards, please see the Contacts page. While every effort is made to provide timely technical support no guarantees whatsoever are implied that technical support will be provided or that technical support, when provided, will be accurate."

Please make sure that you consult the available documentation prior to contacting the support team.

2.7 Get started

Before you can use the IIP, you need a running IIP installation that you can connect to. Then, you need to enter the URL of the IIP server in the address bar of your web browser. If this works correctly you should see the Home page as shown in chapter 4.15. For further troubleshooting tips see chapter 7

3 Icon quick reference manual

The icon reference manual provides a quick overview of the main icons in the interface. A complete description is found in the subsequent chapter.

3.1 Substance display and selection

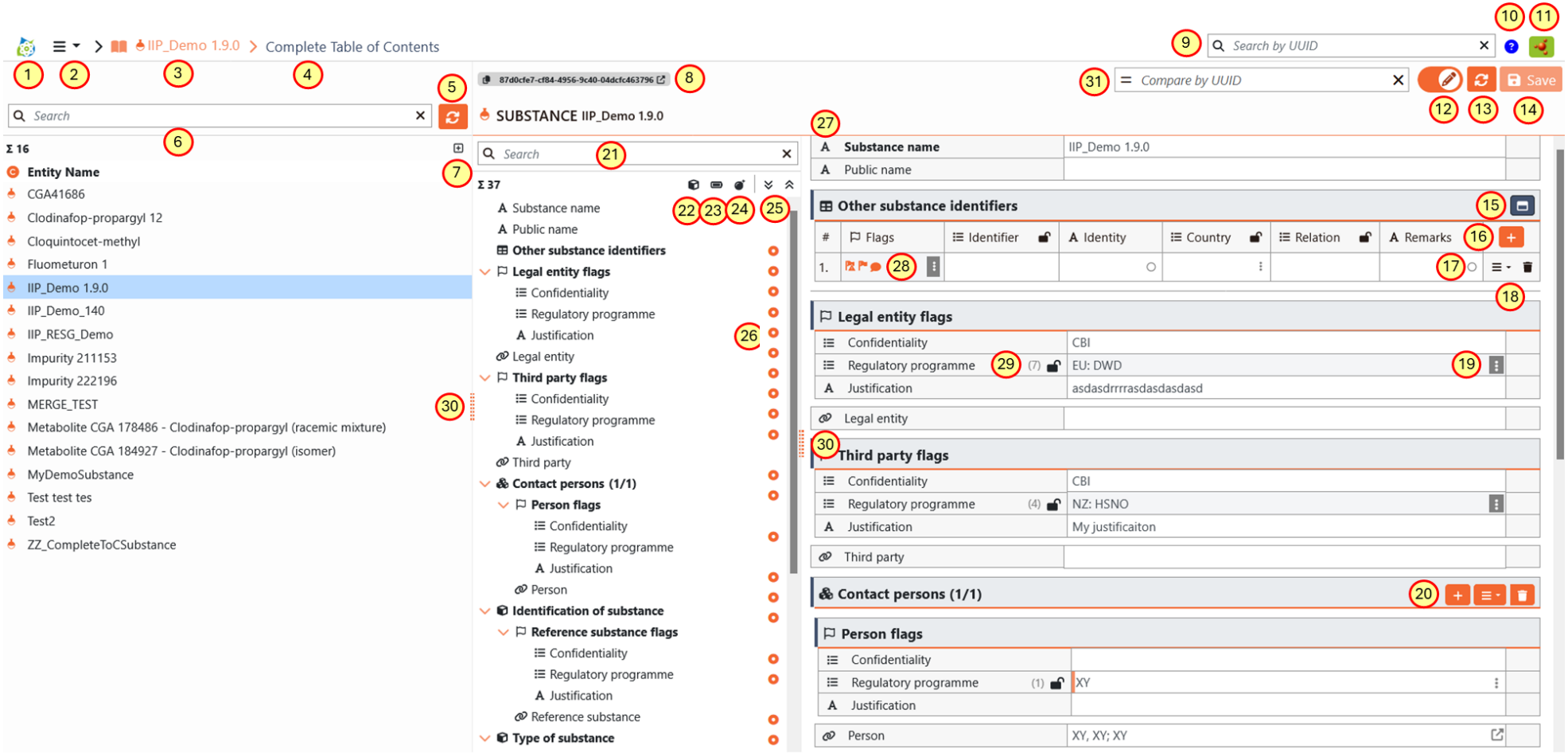


Figure 1 – Icon quick reference– substance selection

#	Description	#	Description
1	Home-Icon. Click to open the left menu bar	**17**	Clickable icon for remarks field, incl. content indication (not filled=empty). Also available for ranges to open the advanced editor
2	History-Icon: Click to open the IIP browsing history	**18**	Icon for Table menu, with different options, clickable
3	Currently selected entity, including type symbol (here: substance)	**19**	Clickable icon for multi-field (available for document references, picklists and attachments), including content indication (filled = more than one entry). Click to open multi-field editor
4	Clickable label, indication of the type of working context once clicked	**20**	Buttons for different operations for repeating blocks
5	Refresh-Button, to refresh the listing in the leftmost pane	**21**	Search field in element navigation pane, searching for labels (not for content)
6	Search bar, to search via string or UUID	**22**	Toggle: Show structure only / show fields
7	Icon to add a new entity of the current type (here substance)	**23**	Toggle: Show / hide empty fields
8	a) Display of UUID b) copy UUID (left icon) c) Open current in IUCLID	**24**	Toggle: Show only invalid fields / Show also valid fields
9	UUID search bar, (for entity types supported in IIP)	**25**	Expand / collapse all
10	Online access to the IIP user manual (PDF) – this document	**26**	Indicator of existing field content
11	Connection status – more details on Mouse over hovering	**27**	Icon for field type – click for detailed field information
12	Toggle between edit mode (default) and review mode	**28**	Icons in confidentiality block cell – click in cell to open maximized display. Including content indication.
13	Refresh the content area (middle and right pane)	**29**	Indication of open multi-picklist (open lock) including number of existing picklist values – see button 19 to access / alter values
14	Save button (active, once document has been altered in IIP)	**30**	Slider handles – Drag/Drop to change width of display
15	Maximize-Button (available for tables and text fields)	**31**	Compare the current display document / entity with a 2nd one of the same type
16	Add a new table row (at the bottom of the table)		

3.2 Dataset display

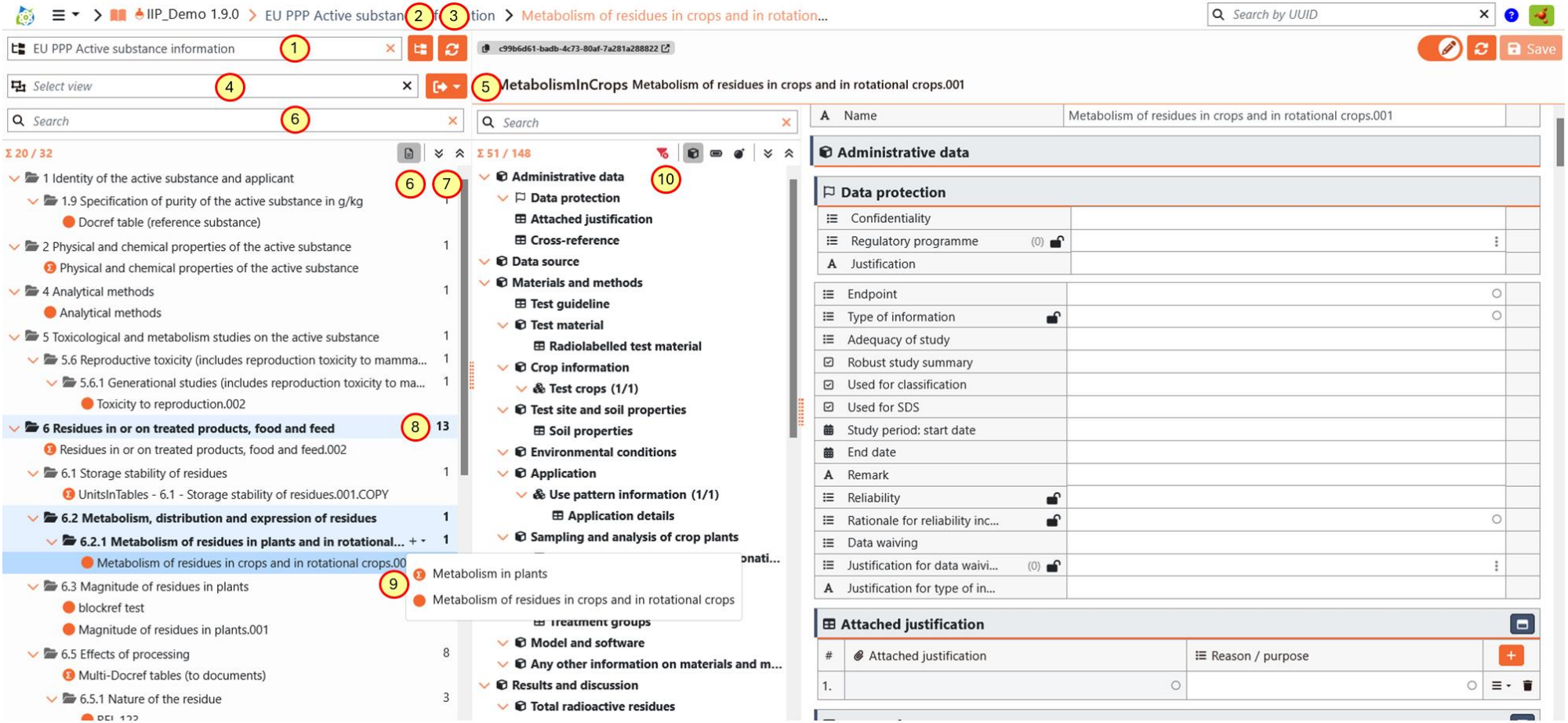
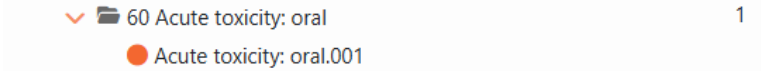
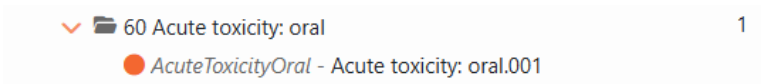


Figure 2 – Icon quick reference – dataset display

#	Description	#	Description
1	Display of active working context. Adding / removing working contexts is done in the IUCLID web interface – this is not supported in the IIP	**6**	Clickable toggle icon to filter empty nodes
2	Toggle between working context display and flat section document listing	**7**	Expand / collapse all
3	Refresh the dataset content (useful after importing of documents or new documents being created in IUCLID)	**8**	Light blue indicates that section is in the selected path. The number at the right side indicates the number of section documents in the respective subtree
4	Select IIP custom view. For details about the custom view feature, see chapter 5.2.1.	**9**	When hovering over a node, a “+” sign appears to create a section document. Dependent on the definition of the working context a submenu may appear, as shown in the screenshot. When holding down the “Shift” key on the keyboard with the mouse anywhere on the working context tree display, all documents will display their technical document type names in addition to their instance name:  With Shift: 
5	Export visible section documents in IEF format (sub-selection of IEF CSV/XML/JSON format in submenu)	**10**	Icon, indicating one or many filter including text search are active. Click on icon to remove all filter criteria at once.

3.3 Job display (dataset import)

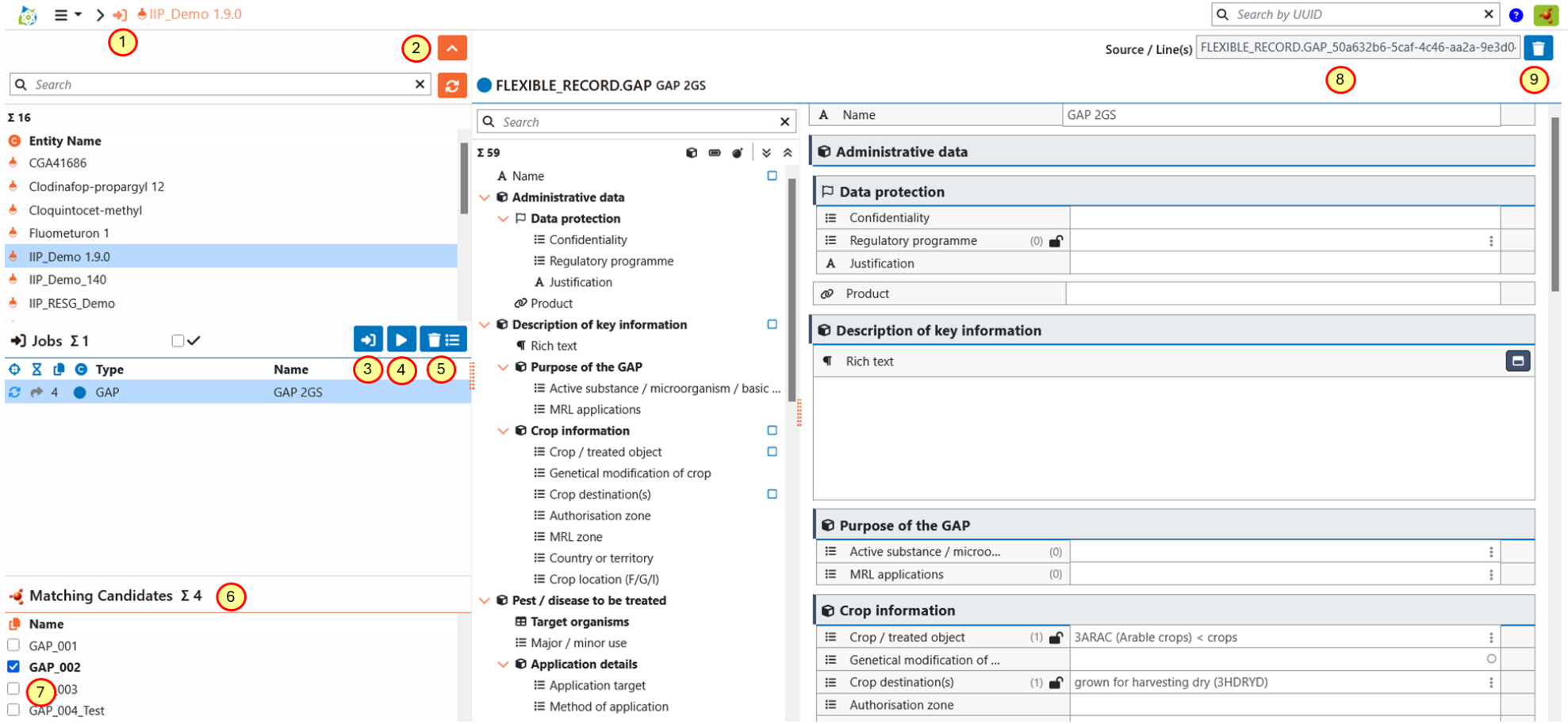


Figure 3 – Icon quick reference – job display dataset import

#	Description	#	Description
1	Indication of import section, plus target dataset where section documents will be imported into	**6**	Matching candidate pane. This pane shows matching candidates that are potential duplicates and can be selected to be updated by the currently selected.
2	Toggle to Show / hide dataset listing (default = hide). The name target dataset is always listed in the top bar	**7**	Listing of matching candidate. There can be zero or one matching candidate selected by the user, which will be updated when the job is being executed.
3	Load import jobs in IEF format	**8**	Display of the source of the job information currently loaded.
4	Execute import jobs (active when jobs are being loaded)	**9**	Deletion of an individual import job
5	Delete all import jobs previously loaded into this dataset		

---- end of icon reference manual

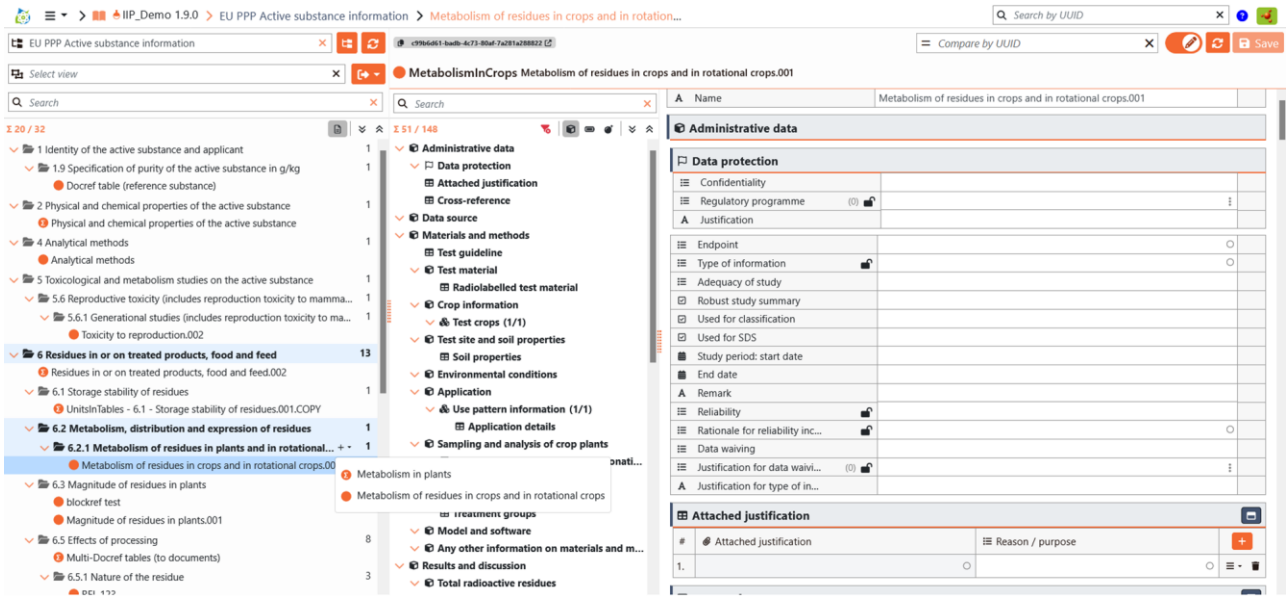
4 User interface elements

The default IIP interface has the following main user interface elements, described in more detail in the subchapters below:

- Main menu, visible when clicking on the Home-Button in the upper left corner
- Top bar, showing the current selection, the UUID search field and the connection status
- Dataset display (or Inventory display, dependent on the selection)
- Element map, showing the hierarchical structure of the document or entity
- Content area, showing the document or entity

4.1 Overview

The following screenshots shows one typical display scenario in IIP:



It consists of the main user interface elements:

- The top bar, showing the current selection, plus UUID search and connection status
- The left dataset display, with an active working context and a specific document selected
- The content bar on the upper right side, spanning the element navigation map and the content area
- The element navigation map in the middle, showing the structure of the selected document, with a particular field in focus
- The content area on the right side, showing the content of the selected field and its context.

Please note the sliders with the red handles between the three main columns, where the user can adapt the display width as needed.

The different user interface elements are explained in more detail below.

4.2 Top bar

Figure 4 – Top bar

The top bar shows the following elements:

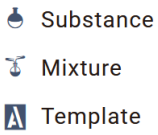
Interface element	Explanation
	IIP application icon - to show the Main menu (see below), also the start of the breadcrumb display to the right. The breadcrumb navigation is a user interface element that shows a trail of links representing the user's path from the root to their current location within IUCLID. It helps users understand their location and easily navigate, as all parts of the links are clickable. For a navigation in a dataset, a typical breadcrumb trail can look like this: • Dataset name > Working Context Name > Document Name
	Navigation history. When clicked, this icon opens the history pane, showing the most recently accessed documents, entities and IIP pages (see chapter 4.2.1 for details).
	Icon for the menu section where the user is currently in (see chapter 4.3 for details): • Datasets, Inventory, Import (depicted on the left), Settings, About
	Icons for the respective entity, either in the dataset or the inventory section. These are the same icons as used in IUCLID: • Substance, Mixture, Template, Literature, Reference Substance, Test Material
	Delimiter between level of the breadcrumb
<Name>	Name of the dataset, working context, or document – dependent on the entity and current selection.
	UUID Search field The user can enter UUIDs of documents and entity types that are supported by IIP. Please see chapter 6.1 for more information about unsupported types.
	IUCLID connection status The icon in the upper right corner displays the connection status between the IIP server and the IUCLID instance. Additional information is displayed when you hover with the mouse over the icon. For more details about the settings for the connected IUCLID instance please see chapter 4.16.

Table 2 – Top bar elements

4.2.1 History Pane

The history pane can be opened by clicking on the icon in the breadcrumb and shows the most recenty documents, entities and IIP pages. The list is limited to 15 entries.

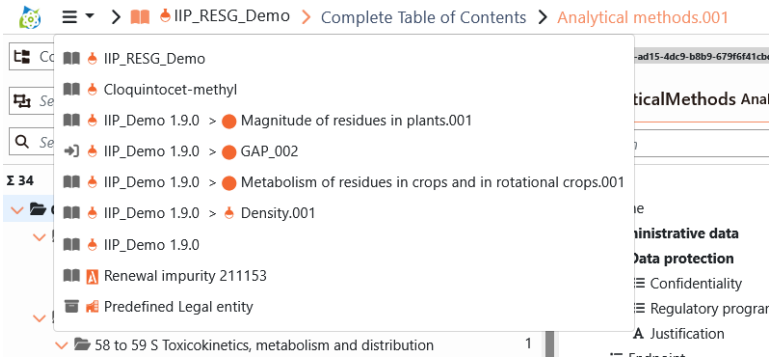


Figure 5 – History Pane

The entries are clickable and reopen the user to that page. The history is restarted for every new session and is not retained across sessions.

When links (docref field type) are clicked in a document or entity, the breadcrumb entry will be updated, and a new history entry will be created. For example, when being in a document Substance123 > DocA and clicking a docref link to DocB, the breadcrumb will show Substance123 > DocB and Substance123 > DocA will become an entry in the history. The user can return to the source of the link by clicking on the new entry in the history.

4.3 Main menu

When clicking on the “bars” icon in the top bar, the main menu will appear on the left side of the screen:

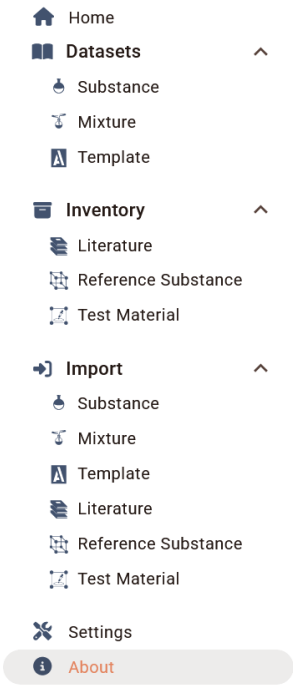


Figure 6 – Main menu

The main menu has the following root sections (see further details in the subchapters below):

- Home – this is an overview entry page with direct access to specific subsections plus a link with access to the user manual (this document)
- Datasets – section to edit or review the substance, mixture and template datasets via the IIP interface
- Inventory – section to edit or review the literature, reference substance and test material entities via the IIP interface

- Import – section to load and execute IIP Exchange Format (IEF) files to import data from external systems into IUCLID
- Settings – the user's connection details to IUCLID and further settings specific to this user (e.g. logging). Please note that every user must provide the IUCLID connection details separately in this webpage. There is no way to preconfigure this during IIP server installation.
  Note: The user credentials are stored in the browser cache and not in the IIP server. The IIP server does deliberately not store any potentially confidential information.
- About – information about the IIP version, copyrights and links to send emails to the CLE eSubmission support team.

4.4 Datasets list display

When selecting an entry in the Datasets root section of the main menu, the available datasets of the respective entity are displayed, e.g. as an example below for substance:

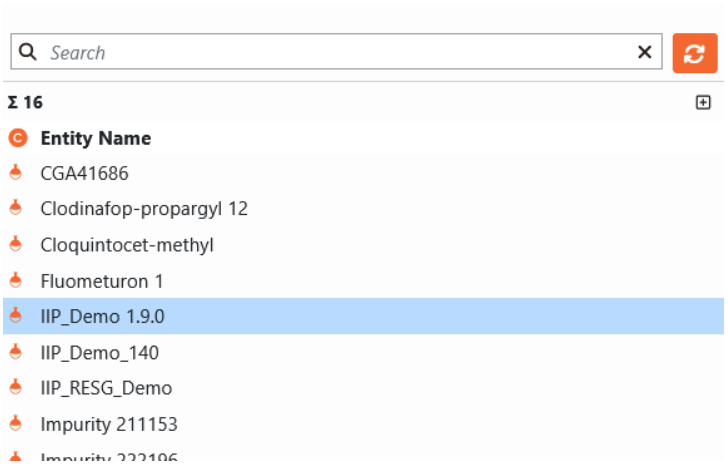


Figure 7 – Datasets list display

To find a specific entity, a text string or a UUID can be entered in the search bar. The text string is case insensitive and a substring match. Once the search bar contains input, it is displayed in red to indicate that the list below is filtered and does not show the complete list of available entities.

The refresh button next to the search bar can be used to reload the list of entities. As entities can only be created via IUCLID this can be used to create an entity in IUCLID and then display the newly created entity in IIP.

In the list display you see the icon of the entity type – here - followed by its name. The list is ordered in alphabetical order of the name.

4.5 Dataset display

Once a specific entity is selected in the dataset display, it is displayed on the right side, with its element map and content (see below). Now, to get the documents in the dataset displayed, please note the display in the top bar, here is an example with the substance "IIP_Demo 1.9.0" selected:

The entry "EU PPP active substance information" is one working context available for the display of this particular substance. When you click on this entry, the documents in the dataset will be loaded and displayed according to this working context.

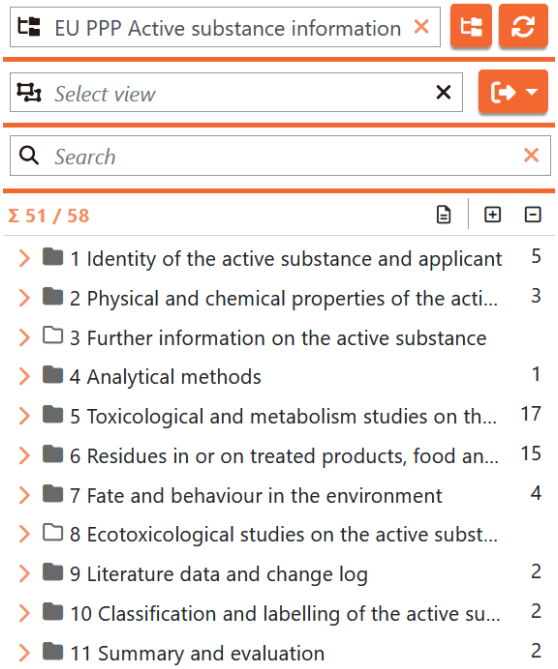
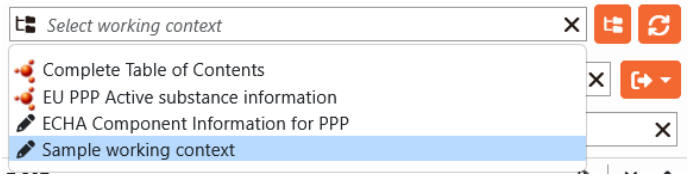


Figure 8 – Dataset display

The top section is for the display and selection of the working context

- When clicking in the display of the working context, the list of assigned working contexts from IUCLID plus the available custom working contexts (see chapter 5.2.3) are displayed and the user can select an appropriate working context.



  - Notes:
    - The IIP does not contain functionality to assign one or more working contexts to a given dataset. This functionality is only available in the IUCLID user interface. Therefore, to modify the upper part of this list, use the IUCLID user interface and then refresh the IIP to use them.
    - For the detailed explanation of custom working contexts please see chapter 5.2.3. In short, custom working contexts allow you to create and use your own custom hierarchical dataset display with features similar to the IUCLID built-in working contexts.

- The button allows to switch between the hierarchical display as present in IUCLID or a flat list view display specific to IIP, including the document type in the display. Note: The button icon shows the current state, not the state when clicked.
- The refresh button reloads the complete information in the dataset display, including the list of available working contexts.

The section below supports

- the selection of a custom view (see chapter 5.2.1). A custom view allow you restrict the fields that are to be displayed when a document / entity is selected, e.g. a custom view can be applied to only show the “Results and Discussion” section of the study document types in the dataset.

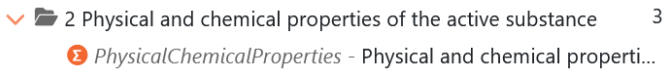
Working contexts and custom views can be applied simultaneously, so chapter 5.2.4 for a detailed discussion.

- when clicking on - the export of the currently displayed documents in the dataset as IEF file. The export of a dataset in IEF format is very useful to see the IEF format in action with real examples. There are three flavours of the IEF format, CSV-like, XML or JSON. For more information about the IEF format, please see chapter 4.15 and the separate IEF format manual.

The third section from the top is the search bar:

The search bar searches in different ways:

- In the hierarchical display, it searches for document names, IUCLID technical document type name (e.g. “AcuteToxicityDermal”) and section names in the working context. Please note that you can display the IUCLID technical name by holding the Shift key:



- In the list view display, it searches for document names and IUCLID technical document type name
- Notes:
  - If “Filter empty nodes” is active, the search will only search in document names, not in names of nodes / sections.
  - If the search string matches a node, the documents / subtree within that node is not displayed

Finally, the tree view itself has a couple of features:

The top section

- shows the number of displayed documents. In the example above, there are 58 documents in the (unfiltered) dataset, where currently 51 are displayed. Please remember that a working context acts like a filter on the documents in the dataset.
- The icon allows to toggle between standard display and a display where empty nodes (sections) without documents are filtered. When clicked , only the nodes containing documents are being displayed, with all respective nodes fully expanded.
- The icons allow to fully expand / collapse the tree display. This can be used in combination with the empty nodes filter described above.

In the list display the empty node filtering and expand / collapse buttons are not applicable and hence not available.

Finally, here is an explanation for the tree display, using the example below:

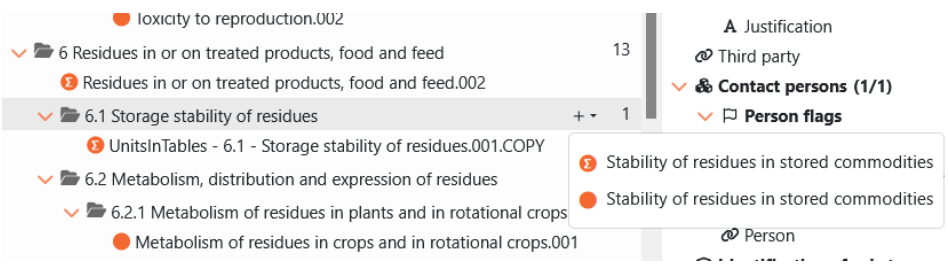
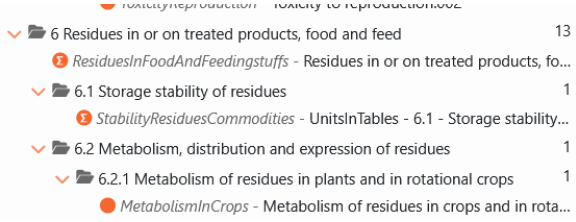
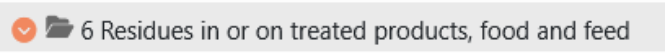


Figure 9 – Working context display

- Nodes containing documents (either directly or in sub-nodes) are depicted filled black (or), empty nodes are not filled.
- The document icons are the same as in IUCLID, differentiating between summaries and other documents
- You can expand / collapse a node by one level by clicking on the text, icon, or caret. The expand / collapse state of a node is shown by the direction of the caret left to the folder icon.
- On the right to the folder name, you see the number of documents in the node / subtree
- When you hover with the mouse over a node, a “+” sign will appear when you can create document(s) in that node. Either you can directly click “+” – or when there are two document types possible in the node you will see a submenu to select from as in the screenshot above.
- The “path” from the root of the working context to a selected document is highlighted in blue, with the selection in darker blue. The user can therefore easily spot the wider context of the selected document.
- When the node name or document name is cropped, the full title is displayed after a few milliseconds in a tool tip when the user hovers with the mouse over the entry
- The working context supports two keyboard shortcuts:
    - Press and hold “Shift” to see the IUCLID technical names in addition



    - Point the mouse over a caret in front of a node and press / hold “Shift”, then note the change in the icon:



When now clicking you expand / collapse the selected node plus its subtree completely, not just one level as without “Shift”.

Here are some differences to the working context display between IIP and IUCLID to consider:

- IIP does not display linked documents / entities (e.g. referenced literature references) in the tree (right now to save display space)
- IIP does not consider a template when linked to a substance or mixture dataset – IIP ignores the linked template in display and linking

4.5.1 IEF export processing dialog

When clicking on the export button, an intermediate dialog will appear, like the one below:

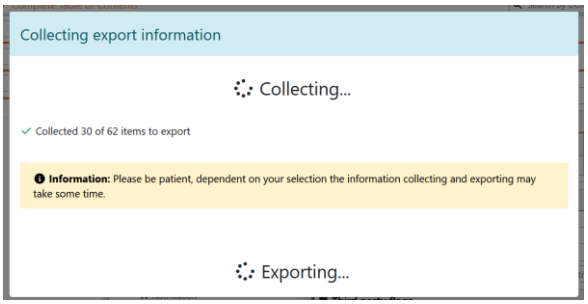


Figure 10 – IEF export processing dialog

Exporting of data will take some time dependent on your previous selection, until all the information is gathered and collected into one zip file. Please note that your previous selection (working context, custom view, search) is relevant on what will be exported.

Note: For custom views, the export selection is reduced by the document types defined in the custom views, however there is no restriction in the export files concerning the exported fields.

When processed by the IIP server, the export file will be automatically downloaded to your default download folder of your web browser.

4.6 Inventory display

The inventory display is very similar to the flat list view in the dataset display, with the difference of what is displayed.

Below is an example of literature reference entities, with the IEF export manual expanded:

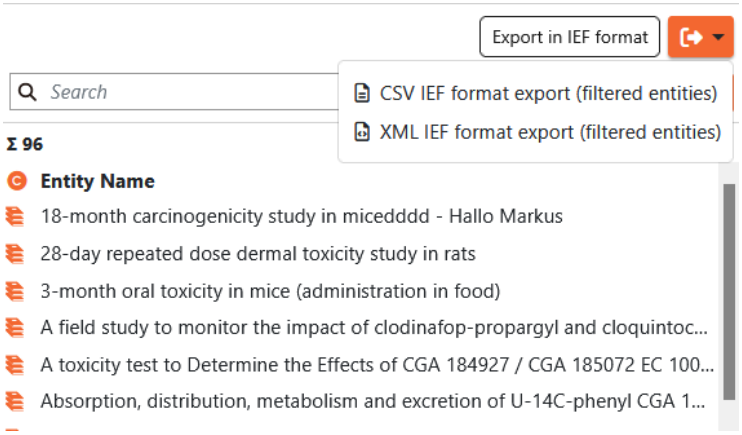


Figure 11 – Inventory display

As above, the search bar can be used to search for the entity name or via a UUID of that entity type. Please note that the value in the display column “entity name” in the listing specifically means

- For Literature: The “Title” field – technically GeneralInfo.Name
- For Reference substance: the “Reference substance name” field – technically ReferenceSubstanceName
- For Test Material: The “Name” field – technically Name
- For Contact: A concatenation of Last Name, First Name and organization
- For Site: Site name – technically GeneralInfo.SiteName
- For Legal Entity: Legal Entity Name – technically GeneralInfo.LegalEntityName

4.7 Element navigation map

The element navigation map shows the structure of the currently selected element, hence can also be called a document map or an entity map.

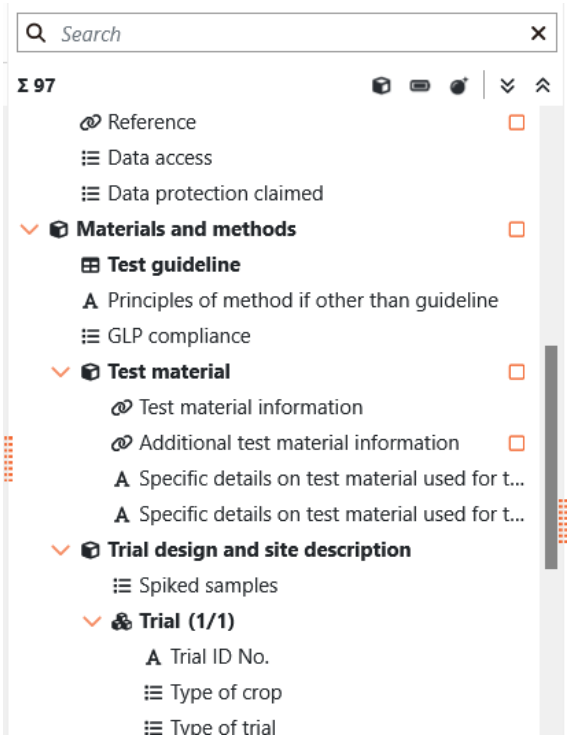
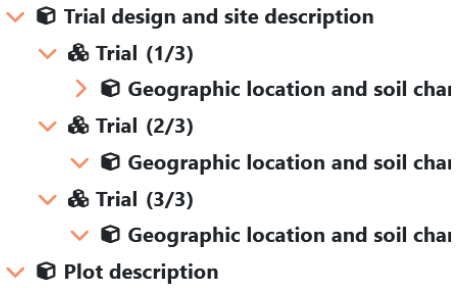


Figure 12 – element navigation map

The structure is displayed in a hierarchical manner using different icons. There are two structuring elements:

- block node - There are single or repeating blocks. Blocks can contain fields, other blocks or tables. Hence, blocks form a tree, like the nodes in the dataset display described above. When blocks are defined as repeatable according to the IUCLID format definition, the name of the block is followed by "(x/y)" providing the number of the block and the total number of blocks in this sequence, as in the example below:



- table – Tables can contain fields; each table can have zero to n rows. Tables cannot contain blocks or fields, so they are on the lowest level
- Fields – there are a variety of fields. Each field has its specific icon. Please see chapter 4.8 for more details about IUCLID field types and their icons. For example, represents a field of type picklist.

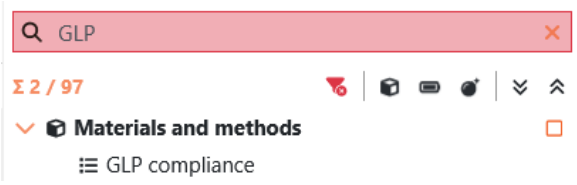
An entry in the element navigation map displays different status information:

- Is there any content in the field – or for a block in any field below. This information is displayed as at the right side of the entry
- Is there an error in the field – or for a block in any field below. This information is displayed in red font (see example in the screenshot with the "Reference" field above)

The navigation map has the following features:

- Search field – search for strings in the navigation map, either in block names or field names in blocks. It is not possible to search for column names in tables, as tables only shown as one line (see

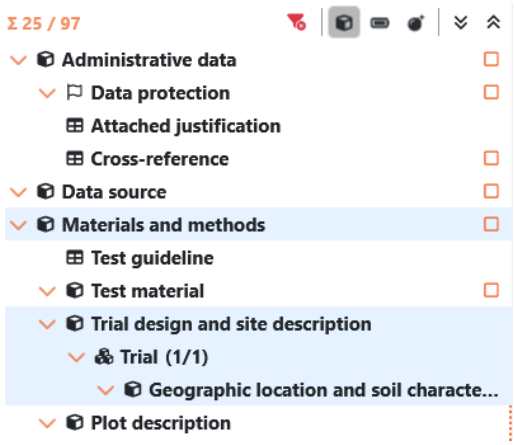
above for “Test guideline”).
When a search string is entered, the field turns red, and the number of matching fields (including the counting of the displayed parent blocks) is displayed below.



In addition, a red filter button appears, allowing to delete all active filters with one click (text filter and filter options, see below)
Note: This is a search in labels of blocks and fields only, not in the actual document or entity content!

- Expand / collapse individual block nodes, by clicking on the caret icon ›.
- Expand / collapse the complete element tree, by clicking on ⌄⌄ and ⌃⌃
- Navigating to the respective field in the content area, by clicking on the navigation map entry:
    - When clicking on a field label, then the field in the content area will get the focus and will be automatically scrolled into the visible area
    - When clicking on a block node or table, then the first editable field within the block or table is getting the focus and will be visible in the content area

  Note: The synchronization also works the other way around – when setting a field in focus in the content area, the element navigation map will highlight the respective field as well.
- With an entry in focus, also the path to that entry is highlighted in blue:



The navigation map has three filter options, accessible via icons that work in toggle mode

- “Hide fields” filter option – when active, only block nodes and tables are displayed in the navigation map. This is especially useful for complex document definitions as in the residues section, where it is hard to keep an overview of the current context due to the nesting and repeatable blocks.
- “Hide empty nodes” filter option – hiding fields without content. The user can focus on the fields having content so far
- “Error” filter option – only show fields / blocks where errors occur. This is useful for checking imported jobs or after pasting. Make sure you do not use the option “hide fields” in parallel.

  Please note that the field with errors cannot be displayed for tables, as
    - the columns of a table are not present in the navigation map
    - the error may be in a table row currently not visible in the display

All active filter (including a text search) can be removed by clicking on the red filter icon appearing when any filter is active (see screenshot above)

4.8 Support of IUCLID field types in IIP

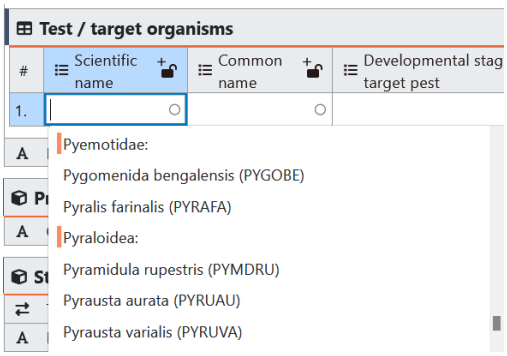
The definition of a document or entity in the IUCLID format consists of a set of basic IUCLID field types, organized in a hierarchical manner using blocks/tables.

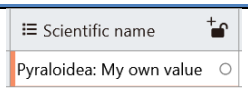
The table below lists those field types, their facets (variations) and their display and editing support in the IIP interface.

4.8.1 Phrasegroup (Picklist)

When a phrasegroup field is in focus you can either start typing / pasting or press SPACE to show the available picklist values.

Supported facets:

Icon	Description
	Open - with “other:” prefix for open values A (single, i.e. non-multi-value) picklist field can have a value that is not part of the predefined list of phrases / picklist items and is user defined. In the IUCLID frontend you first have to select the prefix “other:” and then can supply your custom value. In IIP you can directly supply / paste the value and it is being tagged as “other:” when it does not match any existing picklist value Below you find an example for an open picklist, indicated by the open lock; with an open value that is indicated with the orange bar on the left border of the field. Please note that the “other:” prefix is not displayed. The opposite of an open picklist is called a closed picklist. In IUCLID, there are also picklists • having a different prefix for open value, not “other:” • having multiple open values with prefixes different from “other:”
	Open - with multiple open prefixes A (single, i.e. non-multi-value) picklist field can have an open picklist with multiple prefixes for open value; an example is “Scientific Name” in OHT-89 “Efficacy data”. Here, the prefix for the open value cannot be predetermined to be “other:”, but must be explicitly selected. To do so, the picklist displays the open prefixes with an orange bar:  Once the user selects one of those open entries, the specific value can be added after the prefix, e.g.



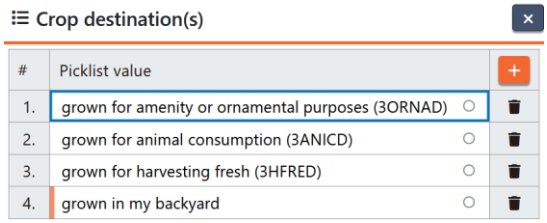
An example for such a field is

ENDPOINT_STUDY_RECORD.EfficacyData.MaterialsAndMethods.PestTargetOrganismsToBeControlled.TestTargetOrganisms.0.ScientificName

Multi-value

A multi-value picklist field can have 0 to many values. The number of current values is indicated in brackets left to the field, e.g. “(4)”. Please see an example below

- The icon at the right side of the field indicates that there are two or more values, which can be displayed in a tabular form by clicking on this icon:

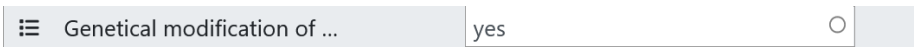


- Please note that multi-value picklist fields can be open or closed. A multi-value picklist can normally only have one open value, not many.
- When there is no or only one value, the icon is displayed as , the icon can still be clicked to open the maximized tabular display.

Remark

A picklist value may have an additional remark.

The empty circle indicates a picklist field without any remark content, the filled circle indicates that a remark is present. In the example below no remark is present:



To open / close the field for remarks, the user can click on the circle or use the keyboard shortcut “Ctrl-Q”. Below is a picklist field with the remarks editor opened.

It is not allowed to supply a remark value without picklist value; doing so will result in an error when saving in IUCLID.

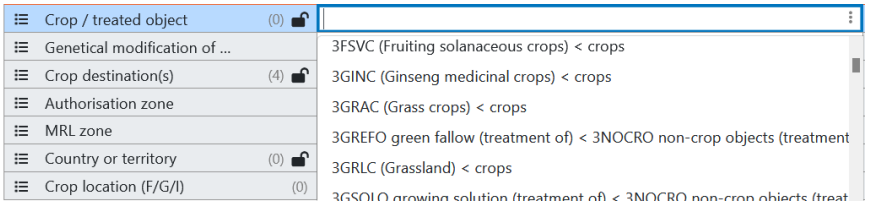
Dependent on the definition, the remark may be 255, 2000 or 32768 character long. The IIP will make sure that those limits are considered and will not accept input beyond the maximum length.

n.a.

Hierarchical

A hierarchical picklist is a picklist organized as tree in IUCLID. There is no specific icon for hierarchical picklists. Below is an example for a hierarchical field as

displayed in IIP;
`FLEXIBLE_RECORD.GAP.KeyInformation.CropInformation.Crop`:



Please note that the information is shown bottom-up, meaning that the information in the leaf node is listed first, then – separated with "<" you find the parent node etc. This is because usually, the leaf information is the most relevant, and the parent node(s) provide context if necessary.

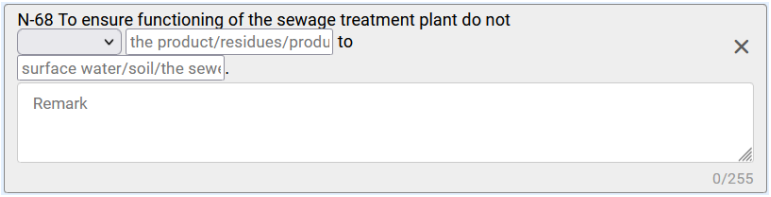
There is a special logic on how data can be entered / pasted to select the right value, please see chapter 4.10.2

Unsupported facets in IIP

- Description – IIP does not display an optional description for the picklist value. Please use the IUCLID web frontend or the IUCLID format download information if needed for this purpose.
- Parameterized picklist values (only occurring in 4 different phrasegroups). For example, the field FLEXIBLE_RECORD.ProtectionMeasures.MeasuresToProtect.RiskMitigationMeasures
  uses the phrasegroup PG6-61571 that contains phrasegroup text like

  `N-68 To protect {0:the environment/water living organisms/soil living organisms/groundwater:} do not {1:...:discharge|dispose} {2:the product/residues/product spills} to {3:surface water/soil/the sewer/any kind of sewage or waste water treatment plants:}`

  In IUCLID this is displayed as



  The IIP will display this field, but with raw technical content. Please use the IUCLID webclient for those picklists.You will recognize those four picklists when strings like "{0: .." appear in the picklist text

Note: For very few fields the loading of all picklist values after pressing the SPACE bar may take 2-3 seconds, e.g. for the hierarchical picklist example above.

4.8.2 Text (ASCII; unformatted)

Dependent on the definition, the content may be 255, 2000 or 32768 character long.

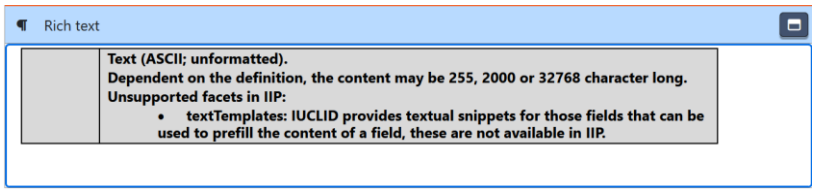
Unsupported facets in IIP

- textTemplates: IUCLID provides textual snippets for those fields that can be used to prefill the content of a field, these are not available in IIP.

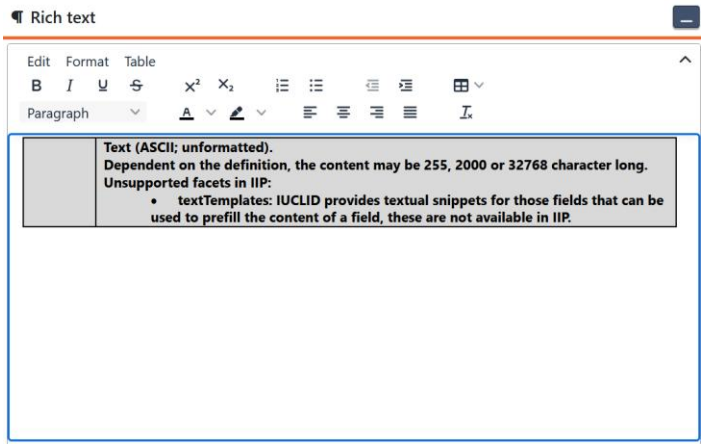
4.8.3 Rich text (HTML, formatted)

The content of those fields is not restricted in length and internally stored in HTML. IIP uses the same component “TinyMCE” as IUCLID for rich text editing and display, with a newer version and a similar visual configuration.

Rich text fields are displayed using the full width of the content area, in contrast to all other fields, allowing for editing and display of longer texts:



When maximized using the maximize button, the user has the full height and width of the content area:



Notes:

- IUCLID does not contain a restriction of valid HTML syntax in IUCLID. In the past there were specific issues reported in conjunction with the IUCLID report generator.
- In the IUCLID format definition, rich text fields often do not have own labels. In order to have an entry in the element navigation map, those fields are displayed with label “Rich text”.

4.8.4 Date

The display of date fields in the IIP frontend is using the date format DD/MM/YYYY, identical to the IUCLID web frontend. Dates have to be typed in / pasted in this given format.

Please note that the date field format in the IEF import format has a different date format: In the CSV flavor, the date format can be specified in the top section. The date format in the IEF XML / JSON flavor is using the XML default date representation YYYY-MM-DD.

4.8.5 Reference (docref)

There are different types of references:

- Intra-dataset references - linking from one document to another in the same dataset (Note: Please consider that IIP does not support the linking of templates at the present moment, so linking a template to a dataset and then creating references between documents of dataset and template is not supported)

- Inter-dataset references – these are references from a document in one dataset to the parent entity of another dataset, e.g. in `FLEXIBLE_RECORD.MixtureComposition`
- Inventory references – from a document in a dataset to an inventory item, like Literature, Test Material or Reference Substance

The IUCLID format determines internally to what target documents or entities a link can be created and the IIP considers this as part of the data validation.

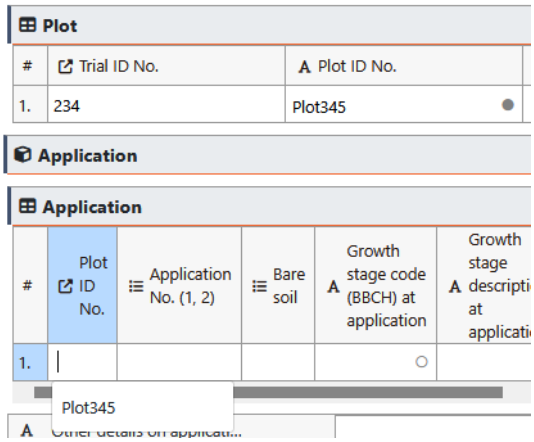
4.8.6 Block Reference (intra-document, to another repeating block or table row)

In some documents (e.g. OHTs 85-5 and 85-9) intra-document references can be created:

- A plot references a trial information, identified by a Trial ID No.
- An application references a plot information, identified by a Plot ID No.

Both references create a reference from a field to another block / table row, internally represented in IUCLID with a UUID, displayed using the content of the identifying field of the target (Trial ID No, Plot ID No.) as display value in the source field of type block reference.

The screenshot shows an example from OHT 85-5 in IUCLID6 v9. The field “Trial ID No.” references a repeating trial block (not visible) and the field “Plot ID No.” in focus references the text field “Plot ID No.” in the table above.



4.8.7 Range

There are multiple variations of the range field type:

- Half-bounded range – Examples:

  `15, ca. 15, < 15 mg/l, ca. 15 MyOwnUnit`

- Full range – Examples:

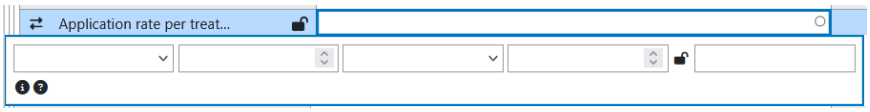
  `> 15 < 30., ca. 15 < 30 mg/l, 15 < 30 MyOwnUnit`

Hence, ranges can contain “qualifiers” like “ca., <” and units, in various combinations, dependent on the exact field definition in the IUCLID format.

The IIP allows to enter ranges in one of two ways:

- Entering / Pasting the range as string into the base field:

- When the exact syntax, the qualifier and the units are not known, then the advanced editor for the range field type can be used. It can be opened and closed by either clicking on the circle at the circle at the end of the field or by using the keyboard shortcut “Ctrl-Q”

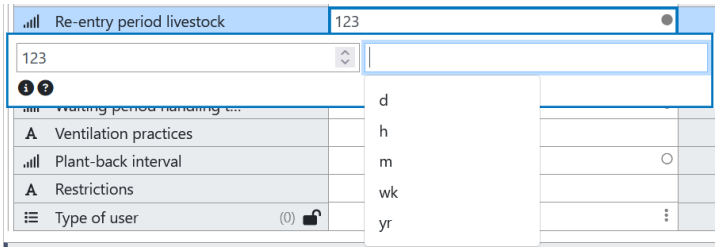


- The advanced editor shows the available qualifier as well as the units (if defined). To display the available units, press SPACE when the unit field is in focus - as for picklist fields.

The advanced editor can be used with keyboard operations only, using TAB, Space and the arrow keys. Please see chapter 4.14 for more information about keyboard support.

4.8.8 Quantity

A quantity is the combination of a number with a unit, in this sense a simplified range. As for ranges, the editing can be done in the base field by entering the quantity as string or using the advanced editor, with activation as for the advanced editor for ranges.



4.8.9 Boolean

The value can be entered in IIP using one of the following strings, that are all mapped correctly to the internal IUCLID representation:

- true/false
- t/f
- 1/0
- yes/no
- y/n

Warning: In IIP there are three possible states of a Boolean field (empty, true, false), in IUCLID only two (checked=true, unchecked=false). Therefore, when entering “false” or an equivalent (see above), this value will be deleted after saving, which is then equivalent to unchecked in IUCLID.

4.8.10 Number (Integer)

These are full numbers, without decimals

4.8.11 Data protection block

The data protection block consists of three fields

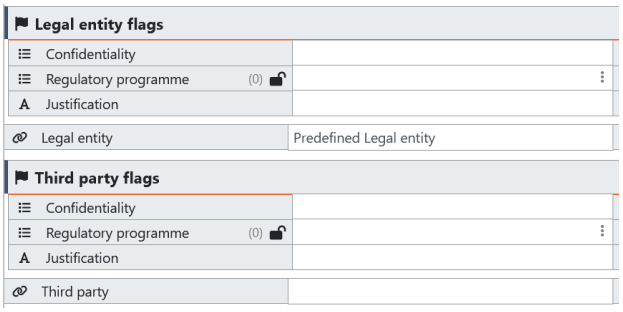
- Confidentiality (Picklist, with currently only one value “CBI”)
- Regulatory Programme (Picklist, multi-value, open)
- Justification (unformatted Text, 32769 character)

The data protection block is associated with either

- the complete document or entity (mostly set directly in the first block “Administrative data”
- a field (like “Legal entity” in substance)
- a table row (like “Other substance identifiers” in substance)

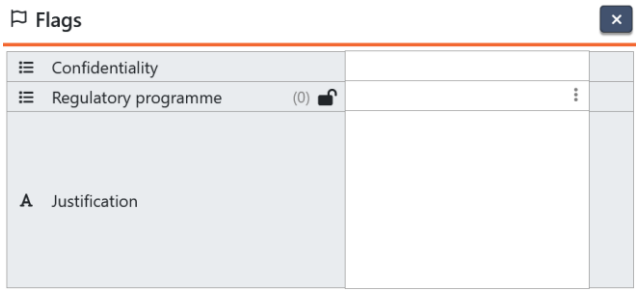
IIP allows to set the data protection information in two ways:

- For data protection for the complete document or a field, the three data protection fields as displayed inline; for fields directly before the field they belong to:



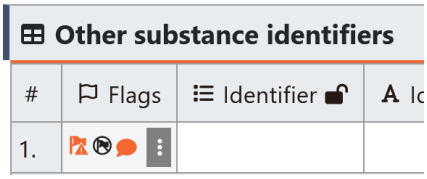
- For editing data protection for a table row please note the three icons as present in IUCLID.

To edit the values, click the dots at the end of the field to display the three fields in maximized mode:



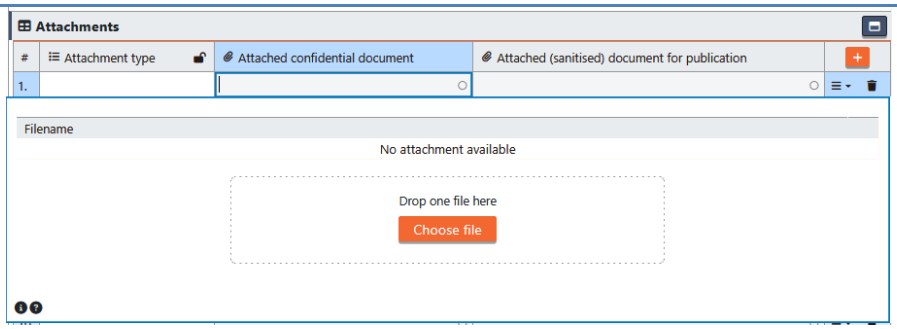
After editing, close the maximized display by clicking on in the upper right corner to return to the previous view.

The colour of the icons indicates what values have values and what not – here confidentiality and justification contain content, but not regulatory programme.



4.8.12 Attachment

Field type to attach files from the local file system. When clicking on the field, an advanced editor opens and allows to choose a file from the file system or to drop a file on the sensitive drop area in the middle of the advanced editor.



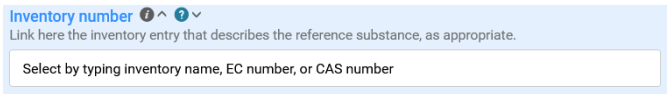
During upload, a progress bar is displayed, please be patient until the upload is completed.

Supported facets:

	Multi-value A few attachment fields can have multiple attachments. In those fields the indicators to the left act as for multi-picklists. They can be clicked to open the maximized multi-attachment display where then multiple files can be uploaded at once.

4.8.13 Inventory Reference

This field type only occurs once, in REFERENCE_SUBSTANCE.Inventory.InventoryEntry

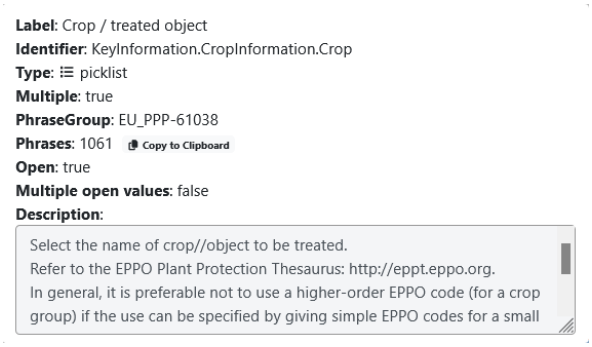


As it is used so rarely it is not supported in IIP 1.9.0 and the respective field is omitted in IIP.

4.9 IUCLID field type information

The IIP interface offers two possibilities to display additional information for a field or block / table:

- When hovering with the mouse over the field or block / table label, the full label will be displayed. This is useful, when the label is cropped due to spacing reasons
- When clicking on the field / block type icon, an infobox appears with additional information about the field / block. The displayed information depends on the field / block type. Here are some examples:
  - For reference fields, the type(s) of accepted target documents is/are displayed
  - For picklists, the available picklist entries including their internal code can be copied using the “Copy to Clipboard” button



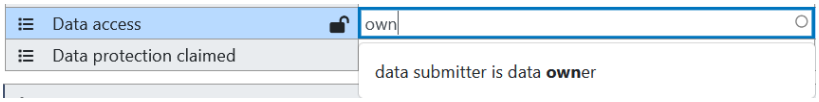
- The field “Identifier” shows the unique identifier of the field with respect to the current document type. This identifier is required to define custom views (see chapter 5.2.1).

4.10 Content resolver for specific field types

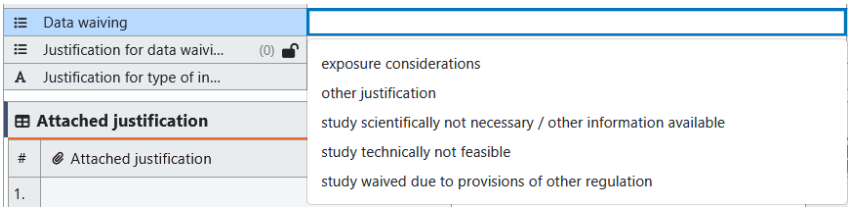
Each field type implemented in IIP and described above validates its input according to the definition. In addition, some fields, have additional resolver that transform entered or pasted content into a form required for IUCLID. As an advantage the user must not adhere 100% to the exact IUCLID

4.10.1 Picklists

When starting to type a string, the IIP only shows the picklist values with matching substring.



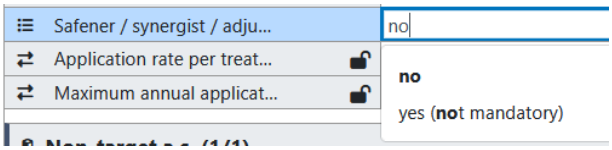
It is sufficient to paste / enter a substring that is unique to exactly one picklist entry only and then press Return / Tab. In the example below it is sufficient to enter “waived” to select the last picklist entry.



You do not need to use wildcards (see chapter 4.10.5) for this matching in picklists.

In order to create an “other:” entry in an open picklist, please enter a value not uniquely matching (e.g. you may quote your string, making it non-matching)

If an entry matches fully to a picklist entry, then this also resolves correctly, even when there are further partial matches:



Still the user can enter a substring and then use the key arrows on the keyboard (or the mouse) to select the single entry and then press Return or Tab.

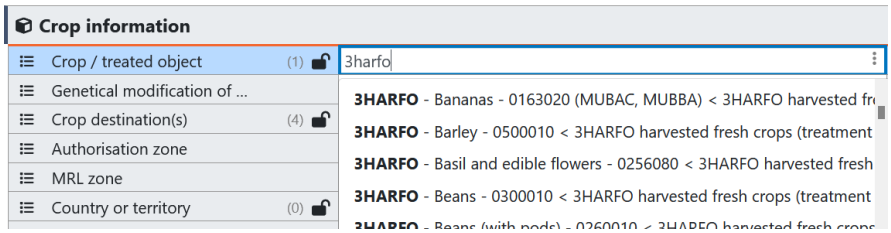
Alternatively, it is possible to enter the internal IUCLID code for the picklist value, e.g. “1680” as equivalent for “according to guideline” in the qualifier for the test guideline table in many endpoint study records.

4.10.2 Hierarchical picklists

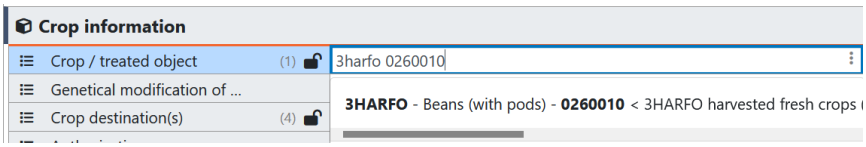
For hierarchical picklists there is a special resolver logic. The example is again

`FLEXIBLE_RECORD.GAP.KeyInformation.CropInformation.Crop`

It can be observed that the information of a leaf node (here “3HARFO”) appears in many subtrees in different contexts:



Therefore, the user can enter *TWO* strings that are then matched against the hierarchical picklist strings from left to right – the second string defining the context of the leaf node information:



4.10.3 Picklists (also part of quantity or range definitions)

There are several special character combinations that are difficult to enter via keyboard or using standard characters. Therefore, the IIP allows to replace those special character combinations with simplified ones. Some of the characters are listed below.

Target	Variants
µ (character code U+03BC)	µ (character code U+00B5), u
µ (character code U+00B5)	µ (character code U+03BC), u
°C	C
°F	F
m²	m2, qm
m³	m3, cbm
±	+-
≤	<=
≥	>=
… (one character)	... (three dots)

Table 3 – mapping for special characters in picklists

Additional characters that are mapped include accents and other special characters.

This mapping is applied on picklists wherever they appear, in both directions: Hence, the entry ”mg/m2” would match the picklist value “mg/m²” and “ug” would match “µg”. Inversely, when typing a value “Kremsmünster” this would match the picklist value “Kremsmunster”

This phrasegroup mapping can be modified by editing the JSON file

`configuration/definitions/phrasegroup.mappings.json`

in the IIP server installation. Please check the IIP installation manuals for more details.

Note: IUCLID uses two different character codes for the micro sign µ internally, therefore two mapping rules are required

4.10.4 Document references (inventory)

IIP uses the search possibility of the IUCLID REST API interface to resolve the entered string. Dependent on the target entity type the string is matched against different attributes:

Type	Resolution details
Literature reference	Title • Field name: `LITERATURE.GeneralInfo.Name` • IUCLID search API field name: `title`

Type	Resolution details
	Instead of pasting a string that is being interpreted as name / title, the `owner_study_no` can be additionally (not alternatively) supplied, using a specific key/value syntax: `type:LITERATURE;owner_study_no:StudyNo123;title:Acute toxicity in the rat` Please note that in the REST API the search parameter for the Name is title.
Reference substance	Reference substance name • Field name: `REFERENCE_SUBSTANCE.ReferenceSubstanceName` • IUCLID search API field name: `name` The `cas_number` and/or `cas_name` can be additionally (not alternatively) supplied, using a specific syntax: `type:REFERENCE_SUBSTANCE;cas_number:CAS123;name:Water`
Test material	Name • Field name: `TEST_MATERIAL_INFORMATION.Name`
Contact	Last name • Field name: `CONTACT.GeneralInfo.LastName` • IUCLID search API field name: `name` Please note that contact entities cannot be created in the IIP, but displayed, edited or created. The first name and the organisation can be additionally provided, using a specific syntax: `type:CONTACT;first_name:Max;last_name:Mayer; organisation:123org`
Legal Entity	Name • Field name `LEGAL_ENTITY.GeneralInfo.LegalEntityName`
Site	Site Name • Field name: `SITE.GeneralInfo.SiteName`

Table 4 – Document reference types resolution

For a specific link, IUCLID determines what entity type(s) are allowed as target entity/entities. Here are some examples, please note that there are a few reference fields that allow multiple target types:

- `[LITERATURE]`
- `[SUBSTANCE, MIXTURE]`
- `[REFERENCE_SUBSTANCE, SUBSTANCE]`
- IIP considers this definition as part of the resolution process
- The IIP interface does not explicitly display the constraints imposed by the IUCLID format.

4.10.5 Wildcards for document references

The usage of wildcards is supported as follows (identical to the Advanced Search masks in the IUCLID user interface):

- The search string foo or foo* will match to IUCLID values starting with foo
- The search string foo or *foo will match to IUCLID values containing foo anywhere in the value
- To enforce a full match to the complete string, enclose the search string in double quotes "foo" Please note that IUCLID does not enforce a trim on leading or trailing spaces, but IIP does. Hence, when searching for document references, a search for a document with name "foo" will not find "foo " in IUCLID.
- The search is case-insensitive, foo or FOO or Foo will match all the possible upper or lowercase sequences of foo

Alternatively, instead of supplying a string with or without wildcards, it is possible to enter the UUID of the entity directly, if known.

4.10.6 Document references (intra-dataset)

The resolver for intra-dataset document references (e.g. of type “related study”, “relevant studies”) are resolved in a similar manner as references to the inventory.

- The name of documents in the same dataset are used as search string.
  Note: Unfortunately, in the IUCLID format there is no other good “primary business attribute” available that can be used for referencing, like an internal document number.
- The referenceable document type(s) are constrained by the IUCLID format definition, here are some examples of constraints:
  - `[ENDPOINT_STUDY_RECORD]`
  - `[FLEXIBLE_SUMMARY, ENDPOINT_SUMMARY]`
  - `[ENDPOINT_STUDY_RECORD.BasicToxicokinetics, ENDPOINT_STUDY_RECORD.DermalAbsorption]`
  - `[ENDPOINT_SUMMARY, ENDPOINT_STUDY_RECORD, FIXED_RECORD, FLEXIBLE_SUMMARY, ASSESSMENT_ENTITY, FLEXIBLE_RECORD]`
  - `[FLEXIBLE_SUMMARY, ENDPOINT_STUDY_RECORD, ENDPOINT_SUMMARY, FIXED_RECORD, FLEXIBLE_RECORD]`
- IIP considers this definition as part of the resolution process
- The IIP interface does not explicitly display the constraints imposed by the IUCLID format

The usage of wildcards is identical to the inventory document references (see chapter 4.10.5).

4.10.7 Document references (inter-dataset)

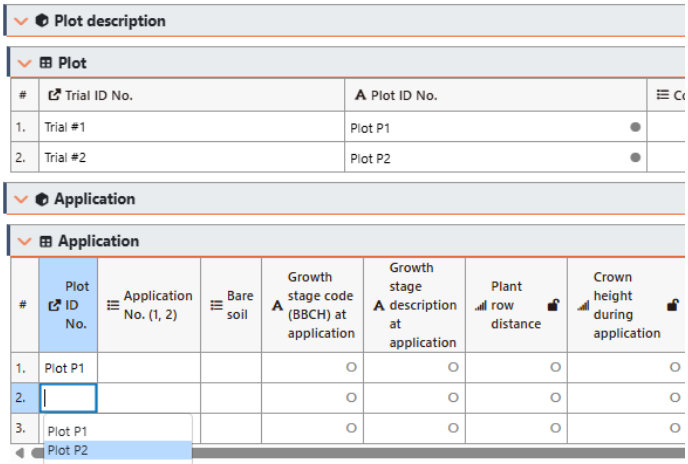
These are a few fields with references from a document in one dataset to the parent entity of another dataset, e.g. in `FLEXIBLE_RECORD.MixtureComposition`.

The resolution can use wildcards as described in chapter 4.10.5.

4.10.8 Block Reference (intra-document, to another repeating block or table row)

Within IUCLID, block references (as present in many residue OHTs) are stored as UUIDs, where the UUID denotes the target block (or table row) where the reference points at.

For each block reference field, the IIP shows a value assistance field with the values of the identifiers of the possible target table rows. This is usually the value in the first column of the table. In case this value is itself a blockref field pointing to yet another table, then value in the subsequent column is used (see the example below)



During the IEF import / export, the actual business / display value (here e.g. “Plot P1”) is being processed and a respective target block / table row in the IEF data is being searched (here, the table row starting with “Trial #1”). Then, this reference persisted using UUIDs as expected in IUCLID.

4.10.9 Value assistance for document references

From version 1.10.0 onwards, IIP supplies value selection assistance applicable for all document reference fields. When the user supplies three (min value) or more characters for the value in the name field of the target entity / document (for literature: title field), the IIP will query the IUCLID instance for matching values. A running query operation will be visible by a spinning wheel at the end of the field, you may need to be patient dependent on the quality of the connection and speed of the target IUCLID instance.

Please note that wildcards as described in 4.10.5. are permitted.

Once the query has terminated, the results are displayed in a dropdown list, please see a (complex) example below:

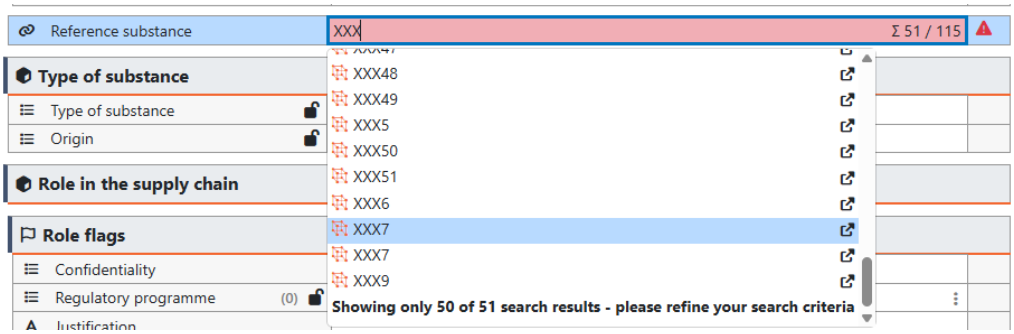


Figure 13 – value assistance for document reference fields

- The value assistance displays maximum 50 hits. If more hits are present, the dropdown list will indicate this in its last line.
- The number of hits versus the total number of target documents / entities is displayed at the end of the field (here “∑ 51/ 115”), meaning the search string matches with 51 out of 115 existing reference substances in this dummy example.
- Each entry in the value assistance contains a clickable link icon at its right end. This icon can be clicked in order to verify that the respective target entity is the desired one for selection. Then the target entity is being displayed in a new web browser tab for verification, not disturbing the current selection process.

The target type icon on the left of the value assistance entry is also clickable and shows an abbreviated preview of the target entry with its most relevant attribute values. The attributes depend on the document / entity type.

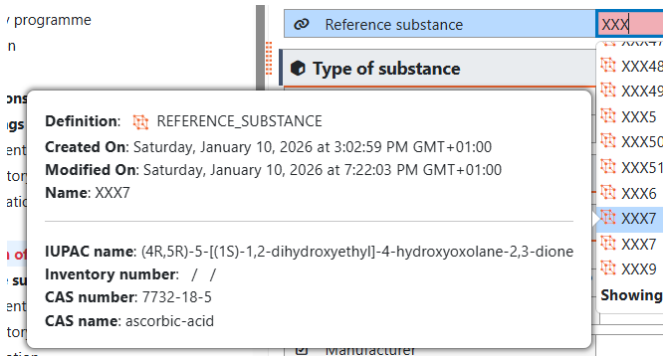


Figure 14 – preview for referenced documents / entities in the value assistance

- If you are not sure what the accepted target reference types (documents or entities) are you can click on the document reference field type icon (see also chapter 4.9) in front of the attribute name:

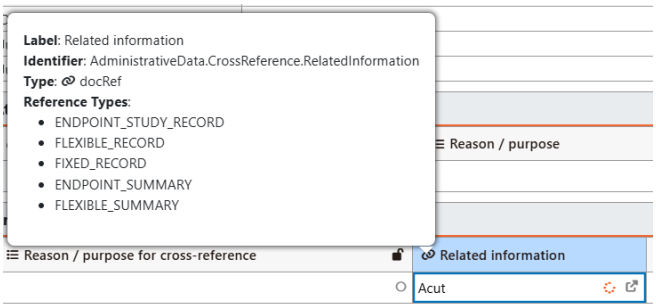


Figure 15 – display of reference types for document reference fields

The user can select the target entity by clicking on the desired entry in the value assistance.

Current limitations:

- Only a search for the "name" attribute is currently implemented, type specific searches for other attributes e.g. for LITERATURE with prefix “study_no:” are not implemented

4.11 Content bar

The content bar on the upper right side below the top bar spans across the element navigation map and the content area. Below is an example:

b0b9a6fc-6a7c-424c-90cb-52396c2aec4a	Display of the UUID of the currently displayed document / entity, with clickable buttons at both ends: • copies the UUID into the clipboar • opens the document / entity in a new browser tab in the IUCLID web interface. Please note that those links sometimes do not display the expected item, as IUCLID does not have

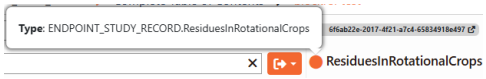
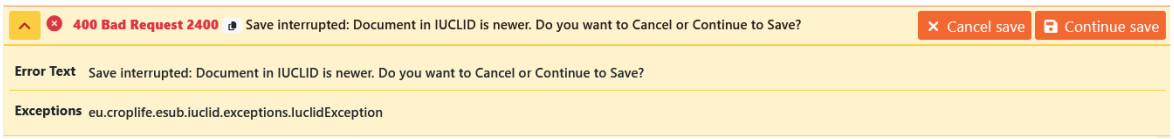
	a stable definition for “deep links” (this issue is also known from IUCLID reports)
	Invocation of the compare function, to compare two instances of the same document / entity type (see chapter **Error! Reference source not found.**)
	• Toogle to switch the content area between edit mode and review mode • Reloading the current document /entity from IUCLID (useful to retrieve content changed in the IUCLID interface) • Save button (active when content has been changed AND there are no errors in the document). To check for errors watch out for red fields and/or us the element navigation map to filter for errors. Keyboard shortcut for save: Ctrl-S
	Icon for entity / document type - document subtype (for documents) and document / entity name. A click on the icon displays the full technical name of the document in a dataset.  The technical document names are required for the definition of custom working contexts (see chapter 5.2.3).

Table 5 – Content bar elements

4.11.1 Document saving check for outdated version

Prior to saving in IUCLID, the IIP retrieves the last modification date of the document / entity from IUCLID: If this is more recent than the last time the IIP has fetched the content, a warning will appear and the user has the option to cancel or continue the save operation.



A similar operation is not available in IUCLID, here the latest change will win without previous alerts.

Please note that the current state of the document / entity in focus can be checked in a parallel browser tab in either IIP or IUCLID.

Note: In IIP 1.9.0 the “Continue save” operation is malfunctioning, this will be fixed in a later service release. Please use the functionality currently as an alert.

4.12 Content area

The content area displays the selected document or entity.

4.12.1 Edit mode

The default display mode is EDIT mode, with the toggle in the upper right corner being set to .
The edit mode is optimized for concise display, with the display trying to mimic a spreadsheet like behaviour and to hide intrinsic editing and field type complexity as far as possible:

- Reuse of existing design and functional solution patterns from spreadsheet programs, minimizing training effort and breaking expectations.
- Support of default keyboard navigation, as known in standard spreadsheet programs, across blocks / tables. Main standard shortcuts are
    - Arrow keys, Tab / Shift-Tab, F2 (for edit mode), Space (for display of picklist values), Return. (For details about keyboard shortcuts see chapter 4.14).
- No vertical space between cells, no wasted space, to increase the information that is displayed on screen.
- Efficient keyboard shortcut support, reducing mouse operation
- No (vertical) movement of the display of fields due to activation of any functionality, requiring refocusing the eyes / repositioning the mouse.

For specific field types the following display optimizations are implemented to maintain the above design principles (see also chapter 4.8):

- For **tables**, only the first few rows are displayed. The full table is displayed when maximized using the maximize button .
- **Unformatted text fields** that are defined with 2000 or 32768 characters are displayed with the initial lines. When exceeding a line limit (configurable, see the settings page in chapter 4.16), a maximize button is displayed and the full content is visible when maximized.
- Similarly, **formatted text fields** (“richtext fields”) are shown up to a certain height and can then be maximized. The formatting menu (similar functionality as in IUCLID, as based on the same technical component) appears in the maximized mode only.
- For picklist with remarks, the remarks field is displayed on demand only, with the icon at the field end indicating whether there is a value present or not .
- For **multi-picklists,** only the first value is displayed. For accessing additional values, the specific icon can be clicked. If there are no additional values, this is indicated by a state change of the icon.
- **Ranges and quantities** are aggregated into one field, combining qualifiers, value(s) and units in one string. An advanced editor can be opened on demand using Ctrl-Q or the circle icon at the field end.
- **Boolean** is treated as a text field, allowing for easy typing / pasting, without the need for (mouse) selection.

4.12.2 Review mode

As the information in edit mode is abbreviated, the user can switch to review mode and display the same information, but read-only and without any abbreviations, all on one page. The layout is similar as in edit mode.

The features of the review mode are:

- The element navigation map is operational, you can click on a field or block/table in the navigation map and the content display will auto-scroll to this element.
- The content area in review mode is suited to be printable via the web browser. However, please note that the printing of documents with wide tables is always a challenge and a good print layout is not in focus of the review mode – complex structured data is inherently difficult to print.
- Application of filter

Please note that IIP is not using the IUCLID report generator, the display and hence printing style is independent on the IUCLID report definitions.

4.12.3 Attachment preview

Attachment fields support a preview functionality within the browser, when either PDF or JPEG files are being attached. Once an attachment field is filled and the document is saved, an eye icon appears at the end of the field:

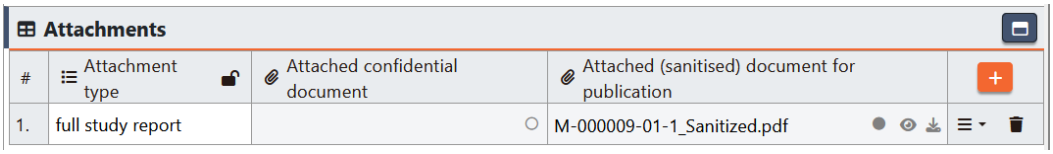


Figure 16 – Attachment preview icon

Once clicked, the attachment is downloaded and displayed in a maximized mode.

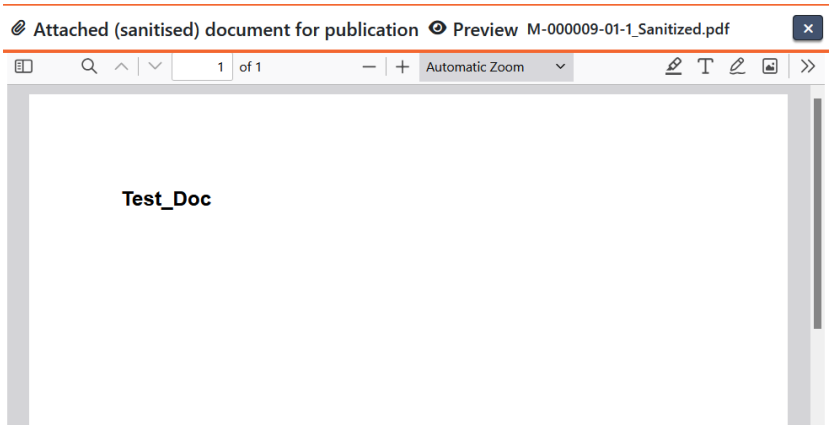


Figure 17 – Attachment preview

The exact type of display depends on the browser type and version and cannot be controlled by IIP.

Important notes:

- The display within the IIP in a maximized mode works only, if the browser settings are configured to display PDF within the browser, like “Open PDF in <browser>” where <browser> is your browser type. If the setting is set to “Download PDFs” or similar, then this attachment preview functionality will not operate correctly; IIP cannot override this setting. Please ask your local IT staff if you are not sure how to access and change this setting in your browser.
- Despite of being called a “preview” functionality, the attachment is downloaded completely and displayed. It is in general not possible to only download a preview portion of any type of PDF in IUCLID

Note: IIP 1.9.0 shows the attachment upload field editor when the preview is closed. This will be fixed in a later version

4.12.4 Expand / collapse of blocks and tables

Blocks and tables in the content can be expanded and collapsed, to show / hide their complete content. This can be achieved by either

- clicking on the caret icon › on the left of the caption bar on the top of each block / table
- clicking on the caret icon › of the block level entry in the middle element navigation pane
- using the expand / collapse all buttons in the middle element navigation pane

As an example, see below the middle and right content pane, with block in the content pane collapsed and

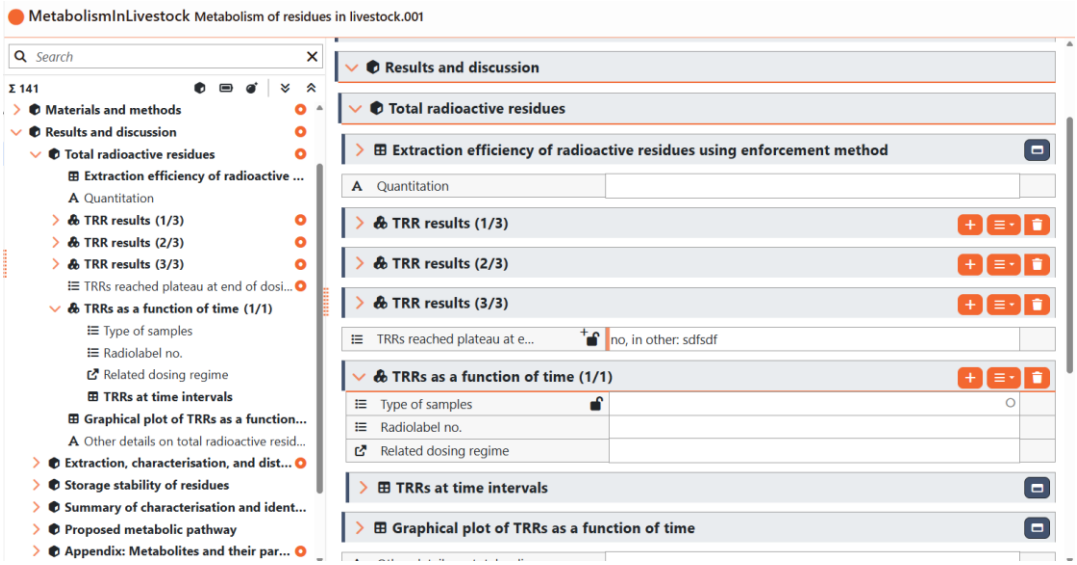


Figure 18 – Expand / collapse of blocks

Expand / collapse of blocks is not operational in the preview or compare mode display

4.13 Edit content

When the content area shows a document or entity it can be edited, when in the default edit mode (see chapter 4.11 for the different view modes).

Each of the basic IUCLID field type has its own specific component in IIP for editing, as described in chapter 4.8. Please consult this chapter for questions about how to edit a specific field type.

This chapter focuses on general editing and navigation features in the scope of the complete document / entity. These are:

4.13.1 Field error state

Each field can be in error state, when the content cannot be validated / resolved against the IUCLID format. Examples are:

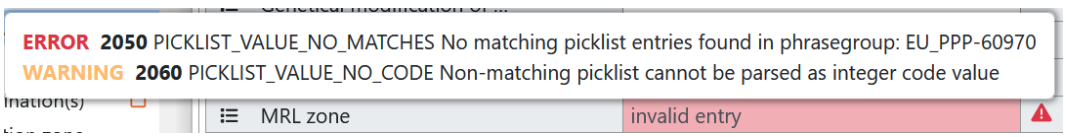
- Invalid date format, number format
- Invalid or non-unique entry for a picklist value for closed picklists
- Document references that cannot be (uniquely) resolved to an existing IUCLID document / entity (see chapter 4.9 for more details about resolver)

The validation / resolution is triggered

- when the field is left by hitting Return or Tab
- when an import job is being imported

Some resolvers take some time (e.g. when executing a search against IUCLID to find a target reference), this is indicated with a spinning wheel inside of the field.

Below is an example of an invalid picklist entry



4.13.2 Pasting

With pasting, existing tabular content from Office documents (e.g. Word, Excel) can be easily entered into IUCLID, provided the information is compatible with the IUCLID format. During pasting, the pasted content is validated and the resolver for specific field types (see chapter 4.9) are executed.

- Single-cell pasting
    - Pasting content from the clipboard into one field, as displayed in the content area
- Range pasting
    - Copy / Pasting a selected range (e.g. from an Excel file) via the clipboard into a set of fields in a block (where a block is considered a table with one column).
    - Copy / Pasting a selected range (e.g. from an Excel file) via the clipboard into a table

  For both types of pasting the pasting operation starts in the field in focus and pastes downward (and to the right if pasting into a table). When the content of the clipboard exceeds the block (e.g. has more rows and more than one column), then the exceeding content is discarded.

  It is not possible to paste content spanning multiple blocks or tables. The content of each block / table has to be pasted separately.
- Pasting in the maximized text display (ASCII or richtext)
- Pasting in the picklist remarks field

For some field types there are specific pasting rules when doing range pasting across different fields:

- When pasting into a richtext field, the content is transformed into HTML, thus the display after pasting may look different than in the source.
- When a multi-picklist or multi-docref field is part of a range pasting, only the first value can be pasted. All previously existing values in a multi-field will be replaced with the single value from the clipboard.

IIP 1.9.0 does currently not support pasting in the following scenarios:

- Pasting in the maximized multi-picklist display
- Pasting in the maximized multi-docref display

4.14 Keyboard support in the content area

The available keyboard shortcuts depend on

- The state of the field (whether the field is display mode or edit mode). A difference is needed, e.g. a Enter / Return key in display mode will navigate to the next field, whereas in edit mode an Enter/Return key within a text field will create a new line within the text.
- The type of field, concerning keyboard shortcuts the supports differ between
    - Picklists
        - Picklist with remarks
    - Text fields
    - Quantity and Range
    - All other fields

4.14.1 Display mode

Key	Picklists	Picklists with remarks	Text fields	Quantity / Range	All other fields
Tab / Shift-Tab	Move to next / previous field				

Key	Picklists	Picklists with remarks	Text fields	Quantity / Range	All other fields
Enter / Shift-Enter	Move to field below				
Arrow-Keys	Move to adjacent field in the respective direction				
Delete / Backspace / Escape	No effect				
Space	**Change to edit mode** and show all picklist values		**Change to edit mode**		
F2					
Mouse Double Click					
Any other keyboard key	**Change to edit mode** and show matching picklist values				
Ctrl-Q	No effect	Show / Hide remarks field	No effect	Show / hide advanced editor	No effect

Table 6 – Keyboard shortcuts in the field display mode

4.14.2 Edit mode

Key	Picklists	Picklists with remarks	Text fields	Quantity / Range	All other fields
Tab / Shift-Tab	Trigger data validation, move to next / previous field, and **Change to Display mode**				
Enter / Shift-Enter	Trigger data validation, move to field below and **Change to Display mode**				
Arrow-Keys	Navigate within the content of the field (left, right, first, right)				
Delete / Backspace	As expected, during field content editing				
Escape	Restore the content of the field to its initial value before edit mode was activated				
Space	Enter a space in the field content				
F2	No effect				
Mouse Double Click	Selection of the word at/before the cursor				
Any other keyboard key	Add key to content at cursor position				
Ctrl-Q	No effect	Show / Hide remarks field	No effect	Show / hide advanced editor	No effect

Table 7 – Keyboard shortcuts in the field edit mode

4.14.3 Advanced editors

When the advanced editor was opened with the shortcut “Ctrl-Q”, the first field of the advanced editor can be put in focus using the tab key. Then the tab / Shift-Tab keys can be used to navigate between the fields in the advanced editor. For the field types in the advance editor

- Qualifier
- Number
- Picklists

the same shortcuts can be used as in the main display.

4.14.4 Remarks field

When the advanced editor was opened with the shortcut “Ctrl-Q”, the remarks field can be put into focus with the tab key. Then, the same keyboard shortcuts operate for the remarks fields as for a text field in the main display.

4.14.5 Document / Entity save

The shortcut “Ctr-S” can be used to save changes for document and entities.

4.15 Home page

The home page is another way to access the different sections of the IIP next to the menu. In addition, a link to the application manual / user manual (this document) in PDF format is provided in the lower right corner.

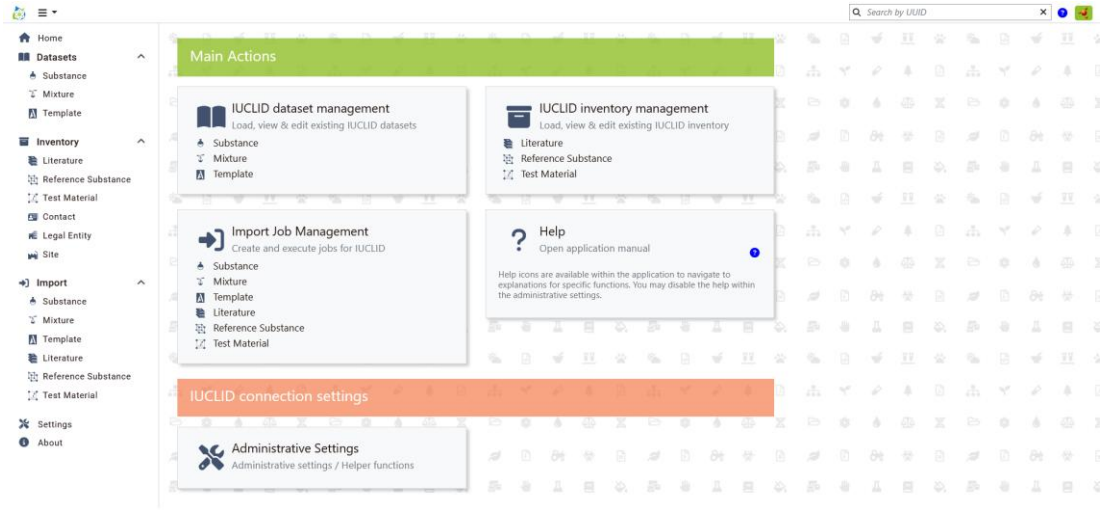


Figure 19 – Home page

4.16 Settings page

The settings page is relevant for the following use cases:

- Set the IUCLID connection settings
- Administrative settings
- System info

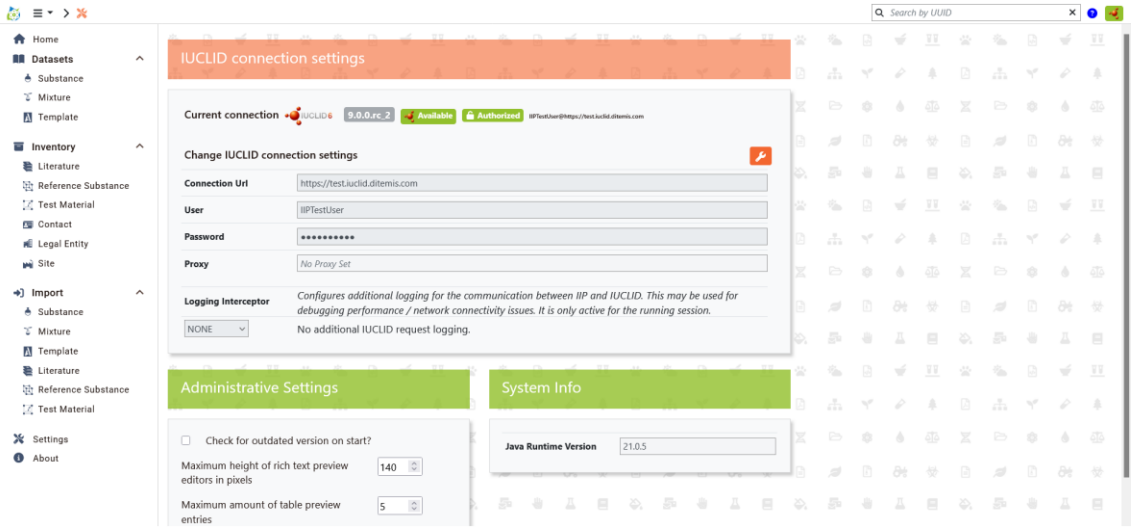


Figure 20 – Settings page

Except for the IUCLID connection settings the sections should be self-explanatory.

4.16.1 IUCLID connection settings

Prior to using IIP, a user account has to be present in the IUCLID instance. Then, each user must individually and separately enter IUCLID connection details here. This task cannot be done during the IIP server installation, as the credentials are stored in the local browser cache on the user's computer, to avoid having any confidential information on the IIP server.

- **Connection URL**: The URL to the IUCLID instance. Here, only the first part or the URL is needed. As an example, if the URL to the IUCLID dashboard is https://yourserver.com/iuclid6-web/dashboard , then you only need to enter https://yourserver.com.
- **User**: Your username, as used to connect to IUCLID in the IUCLID web interface
- **Password**: Your password, as used to connect to IUCLID in the IUCLID web interface

Please note that IUCLID has its own user management and can constrain user access rights. Those access rights are also active when using IIP. As an example, when you are not allowed to access or create specific entities in the IUCLID web interface, this will also be the case in IIP.

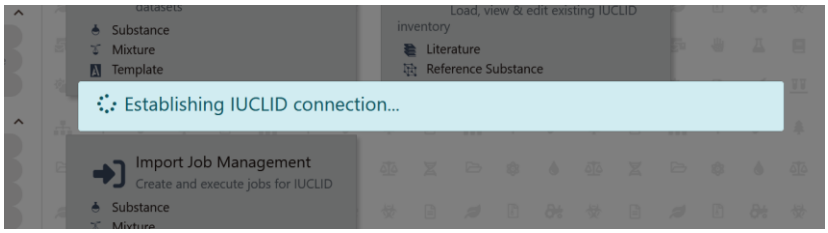
When you want to edit the connection settings, click the wrench button. Once you have entered and saved the settings, the IIP tries to connect to the IUCLID instance; and if successful, displays information about the connected instance in the top bar:

- Version of the IUCLID instance, here "9.0.0.alpha_4"
- Status "Available" meaning a connection to IUCLID using the connection URL could be established, otherwise Not Available will be displayed.
- User status "Authorized", meaning the supplied credentials were correct, otherwise Unauthorized would be displayed.

When entering your data, make sure that all status signs are on green as displayed above.

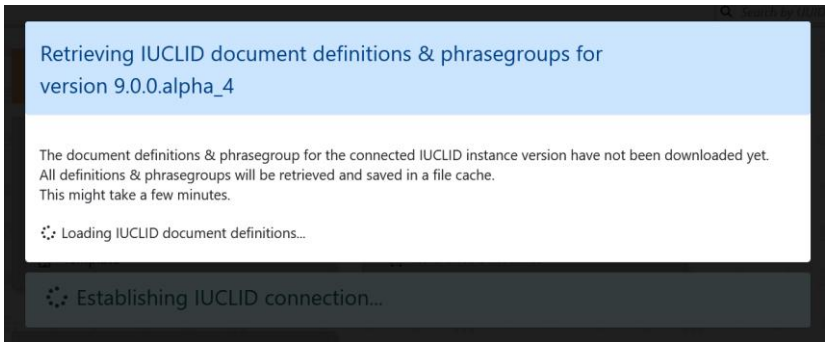
Currently, only one connection profile can be saved. In case you need to connect to different IUCLID instances you need to change and save the settings as needed.

It is possible that a message like this appears:



Please be patient, the IIP server then (re-)loads the IUCLID format cache for this instance. This should not take longer than 2-3 minutes.

In case you are the first user to connect to a previously unknown IUCLID version, then the following screen is displayed:



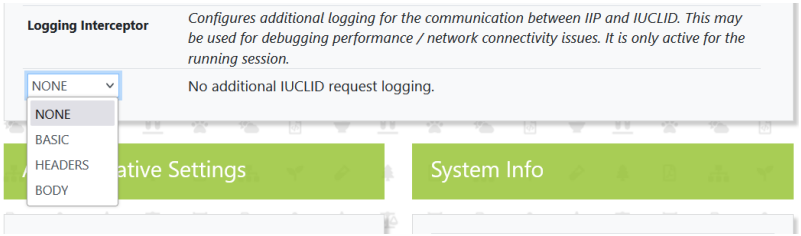
In this case the IIP server needs to once download the IUCLID format from the new IUCLID version. All subsequent connections will use the cached format.

This operation may take a couple of minutes. In case this operation takes very long or fails, please contact your IT administrator and refer him to the IIP installation manual for more information about troubleshooting. There may be connection or timeout issues between the IIP and the IUCLID instance. This is nothing the IIP can resolve.

4.16.2 Logging interceptor

In case of issues, you may be asked to activate the logging interceptor. This logging interceptor logs the messages between the IIP server and the IUCLID instance.

Note: The logging interceptor does not log the messages between your browser and the IIP server and does not help with issues connecting to the IIP server from your web browser.



If requested, activate the logging interceptor by setting the logging level to either BASIC, HEADERS or BODY. Then, perform some IIP activities in question and make sure you exactly note the time when some unexpected behaviour happens.

You need your system administrator to access the log file `iuclid.client.log`, the full relative path is

`\wildfly-xxx.Final\standalone\log\iuclid.client.log`

below the root IIP installation directory. Please note that the logging interceptor settings is retained only during the current session and will be reverted to NONE in a new session, to avoid permanent logging.

4.17 About page

The about page shows

- version and copyright information about IIP
- a link to the What's New page on the CLE eSubmission website.
- Links to emails to the support team.

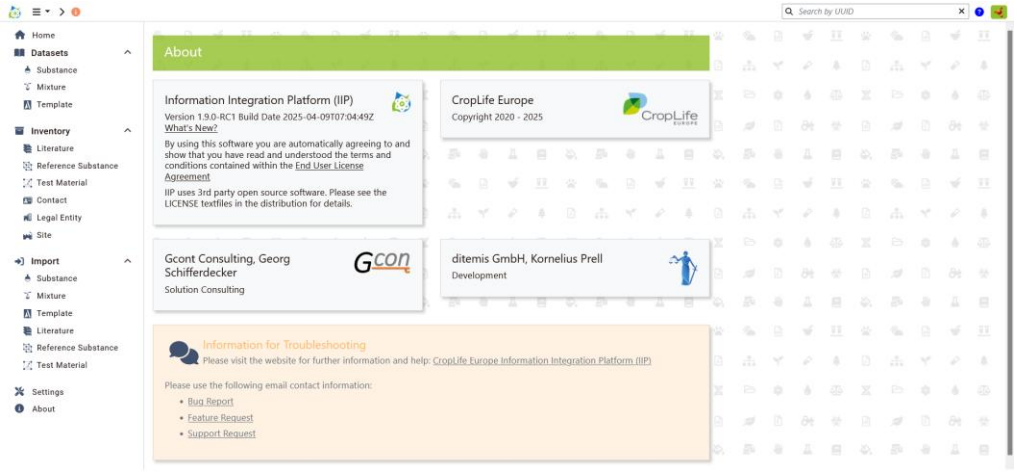


Figure 21 – About page

5 Specific IIIP functions

5.1 IEF Import functionality

The IIP supports its own import format called IIP Exchange format (IEF), that comes in three “flavours”

- CSV-type
- XML-based
- JSON-based

Details about this format will not be covered in this manual. There is a separate IEF format manual describing the details and the syntax in detail. In addition, the IEF export functionality available on the top of the dataset display and inventory display panes allow to export existing data in this format to easily create working examples.

The IEF import functionality can be divided into two categories:

- Import into a specific dataset (substance, mixture, template)
- Import into the inventory (literature, reference substance, test material)

Job information is generally styled in blue, to differentiate job information from information in IUCLID. Please note that when you view a job, it is displayed in the very same mask as the same document / entity type in IUCLID, but the data is a preview and is not in IUCLID.

IEF Import packages with one or many jobs are usually zipped and have the mandatory extension “ief.zip”, also containing potential attachments to be imported. Please use the IEF export functionality to generate some samples. However, for testing it is also possible to import a single IEF file (CSV, XML, JSON), then without the possibility to import attachments.

5.1.1 Import into a dataset

When clicking on substance, mixture or template in the import section of the main menu, the import pane is shown in the leftmost column of the IIP display:

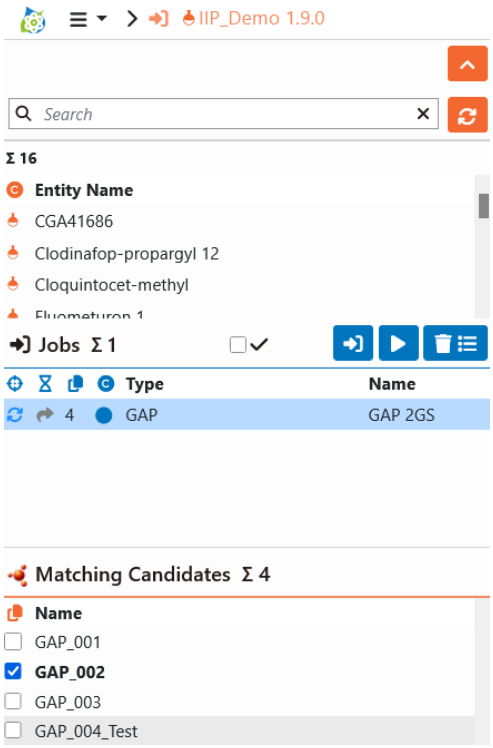


Figure 22 – Import pane

The import pane consists of subpanes, which are not always visible as shown above:

- The topmost subpane is the listing of the datasets of the entity type you have selected. Here you can select the instance in which document should be imported.
- The expand / collapse button allows you to collapse the dataset listing, to gain more space for the jobs pane below. Please note that you still see the selected instance to import into in display in the breadcrumb in the top bar.
- The search bar, the refresh button and the actual listing works as already described in chapter 4.4.

5.1.2 Import into the inventory

To import into the inventory, there is no need to select a target dataset prior to import – the inventory is a set of items that is not categorized any further. Therefore, there is only an import job display, as described in chapter 5.1.3

5.1.3 Import job display

The import job display part of the import pane shows the currently loaded import jobs. To load jobs for processing, please see chapter 5.1.5.

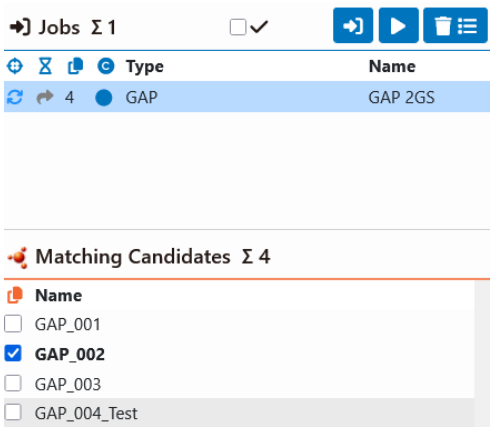
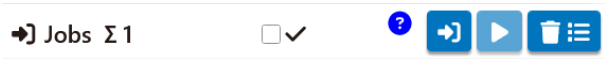
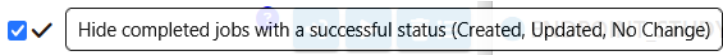


Figure 23 – Import job display

The top bar of the import job display has the following functions:



- At the left the number of jobs is displayed.
- The checkbox allows you to hide completed jobs with a successful status (Created, Updated, No Change), to have a better overview of remaining jobs with issues. You can use the mouse to get this explanation in the application directly (a short mouse over text is also available on most other buttons as well)



- The import button opens the upload pane for IEF files (see chapter 5.1.5). When loading a new IEF files, previously loaded jobs are deleted.
- The execute button starts to execute the import jobs as displayed in the list. During this time, the button icon will change to a spinning wheel, and the job information in the list is being constantly updated. Please be patient until the operation has completed and the button returns to an inactive state depicted in light blue.
- The clear button clears the list of currently loaded jobs. Please note that an individual job can be deleted in the job display pane (see chapter 5.1.7).

The caption bar of the job listing when importing in datasets

Type Name

contains the following columns

Target update status

This status describes what the effect in the IUCLID instance will be when this job will be executed. The status depends on whether matching candidate(s) exist and which one is selected, either preselected by IIP or selected by the users, prior to the execution of the job list. For details about matching candidates see chapter 5.1.4.

	NEW The job will create a new document/entity, as there is currently no matching update candidate, either not present at all or not selected by the user / preselected by IIP.
	UPDATE The job will update an existing document/entity. There is a matching candidate selected, either by the user or the IIP itself. The update is a complete update of the information based on the new information in the job.
	MERGE The job information will be merged with an existing document/entity. There is a matching candidate selected, either by the user or the IIP itself. A merge job cannot be executed without one matching candidate selected.

Job status

The job status depicts the status of the job, from creation during execution to one of the possible terminal states.

	NEW Initial job state after loading IEF file, prior to execution; with any action flag. Job information is syntactically correct.
	QUEUED Job waiting for execution, but dependent on the successful execution of another job, as it directly or indirectly links to it via an intra-dataset docref reference
	EXECUTE Job currently executing. • Predecessor state is NEW • Successor state is either CREATED, UPDATED, NOCHANGE or ERROR_EXECUTE
	CREATED Job that was executed and created a new entity/document. Terminal state.
	UPDATED Job that was executed and updated an existing entity/document. Terminal state

	NOCHANGE Job that was executed and did not change an existing entity/document. Terminal state.
	ERROR_IMPORT Job with errors during import. The job cannot be executed. Initial state and also terminal state. Occurs when • IEF syntax is wrong, e.g. mandatory content missing • XML schema validation fails • a field content is wrong, e.g. unknown date format • a picklist value is unknown or obsolete • a docref field (e.g. reference to another document or inventory) cannot be resolved For details about the errors please see the information in the job display pane (see chapter 5.1.7)
	ERROR_EXECUTE Job with errors during execution. Terminal state. Predecessor state is EXECUTE. Occurs when • Technical issue with sending Job messages • IUCLID server is not available / timeout • Update candidate no longer available • Documents cannot be retrieved or updated • Attachments fail to be uploaded or set

Amount of found matching candidates

Number of matching candidates for the job. For details about matching candidates see chapter 5.1.4

Type definition (icon)

This is the same document type / entity type icon as used in IUCLID, just in blue

Type **Type of the document**

Technical type of the document / entity, like ENDPOINT_STUDY_RECORD or LITERATURE.

Name **Name of the document**

The value of the name field (mab be empty)

Table 8 – Job display columns

The job table when importing in the inventory looks slightly different:

The columns Identifier and Name contain different information, dependent on what entity type is being imported:

	Identifier	Name
Literature	Study Number `(GeneralInfo.CompanyOwnerStudyNo)`	Title `(GeneralInfo.Name)`
Reference Substance	CAS Number `(Inventory.CASNumber)`	Reference substance name `(ReferenceSubstanceName)`
Test material	Column Not present	Name `(Name)`

Table 9 – Job display columns for inventory entities

5.1.4 Matching candidates

The IIP concept of matching candidates was conceived to avoid importing undesired duplicates of documents or entities in IUCLID, as reported by many users. IUCLID does internally use the UUID as unique key only and does not have a concept of “business primary key(s)”, therefore no data deduplication based on UUID is possible.

A matching candidate for an import job is a document or entity in the connected IUCLID instance, that is a potential candidate of a duplicate for this job information, according to “business primary keys” defined below. For example, a literature reference in the IUCLID instance with the same value of StudyNo as the job is considered a matching candidate. Please note, that there may be zero, one or many matching candidates.

Please note that for documents the match is only determined within the scope of the target dataset to import in, not across the complete IUCLID instance.

The table below defines the matching rules including the “business primary keys” as defined by IIP; per type of import.

	Matching rules between job and IUCLID
Document (in a dataset)	For a document, a combination of two attributes is used, that both must match in order to match fully: • the full document type (e.g. `FLEXIBLE_SUMMARY.EstConcGroundwater`) Only documents of the same type can ever be matching candidates • the document name (displayed in the top bar when the document is displayed on the right side) The matching candidate pane shows all documents of the same document type. If additionally, there is a document with the same document name it will be marked in bold and preselected by IIP.
Literature reference	“Study no.” `(GeneralInfo.CompanyOwnerStudyNo)`
Reference substance	If either one or both of the following two fields are supplied in the job information • CAS Name `(Inventory.CASName)` • CAS Number `(Inventory.CASNumber)` a match in IUCLID of either of the two attribute values is displayed as update candidate. If both fields are empty in the job information, then the field • “Reference Substance Name” `(ReferenceSubstanceName)`

	Matching rules between job and IUCLID
	is used as matching candidate
Test material	Name (`Name`)

Table 10 – Matching candidate rules

In the IUCLID interface, the matching candidate(s) for a job in focus are displayed below the job display list. Here is the same screenshot from above again:

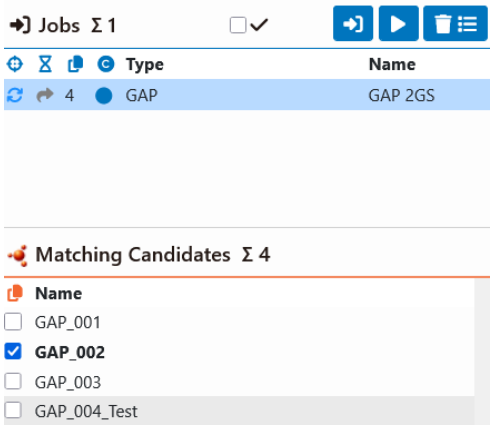


Figure 24 – Import job display

There are two matching candidates, one is a full match (type + name), the other is a partial match (type only). The full match is preselected and marked in bold.

In general, the displayed matching candidates may have one of the following status:

- Pre-selected: If there is exactly one matching candidate where all criteria match it will be highlighted in bold, plus pre-selected.
- Recommended (text in bold): Multiple update candidates exist with exact matching criteria. No matching candidate is pre-selected as there are multiple valid choices.
- Listed (only relevant for documents): The document type matches, but not the document name. Those items are not highlighted or preselected.

Prior to executing the jobs, the user can now review the matching candidates, by selecting each job and reviewing the matching candidates and the pre-selection, if any. The number of matching candidates is displayed in the 3rd column of the job list, so with 0 matching candidates there is nothing to review.

When selecting a matching candidate, the information from IUCLID is retrieved and displayed in the display form for this document / entity type with red IUCLID styling. When selecting a job, the job information is loaded and displayed in the same display form, but now with blue styling, to indicate a job.

Please note the checkboxes in front of the name. The user can change the selection or remove the selection completely. This will have an impact on the target update status of the job, see Table 8 – Job display columns:

- With no selected matching candidate, the target update status will be NEW, a new instance of this document / entity with a new UUID will be created in IUCLID when the job is executed.
- With one selected matching candidate, the target update status will be UPDATE or MERGE - dependent on the specification of the `ACTION` in the IEF file (either `CREATE_REPLACE` or `MERGE`) – and the selected matching candidate will be changed in IUCLID, with its UUID retained.
    - For IEF jobs with action flag CREATE_REPLACE, the selected update candidate in IUCLID will be completely updated / replaced with the information in the job, overriding all information in IUCLID with the job information.

- For IEF jobs with action flag MERGE, the content of selected update candidate and the job content will be merged. A MERGE job cannot be executed without one matching candidate being selected.

IEF files also support the deletion of content in the target ICLID instance when using the MERGE action flag, with some constraints and different scope in IEF CSV compared to IEF XML /JSON. Please refer to the IEF manual for more details.

5.1.5 Upload and selection pane for IEF files

Before IEF files for data import can be imported and processed, they must be first made available to the IIP server: When clicking on the button in the import job display pane to import IEF files, a modal import pane opens:

Please note the two tabs below the caption bar:

- Import by local upload: When using this functionality, you can upload IEF files from your local computer.
- Import via server upload: When using this functionality yon can select IEF files from an upload directory on the IIP server. The IEF files must be uploaded to that directory before, e.g. by an automated process or via a shared drive.

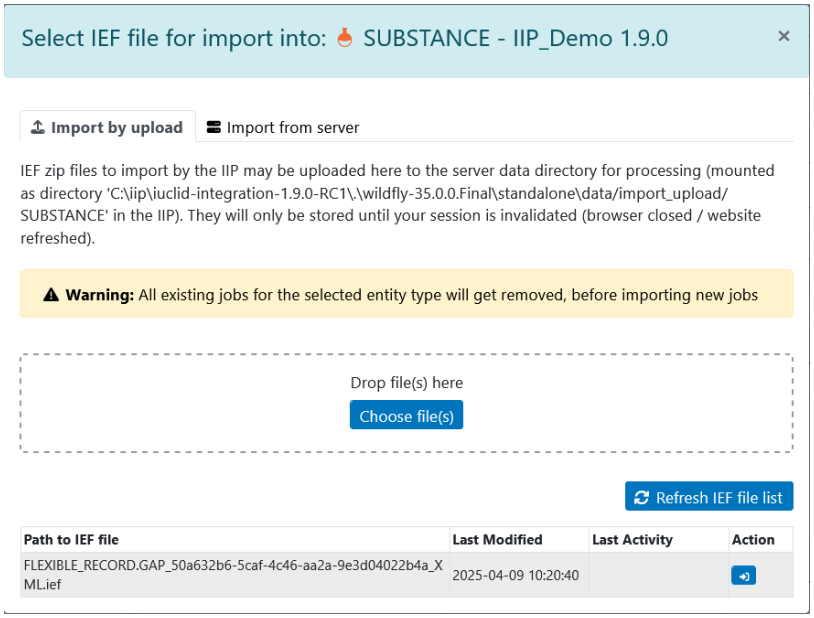
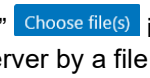
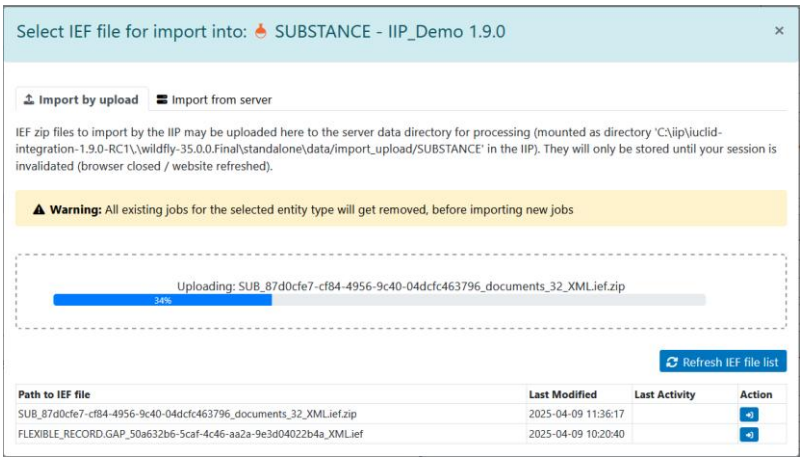


Figure 25 – Import pane for IEF files

The IIP server can be configured to show / hide these two upload options, hence it may be that the user does not have both available. Please see the IIP installation manual for more details.

For the option “Import by local upload”

- in the middle the button “Choose files(s)”  inside a drop zone is displayed. Therefore, you can either upload IEF file(s) to the IIP server by a file system selection dialog or by dragging/dropping them to this zone in the middle of the dialog. Below you see an example of an upload operation in progress:



- at the bottom a table with the IEF files is displayed that have been uploaded before during this user session.
    - The “last Activity” is the most recent date when the IEF file has been executed
    - The first button allows you to load the selected IEF file into the job pane
    - The second button opens a log file in case the IEF file has been executed before. Note: There is no specific log file for loading a job file into the import job pane.
- The IEF files displayed here are available during the current user session and will be automatically purged in a new user session (e,g, when the browser tab is closed /reopened or refreshed). These IEF files are not visible for any other user, hence it is not possible that user A uploads IEF files that then user B will import and process.

For the option “Import from server”, only the IEF file listing is displayed, that are available on the IIP server below a predefined root directory. These files are visible for all users of the IIP. The IIP does not delete any of those files on the IIP server directory, this must be organized separately.

5.1.6 Job loading pane

When clicking the execute button for an IEF file in the job loading pane, the respective IEF file is being processed and loaded into the job display pane. Below you find an example of this pane:

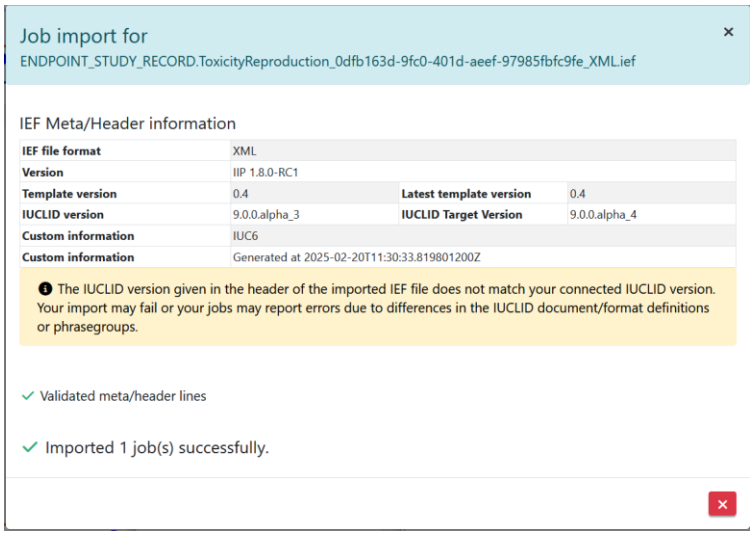


Figure 26 – Job loading pane

During processing some meta information from the IEF file is being displayed:

IEF Meta/Header information	Description
IEF file format	XML, JSON, CSV, one of the three flavours of IEF
Version	Version of the software with which the content was created. In case the IEF file is created using IIP IEF export functionality, this will be populated with the IIP version; for applicant tools the tool version should be added here.
Template version / Latest template version	The current format version of the IEF itself. Please note that the IEF format is independent on the IUCLID format – a new IUCLID format does not require a new IEF format, but potentially a new IIP version will bring changes to the template version. For more details about the difference between the IEF version and the IUCLID version please see chapter 5.1.8.2 Please make sure you use the latest template version available; this information is displayed in the right column.
IUCLID version / IUCLID Target version	Left: String of the IUCLID6 version, based on which the IEF format was generated, as template or content file. This is generated by the IIP software and should be kept when using a template generated by the IIP. On the right you see the version of the currently connected IUCLID instance A warning will be raised during import when the values in this marker differs from the version of the connected IUCLID instance (see screenshot above). Then, during job execution errors may occur, when the IEF format cannot be mapped on the IUCLID format of the connected instance.
Custom information	This is optional information that can be put into IEF files, e.g. to supply additional information when IEF files are generated using an automated data pipeline.

Table 11 – IEF Meta/Header information display

On the bottom of the display, you see continuously updated job loading progress information. Here, all the data validation using the field validators and the content resolvers (see chapter 4.9) are being triggered in the background to check for syntactical or semantic errors in the IEF content, so this process may take time for larger IEF files / slower connectivity / performance to / of the IUCLID instance.

In case that the IEF files is syntactically wrong and does not adhere to the IEF format description, the processing of the IEF file may fail and the content will not be loaded into the job list. For further help please consult the IEF format manual. You can also try to first create the desired content in the IUCLID or IIP interface and the export as IEF file in IIP, to learn from working experiences. Please note that the IEF export chooses to export some information that is optional (e.g. UUID information) and chooses one option to export specific field content when there may be many, but still, you can move forward from there.

5.1.7 Job display

When a job is selected in the job pane, the right side of the IIP shows the details of the job in the same display mask as it would be in IUCLID, but in blue styling. So, this can be used as a preview.

The job display works almost identical to the display of IUCLID documents / entities, this includes the operation of the element navigation map, where filters can be applied, e.g. “Hide empty nodes”, “Errors” to focus on relevant content of the job.

When a job is selected, where errors have been detected during the validation phase, an aggregated error information is displayed above the display and its error are being shown, if possible, with error styling directly at the field level. To review those errors, please use the “Errors” filter from the element navigation map.

Please note, that errors within large tables may be hard to spot, as the field in question may not be in the first rows of the table and only be visible after using the pagination feature of the table. There is no support to get those fields into display automatically.

There are only a few differences compared to the display when viewing / editing information from IUCLID:

- The display is read-only, job information cannot be changed
  Rationale: IEF files are expected to come from existing other inhouse sources (inhouse database systems, Excel files etc.) so it is more advisable to change the source information to keep IUCLID information and inhouse information in sync, rather than to modify a transport format.
- The styling is in blue instead of red, to indicate the job status
- There is no review mode available
- A single job in display can be deleted using the delete button in the upper right corner.

5.1.8 IEF format

Although there is a separate IEF format manual available the following details for IEF files and it is not expected that a standard user creates and manages IEF files the following details are relevant for IIP end users:

5.1.8.1 IEF format flavours and upload in IIP

The IEF format version is the version of the definition of the syntax of IEF files. The IEF format version may change in upcoming IIP versions when IIP import functionality is extended. As the IEF format exist in two syntactic flavours, there are even two different IEF format versions. For IIP version 1.9 these IEF format versions are

  - IEF CSV: 1.4
  - IEF XML/JSON: 1.0

The granularity of the IEEF format flavours differ:

- For IEF CSV, one IEF file can contain one to many job definitions, all of the same type (either document definitions to be imported into one dataset, or many instances of the same inventory entity type)
- For IEF XML/JSON, each job is represented as one separate file

For both flavours, attachments can be uploaded alongside, using relative paths in the respective fields.

For upload purposes, the IEF files may need preprocessing:

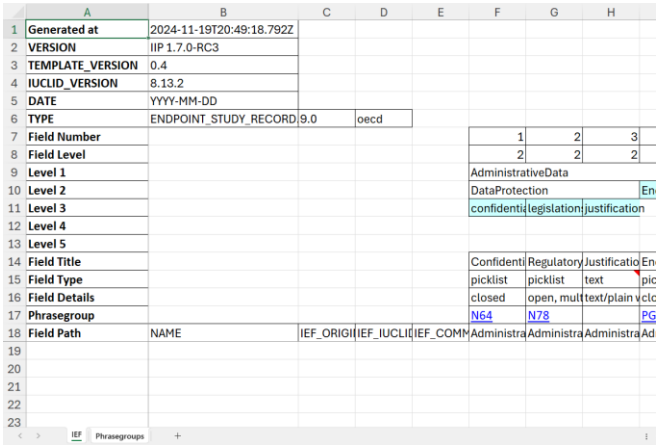
- If there are no attachments to be uploaded, you can upload a single IEF CSV file (with one or many jobs) or a single IEF XML/JSON file (with one job)
- To upload multiple jobs at once using XML or JSON, please put the IEF files in a zip file with the specific extension “.ief.zip”
- To upload one or many jobs including attachment, please put the IEF files including the attachments in a zip file with the specific extension “.ief.zip”. The IEF files should be placed directly in the ZIP (no subfolder), whereas the attachment can be in a subfolder. Then, make sure that the relative paths from the IEF files to the attachments are correct.

5.1.8.2 Dependency between IEF format and IUCLID format

It is important to understand the relation between IEF format version, IEF templates, IIP version, IUCLID format version and IUCLID version:

- The IEF format version of the two IEF format flavours, see chapter 25.1.8.1 above

- An IEF template is a file specific for each document / entity, that a (technical) user can use to prepare for generating an IEF file in the appropriate flavour. The IEF templates are auto-generated by IIP, based on the currently connected IUCLID instance with its specific IUCLID format.
    - For IEF CSV, human-readable Excel files can be created with the IIP. As an example, here is a fragment for the definition of `ENDPOINT_STUDY_RECORD.AcuteToxicityOral`.



	A	B	C	D	E	F	G	H
1	Generated at	2024-11-19T20:49:18.792Z						
2	VERSION	IIP 1.7.0-RC3						
3	TEMPLATE_VERSION	0.4						
4	IUCLID_VERSION	8.13.2						
5	DATE	YYYY-MM-DD						
6	TYPE	ENDPOINT_STUDY_RECORD	9.0	oecd				
7	Field Number					1	2	3
8	Field Level					2	2	2
9	Level 1					AdministrativeData		
10	Level 2					DataProtection		En
11	Level 3					confidentia	legislation	justification
12	Level 4							
13	Level 5							
14	Field Title					Confidenti	Regulatory	Justificatio
15	Field Type					picklist	picklist	text
16	Field Details					closed	open, mult	text/plain
17	Phrasegroup					N64	N78	
18	Field Path	NAME	IEF_ORIGI	IEF_IUCLI	IEF_COMM	Administra	Administra	Administra
19								
20								
21								
22								
23								

IEF | Phrasegroups

Please note the meta information at the top, specifying both “IUCLID version” with the template was created and the “Template version” of the IEF CSV itself.
Each field is explained in some details. The user can also click on the phrasegroup hyperlinks to see a list of available phrasegroups in the 2nd worksheet tab.

Please note that those Excel files are for documentation purposes only and cannot be processed by IIP. For processing you need to use the “real” CSV-based syntax.

- For IEF XML, XML Schema Definition files (XSDs) are being supplied. JSON files are converted to XML after import and validated using the XSDs. Therefore, the JSON version and the XML version are aligned.

  The IUCLID version from which the XSD files are generated is part of the file name and as element mandatory element in the iip.types.xsd, which is used to define the complex type ImportMeta that defines the common header part of the IEF files. The information about the IEF XML template version is a mandatory element in the file iip.types.xsd. Hence, both versions need to be supplied in every IEF import part and are used during the job validation process.

```
<element name="templateVersion">
    <annotation>
        <documentation>Fixed: Version of the XML template format. May be used for compatibility checks</documentation>
    </annotation>
    <simpleType>
        <restriction base="string">
            <enumeration value="1.0"/>
        </restriction>
    </simpleType>
</element>
<element name="iuclidVersion">
    <annotation>
        <documentation>Fixed: IUCLID version / definitions with which the XML template was created</documentation>
    </annotation>
    <simpleType>
        <restriction base="string">
            <enumeration value="8.13.2"/>
        </restriction>
    </simpleType>
</element>
```

- The IUCLID format is (mainly) the definition of documents entities, as present in IUCLID. The IUCLID format version is supposed to be stable across minor IUCLID software releases and changes for every major IUCLID release.
- Unfortunately, there is no reliable way provided by ECHA to determine, whether in a new (minor or major) IUCLID release the definitions as part of the IUCLID format have changed or not (e.g. the definition versions change even if there is no actual change). To be on the safe side, IIP considers the IUCLID format as changed for every IUCLID version. Consequently, the IIP is forced to
    - download a full IUCLID format cache for every major or minor IUCLID version
    - generate new IEF templates for every IUCLID version

To summarize, an IEF template will change

- due to changes in the IEF template version (triggered by a new IIP version)
- due to a new IUCLID version – with unknown impact on the actual IUCLID format definitions

The IIP tries to apply some flexibility and tries to process IEF files with both outdated IEF template version as well as IUCLID version, but this has its limits, especially for format changes between major IUCLID versions. Please consider that IIP does not have access to IUCLID migration rules.

Therefore, please consider the following rules when using IEF files:

- With new IUCLID versions, and especially major versions, recreate your IEF templates and based on that your actual IEF files you want IIP to process.
- Check if you are using the latest template versions (this is indicated in the job loading pane, see Figure 26 – Job loading pane)

5.1.9 IEF import and job processing

Here are some key takeaways that should be known when working with the IEF import functionality:

- The IEF import does currently not support the creation of substances / mixtures / templates (only documents within those entities)
- From version 1.10.0 onwards, the IIP implements an optimization of the order in which jobs are being executed, to accommodate for dependencies between documents in a dataset that reference other documents using the docref field type, which can be transitive and even cyclic. Example for those fields include
    - Link to relevant study report(s)
    - Relevant study / Relevant studies
    - Related information

  The following rules for error handling of such job dependencies via docref field values apply:

  - A document is not imported if the import of another document from which it depends cannot be done (e.g. syntax error, content validation error) or the import execution has failed. This rule is transitive: In a graph A->B->C; when the import of C cannot be done or fails, the import of A and B will not be done and A and B will be set to an ERROR state.
  - The same transitive approach is applied, when individual jobs that have dependencies are deleted: When the user wants to delete an individual job after import, but prior to execution, all other jobs dependent on the deleted job are identified. If other jobs are found, then the user can
    - Continue the deletion which will set all dependent jobs to ERROR state (*"Dependent Job <jobName> cannot be target as document reference anymore, as it was deleted."*)
    - Cancel the deletion of the job
  - Documents in the IEF file that are to be newly created (not updated) and have cyclic dependencies (e.g. A->B->A, A->B->C->A) cannot be processed and are set to an ERROR state. Currently, you need to resolve such cyclic dependencies by splitting the creation of the affected documents into two steps (IEF files), first create one document within the cycle without the outgoing document reference, then in the 2nd IEF batch run add the other documents and update the existing one with the missing docref information.
- The IIP applies a consistency check on the job data provided and refuses to apply jobs with one of the following value errors
    - Picklist values that cannot be found or are obsolete in the current IUCLID format. The IIP supports a partial substring match with the decode values of the IUCLID picklists, provided that the match is unique.
    - Cross-references to documents or entities that cannot be resolved to ***exactly*** one item. Please check the latest IEF manual to see the options on how to supply information for cross-references upon import without using a UUID.
    - Import documents where one of the docref fields point to a non-existing target document that is neither part of the IEF file nor in the target IUCLID instance.

- As there is no support for the linking of templates, there is currently no support to create cross-references (with field of type docref) from a document in a template to a document in a dataset, where the dataset has this template linked. The reason is that currently the documents from linked templates are not considered / displayed when opening a dataset.
- Editing / Correction of job data in the IIP web frontend prior to (re-)execution is not possible
- The processing of an IEF file based on a previous major IUCLID format may fail, when format changes have occurred that the IIP cannot handle. The IIP does not contain any migration support for IEF files to newer IUCLID formats. Consequently, IEF files should always be based on the latest major IUCLID version.

5.2 Administration of custom views and custom working contexts

The administration menu for custom views and custom working contexts is not accessible via the default IIP menu bar on the left side. The reason for that is that this is supposed to be a rarely used functionality by a selected group of IIP users. As IIP avoids implementing a second user management system with access rights next to IUCLID, the administration menu is put out of sight for the regular user by assigning a separate URL that must be typed in manually:

- In the address bar of your browser, type in *http://<server-name>/information-integration/#/admin* , where <server-name> is the server from which you run the IIP tool.
  Alternatively you can click on the “Home” view and then manually modify the default URL from your IIP home screen which is *http://<server-name>/information-integration/#/home* - hence replace “home” with “admin”
- This will open the administration menu where custom views and working contexts can be managed

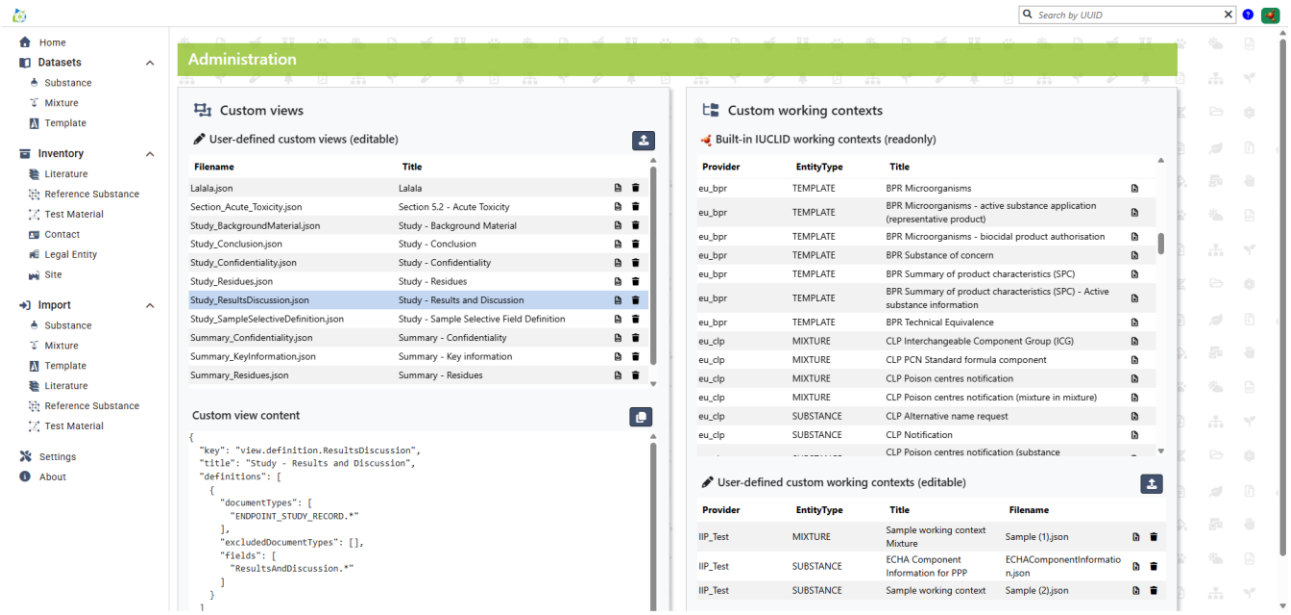


Figure 27 – Administration menu

On the left side of the administration pane you see a listing of custom views that are currently defined for the current IIP server and are made available across all connected IUCLID instances.

- Each listing has two icons; download view definition as JSON - and delete
- Above the listing you find an upload icon to upload new custom view definitions as JSON files
- Clicking on a custom view in the listing will display the JSON definition of the custom views in the lower part. In the screenshot above the definition of “Study – Results and Discussion” custom view is displayed. The JSON content can be copied to the clipboard using the icon

The right side displays information about working contexts

- The upper listing contains the built-in working contexts from the currently connected IUCLID instance. Please note that therefore this list and the working context definitions may slightly change dependent on the connected IUCLID instance.
    - Each built-in working context can be downloaded in a simplified Excel format, to be used as template to build own custom working contexts, both from a syntax as well as from a content perspective.
- The lower listing contains the user-defined custom working contexts currently defined for the current IIP server and are made available across all connected IUCLID instances.
    - Each listing has two icons; download custom working definition as Excel - and delete

5.2.1 Custom views

Custom views are a functionality not available in IUCLID and can be applied on a dataset in addition to a working context (both IUCLID built-in and custom working context) and

- Reduce the displayed document to a list / category of specific document types (Example: Only show documents of type ENDPOINT_STUDY_RECORD.* - note the wildcard)
- Reduce the content display of the selected documents by only showing defined fields or blocks (Example: "ResultsAndDiscussion.*", "AdministrativeDataSummary.DataProtection.justification")

IIP ships with a number of sample custom views that reside in a specific subfolder of the IIP server installation. Each custom view is defined as a separate JSON file. Here is one example:

```
{
  "key": "view.definition.SummaryConfidentiality",
  "title": "Summary - Confidentiality",
  "definitions": [
    {
      "documentTypes": [
        "ENDPOINT_SUMMARY.*",
        "FLEXIBLE_SUMMARY.*"
      ],
      "excludedDocumentTypes": [
      ],
      "fields": [
        "AdministrativeDataSummary.DataProtection.confidentiality",
        "AdministrativeDataSummary.DataProtection.justification"
      ]
    }
  ]
}
```

Figure 28 – Example of custom view

The view above includes all summaries (of both categories ENDPOINT_SUMMARY and FLEYIBLE_SUMMARY), does not exclude any further document type; and from those summaries only two fields are displayed when the custom view is active.

The shipped sample custom views are meant as examples. Each IIP user should delete / modify the custom view definitions as needed. When you refresh the dataset display (top section) also the custom views are being reloaded. For more information about where to find the custom views and how to modify them, please consult the IIP installation manual.

Please note that the application of custom views is dependent on the specific IUCLID format of the connected IUCLID instance: A custom view definition may be operational in one connected instance, but not in a second, when the two associated IUCLID formats differ and the custom view definition contains document or field definitions that have changed and affect the view (e.g. a specific field path is no longer valid due to an IUCLID format change).

The administration menu for custom views does currently not display a status information whether specific views are operational for a specific IUCLID format or not.

5.2.1.1 Order of definitions

A custom view can contain multiple sections of the type

```
{
    "documentTypes": [
        <list of document types>
    ],
    "fields": [
        <list of block / field names>
    ]
}
```

A document type may occur multiple times in the definition, as in the following example:

```
{
    "documentTypes": [
        "ENDPOINT_SUMMARY.ShortTermToxicityToFish",
        "ENDPOINT_SUMMARY.LongTermToxicityToFish",
    ],
    "fields": [
        "KeyValueForChemicalSafetyAssessment"
    ]
},
{
    "documentTypes": [
        "ENDPOINT_SUMMARY.*"
    ]
},
```

Here, for the two explicitly given endpoint summaries, only a specific field / block is displayed, for all other endpoint summaries in this catch-all type definition (note the wildcard in the definition) the complete document is displayed.

The order of definitions in such cases is relevant, as the first matching definition in the view definition is applied. If the above two definitions would be reversed, the second part would never be applied.

5.2.2 Administration of custom views

The IIP allows you to define and upload custom views in JSON format. A basic technical understanding of the JSON format is recommended, ask your local IT for support if needed.

- Navigate to the administration menu (see chapter 5.2)
- Look at the examples for custom views to get familiar with the JSON syntax of custom views
- Download one example that is similar to your needs, as a template to start with
- Change the file name (important!) and modify the definition to your needs. Make sure that
    - the content is in correct JSON syntax (use an appropriate editor for JSON for checking)
    - you supply a unique "key" and "title" value across all custom views
    - the technical names for document types are correct: To check the technical name for a document type, click on the icon for the document type above the content area to display the document type info box

- the block / field identifier are correct: To display the identifier for each block or field, click on the block or field icon to display its infobox with its Identifier. The Identifier can be copied to the clipboard using the icon in front of it
- Important: If you want to display a block / table, you need to append ".*" behind its identifier, to show what is below the block. For fields, the identifier from the field infobox can be used directly.

- Upload the JSON file, using the upload icon and the file selection dialog. Make sure to use different filenames for each view, as only the uniqueness of the filename (and not the view content) is checked upon upload.

After upload the custom view definition, it is being displayed in the list of available custom views in the administration menu and you can test it:

- In the dataset display, please refresh the browser using F5 to reload the list of available custom views
- Select the custom view
- In case the custom view does not behave as expected there is likely an error in the JSON definition. Currently there is no detailed debugging functionality available. In this case it is recommended to start with a small example and then stepwise add additional functionality to the view.

5.2.3 Administration of custom working contexts

IUCLID ships with a number of predefined working contexts that can be applied to a dataset and display the documents in a datasets in different hierarchical views. Custom working contexts also support the creation of new documents.

The IIP allows you to define and upload custom working contexts that can be tailored to your needs. In addition, a custom working context can be connected to a custom view to be applied simultaneously

- Navigate to the administration menu (see chapter 5.2)
- Download a suitable built-in (or custom) working context in Excel format as template
- The screenshot below shows the content of a sample working context

	A	B	C
1	**Provider**	IIP_Test	
2	**Title**	ECHA Component Information for PPP	
3	**Applicable For**	SUBSTANCE	
4	**Custom View**	View for ECHA Component working context	
5	**IUCLID**	10.0.0	
6			
7	**Level 1**	**Level 2**	**Documents**
8	1 - Classification under CLP		FLEXIBLE_RECORD.Ghs
9	2 - MAMMALIAN TOXICITY DATA		
10		Acute toxicity	ENDPOINT_SUMMARY.AcuteToxicity
11			ENDPOINT_STUDY_RECORD.AcuteToxicityOral
12			ENDPOINT_STUDY_RECORD.AcuteToxicityInhalation
13			ENDPOINT_STUDY_RECORD.AcuteToxicityDermal
14			ENDPOINT_STUDY_RECORD.AcuteToxicityOtherRoutes
15			ENDPOINT_SUMMARY.IrritationCorrosion
16			ENDPOINT_STUDY_RECORD.SkinIrritationCorrosion
17			ENDPOINT_STUDY_RECORD.EyeIrritation
18		Genotoxicity	ENDPOINT_SUMMARY.GeneticToxicity
19			ENDPOINT_STUDY_RECORD.GeneticToxicityVitro
20			ENDPOINT_STUDY_RECORD.GeneticToxicityVivo
21		Short term toxicity	
22		Long term toxicity	ENDPOINT_SUMMARY.RepeatedDoseToxicity
23			ENDPOINT_STUDY_RECORD.RepeatedDoseToxicityOral
24			ENDPOINT_STUDY_RECORD.RepeatedDoseToxicityInhalation
25			ENDPOINT_STUDY_RECORD.RepeatedDoseToxicityDermal
26			ENDPOINT_STUDY_RECORD.RepeatedDoseToxicityOther
27		Other relevant information	ENDPOINT_STUDY_RECORD.ToxicityToOtherAboveGroundOrganisms
28			ENDPOINT_SUMMARY.ToxicityToOtherAboveGroundOrganisms
29	3 - ECOTOXICITY DATA		
30		Effects on birds	ENDPOINT_SUMMARY.ToxicityToBirds
31			ENDPOINT_STUDY_RECORD.ToxicityToBirds
32		Effects on mammals	

Figure 29 – Definition of custom working context

- Lines 1-5 are the header lines:

- **Provider** (mandatory): A string to denote the organization that creates this working context. E.g. use your company name here
- **Title** (mandatory): The title of the custom working context, as it will be displayed in the IIP interface for selection, alongside the built-in working contexts
- **Applicable For** (mandatory): Put in either "SUBSTANCE", "MIXTURE" or "TEMPLATE" (case-sensitive)
- **Custom View** (optional): You can specify the key or title of a custom view that is to be applied in conjunction with the custom working context, as soon as it is selected. This allows you to not only define your own hierarchy with a restricted number of document types, but also the field content to be displayed.
- **IUCLID** (optional): Supply the IUCLID version with which you have developed this custom working context. When exporting a built-in working context, this field is filled with the version of the currently connected IUCLID instance

  - Then, the actual working context definitions starts (on Excel row 7)
    - The first columns "**Level 1**", "**Level 2**" define the nodes of the hierarchy. There must only be one node per line. If there is a node without documents followed a subnode, that subnode has to be put into the following line (see examples from built-in working contexts).
      If you need additional levels compared to the example, add additional columns that need to be added left to the column "**Documents**"
    - The final column with content must be the column with the header "**Documents**" (please do not change this label). Here, the technical names of the document instances to be displayed in the respective node are listed. There may be zero, one or many different document types per node.
      To find out about a technical document name, navigate to an example in IIP and click on the document icon in front of the name in the content bar (see chapter 4.11).
    - A document type must only appear once in a custom working context. It is not possible to display the instances of the same document type simultaneously in multiple nodes.
    - A custom working context can also be used to create documents. The suggested document name for a new document and the information, whether a document can be created once or many times within a dataset is taken from the complete ToC information from the built-in working context.

- When done, you can then upload the Excel file in the administration menu (see chapter 5.2). During the upload process, basic syntactical checks will be done to prevent the most apparent errors.
- Refresh your IIP application by clicking F5 to reload
- Then, you can use your new working context.

In the screenshot below you see the working context in action, in combination with a custom view. The screenshot also shows the possibility to create new documents from within the custom working context.

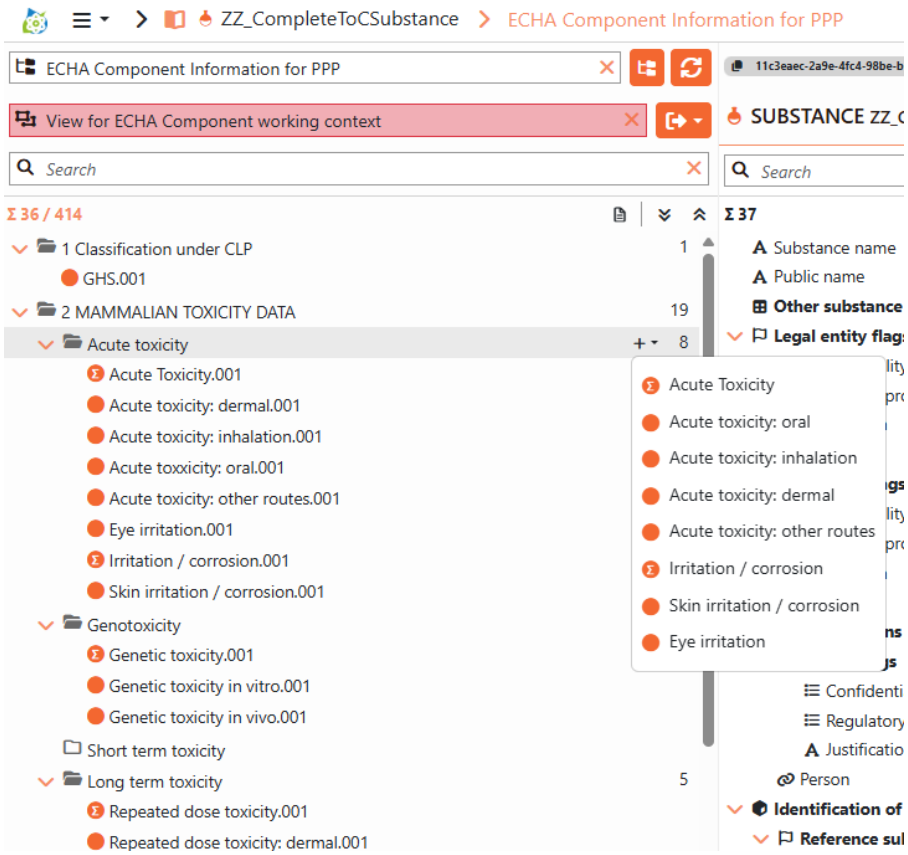


Figure 30 – Example of custom working context

5.2.4 Relation between working context and custom views

Both working context (built-in or custom) and the custom views contain document definitions that restrict what is being displayed. When applied simultaneously, a document type will not be displayed when it is not part of the definition of the applied working context, independent on whether an applies custom view definition contains a view definition for this type.

5.3 Compare

IIP contains a compare functionality, where you can see the differences between two documents or entities of the same type. Within the connected IUCLID instance, you can compare documents across datasets.

To compare a given document or entity with a second one, use the field labelled "Compare by UUID" in the upper right corner of the content display pane and paste the UUID of the other document into this field.

The IIP will search for the document / entity in the connected IUCLID instance and will then open / reopen another browser tab to display the compare result in a dedicated compare view.

Below you find an example of a comparison result as displayed in a new IIP tab:

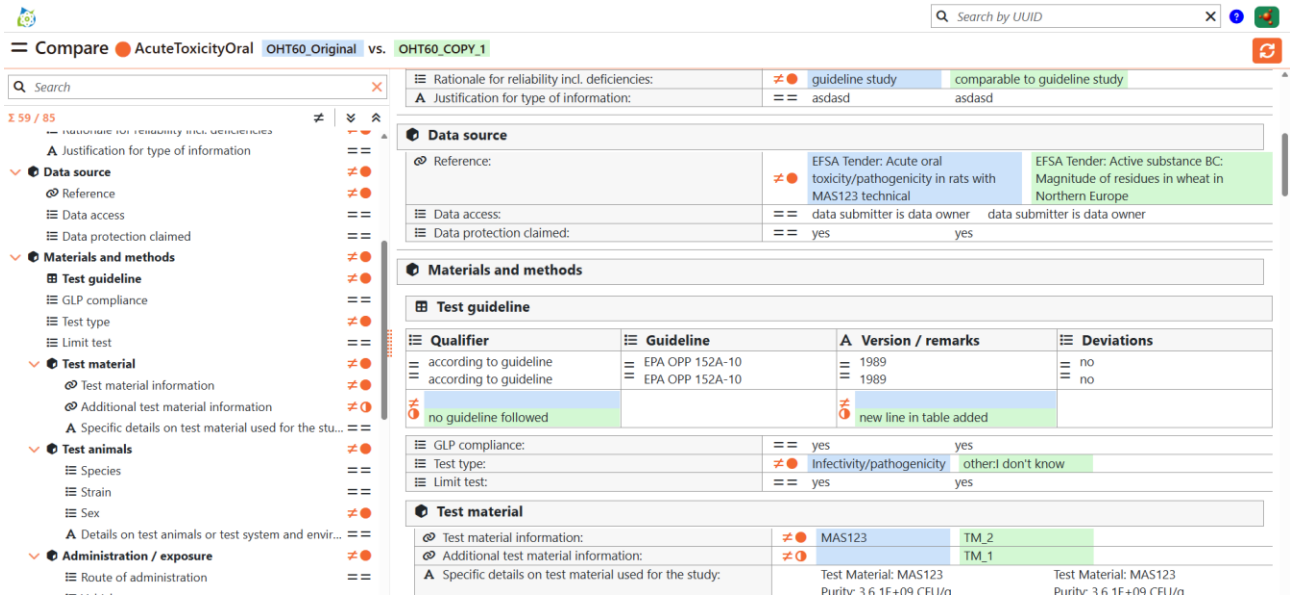
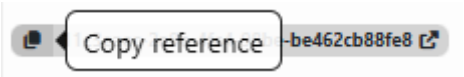


Figure 31 – Example of comparison result

Note: To copy the UUID of a specific document / entity into the clipboard, you can use the "Copy reference" icon next to the UUID display of the document / entity in the area above the content display.



The compare view contains two panes:

- The element navigation map, showing the hierarchy of the fields, is located on the left, with a specific filter option with the icon ≠. Applying this filter will "Show / Hide fields with equal values"
- The right pane shows the values of the two documents for each field / cell and the comparison result in a combined view:
    - Different values are highlighted with a respective color, and icons are used to show the field differences (see further below). Identical values are not marked with colors
    - Please see the top bar for the colors assigned to the two documents / entities. The values for the document from where you started the comparison are located on the left (for fields in block) or top (in table cells), the values for the document with the pasted UUID are shown on the right / bottom.
    - If a field has not been filled in both documents, then the field will not be shown at all in the compare view (similar to "Hide empty fields" in the preview mode). If a cell in a table has not been filled in both documents, but other cells in the same row contain content, the table cell remains empty. Those filters are applied automatically to condense the display and to be able to visually focus on differences.

Icons are used on field / cell level to denote the comparison result:

- "**==**" for identical values
- "≠●" for different values, where both values are non-empty
- "≠◐" for different values, where a value exists in the first document / entity, but no value is present in the second
- "≠◑" as above, but in the other direction

For attachments, the actual content (technically the MD5 value) is being compared. So even if the file names of the uploaded files are different, they are still detected as identical when they are mere content copies.

The comparison result on individual fields and tables is also displayed in the element navigation pane and the comparison result is then aggregated on parent blocks. Hence, you can use the Toggle "Show / Hide

fields with equal values" in combination with "Collapse / Expand all" above the element navigation pane to display only branches of the comparison result where differences occur.

The comparison display is read-only, and no values of the documents can be changed. You can change document values in the default editing display, save them and then hit the "Refresh content and compare again" button in the upper right corner of the comparison display to update the comparison.

The comparison result can be printed (or saved as PDF) using the browser functionality. Please use the print preview function to control the scaling and pagination.

6 Constraints and limitations

6.1 Unsupported IUCLID types

The following IUCLID types are not supported in IIP, mainly due to their infrequent / restricted use:

- ANNOTATION
- ARTICLE
- ASSESSMENT_ENTITY*
- ATTACHMENT (on document / entity level) – attachment fields are supported
- CATEGORY
- DOSSIER* (meaning no Dossier display or creation - all operations work on datasets only)
- DRAFT_DOSSIER (draft dossier header, introduced in IUCLID6 v9)

6.1.1 CUSTOM_ENTITY / CUSTOM_SECTION

The following IUCLID types / concepts are not part of the IUCLID format and not officially specified by ECHA:

- CUSTOM_ENTITY (alteration of the display and handling of an entity definition, dependent on an applied working context)
- CUSTOM_SECTION (as above, but for a document definition)

In the IUCLID web interface, the application of those concepts can be considered as an additional layer based on the core definition and leading to changes in the displayed fields, field labels and also picklists, hence the affected entities and sections may look different as in IIP.

The below table showing some (potentially not all) affected document dates from 2023 and may be outdated by now:

FLEXIBLE_RECORD.Ghs	CUSTOM_SECTION.PCN_GHS
	CUSTOM_SECTION.SPC_Ghs
FLEXIBLE_RECORD.Identifiers	CUSTOM_SECTION.PCN_Reg_Prog_Id_Subset
	CUSTOM_SECTION.PCN_Reg_Prog_Id
FLEXIBLE_RECORD.MixtureComposition	CUSTOM_SECTION.PCN_MiM_Mixture_Composition
	CUSTOM_SECTION.EU_PPP_BASIC_SUBSTANCE_COMPO
	CUSTOM_SECTION.PCN_Main_Mixture_Composition
	CUSTOM_SECTION.SPC_MixtureComposition
FLEXIBLE_RECORD.Packaging	CUSTOM_SECTION.PCN_Packaging
FLEXIBLE_RECORD.ProductInfo	CUSTOM_SECTION.PCN_Product
FLEXIBLE_RECORD.ProtectionMeasures	CUSTOM_SECTION.SPC_ProtectionMeasures
FLEXIBLE_RECORD.SDSInfoMixtures	CUSTOM_SECTION.PCN_SDS_Info_Mixtures
FLEXIBLE_RECORD.Suppliers	CUSTOM_SECTION.SPC_Suppliers
FLEXIBLE_SUMMARY.BioSummaryEvaluation	CUSTOM_SECTION.SPC_SummaryAndEvaluation
FLEXIBLE_SUMMARY.ProductSummaryComposition	CUSTOM_SECTION.SPC_ProductSummaryComposition
MIXTURE	CUSTOM_SECTION.PCN_Mixture_Section

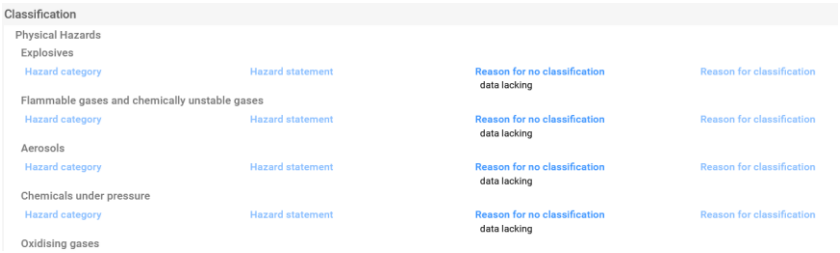
Table 12 - List of documents affected by CUSTOM_SECTION overlays (incomplete)

You can spot the working contexts where those custom definitions are used in the name, e.g. PCN stands for Poison Centre Notification working context. As IIP was created with crop protection in focus, the impact of the constraint to not be able to support those concepts seems acceptable as of now.

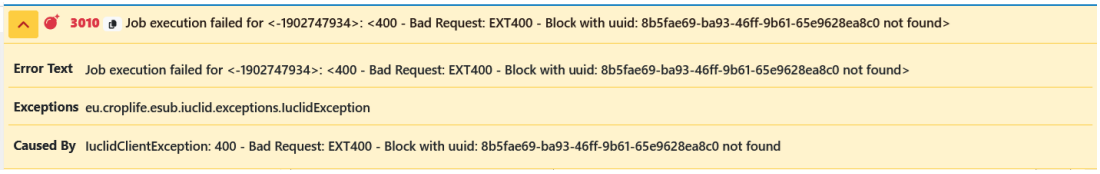
6.2 IIP technical constraints and limitations

- There are some picklists with many entries / long entries
    - The initial loading of all entries may take 2-5 seconds (example Scientific name in `ENDPOINT_STUDY_RECORD.EfficacyData.MaterialsAndMethods.PestTargetOrganismsToBeControlled.TestTargetOrganism`
    - When scrolling within the picklist entries with the keyboard (arrow keys) it is possible that the entry currently in focus is not in the visual area
    - It is possible that for long entries the picklist text exceeds the picklist display window
- When a document with a very large table (> 500 rows) is loaded and displayed, this may take some time. Also, when changing the pagination setting of the table, the IIP may seem to freeze for a while until the change is effective. Unfortunately, there is no possibility to display a wait cursor during this time.
- No support for connecting IIP to IUCLID6 instances on the ECHA cloud (this is due to the official ECHA policies, not due to technical constraints)
- Application of dynamic content rules (these are field-level validations that depend on values in other fields of the same document). Therefore, you can enter data via IIP that in IUCLID violates dynamic content rules. To continue in IUCLID you first need to resolve those violations.
  Note: Dynamic content rules are not related to the rules that are applied as part of the generation of validation reports.

  The screenshot below shows the block `FLEXIBLE_RECORD.Ghs.Classification` in the IUCLID web interface with both dynamic rules and “shifted” layout:

  Dynamic rules are not official specified and made available to external applications in a similar manner as the IUCLID format. IIP will display those fields in sequential order in one column, with all fields active.
- The IIP interface and the IUCLID web interface are not communicating with one another, nor can the IUCLID server actively inform IIP about changes. Hence, if you create or change something in IUCLID, after saving you would need to refresh the other interface to see the change – and vice versa. This is not different compared to multiple IUCLID web interfaces – if the interface is not actively refreshed it will not display any changes made since its content was last loaded.
- IUCLID can be launched from IIP, however those links may not always work as expected. There are no stable “deep” links available in IUCLID; this problem can also occur when clicking on links in IUCLID reports itself.
- No support due to lacking official specification and availability via the IUCLID REST API
    - Dynamic rules (see above)
    - Validation rules cannot be applied / validation reports cannot be created
    - Migration rules (between different IUCLID formats)
- Upon IEF import, there have been rara instances of errors of the following type (“Block with uuid <xyz> not found”)



- The precise reason for this is unknown, the error message comes from IUCLID and the UUID of the block is not part of the IEF import file. In case such an error is observed, please contact the support.

6.3 Unsupported IUCLID functionality

- Creation of CONTACT entities
- Functionality related to unsupported IUCLID types (see chapter 6.1), e.g. the creation of dossiers.
- Creation, display and evaluation of the link between datasets and templates; this includes referencing between documents. However, during IEF import, references to documents inherited from a template can be resolved.
- Multi-lingual support (IIP default = English). Please note that some picklists are defined as multi-lingual and then matching rules may not operate as expected.
- Display of
  - text templates for text fields
  - fields in “shifted” layout (usually as three column-layout), see e.g. the display in the block `FLEXIBLE_RECORD.Ghs.Classification` (see screenshot in chapter 6.2)
- Editing support for Parameterized picklists (these are picklists with text where IUCLID allows to fill specific placeholder with values)
- Inline display of images in fields, e.g. `REFERENCE_SUBSTANCE.MolecularStructuralInfo.StructuralFormula`
- Access to the modification history
- Consideration of (the relatively few) mandatory fields. The definition as mandatory field is currently not considered in IIP.
- User management. IIP uses an existing account, any account change has to be done in IUCLID.
- Functional support as present on the ⋯ menu of a selected entity / document in IUCLID:
  - Import from / Export of I6Z files
  - Create PDF/RTF
  - Generate report
  - Compare
  - Clone
  - Copy data from…
  - Bulk operations (e.g. Bulk delete)
- Generation of validation reports
- Advanced searches
- Document reference creation support: IIP does not have a visual value selection assistance, where the target object of the reference can be searched for and selected. The IIP accepts a string that is then resolved according to the business logic described in 4.10.4 and 4.10.6. Either the string can be resolved uniquely, or the field displays an error. There is no further support finding the right matching candidate.

6.4 IIP functional constraints and known issues

- When pasting in blocks containing multi-value fields (picklists, docref), only the first value of the multi-field can be filled. Already existing multiple values are deleted.
- The IIP does not support its display in “dark mode”
- When closing the attachment preview window for PDFs, the advanced editor for upload is being opened without active user intervention.
- There is no automatic refresh of the display, when changing from import to dataset view. Recently imported items will only display after a manual refresh.
- There may be occasional caching issues, when changing the IUCLID instance during a session. In case of issues, please close the browser and reconnect again to enforce a new session.
- IIP allows to generate Excel-like reports about the IUCLID format, with the server setting "iuclid.definition.report = true”. These operations are very memory intensive on the IIP server and may require a change in the available memory for the IIP server; please see the IIP installation manual
- IUCLID has currently an open picklist Z52 for the field “Justification for data waiving” without any picklist values. Consequently, IIP does not show any suggested values when pressing SPACE or F2 as for fields with “real” picklist values.
  This effect may occur for other picklists as well.
- Pasting in maximized views of multi-editors (picklists, docref) is not implemented.
- New documents / entities cannot be created, when there is no single entity existing yet. The create functionality becomes active with one existing document / entity.
- The “inventory” field in reference substance is not implemented – this field type exists only once.
- There is no keyboard support for the document / entity / job listing display
- For long picklists, using the arrow keys to scroll through the available entries in the dropdown list lead to a situation where the entry in focus is not in the visible area of the picklist validation
- When working with large tables / large pagination sizes, changing the pagination size and navigation may time some time and the interface does not seem to react
- Please consider the time for downloading large attachments when using the attachment preview or download function.
- Pictures in attachment fields are not displayed in the editor view, as in IUCLID (e.g. for the reference substance)
- There is no keyboard shortcut (Ctrl-Q) for the data protection block field type, this needs to be clicked with the mouse.

6.5 Possible infrastructure issues during IIP operation

- A connection between browser and IIP server requires WebSocket connections. If a connection to IIP is not working as expected this may be due to WebSocket not allowed in an intermediary network segment or firewall.
- Please be aware that the first startup, especially with an initial IUCLID format cache loading may take time. If you run into issues, please consult the IIP installation manual and consider changing timing settings.
- If you use a Virtual Private Network (VPN) between browser and IIP or between IIP and IUCLID, some long-running calls may run into a timeout (e.g. initial IUCLID format cache loading)

7 Troubleshooting tips

If you observe issues using IIP, you can try the following steps:

- Did you use the correct URL to connect to the IIP? Do you see the IIP home page? If not, your URL may be wrong, your network has an issue or the IIP server may be down
- In case of sudden issues, make sure that your connection status (upper right corner) is still green
- If you are stuck with an operation in IIP and operation seems not to be normal (e.g. the field types behave differently), you can press “Ctrl-F5” to reload the IIP application in the browser. Unfortunately, you will lose all changes since the last save operation. If the issue reoccurs, please supply a bug report to the support team (see chapter 4.17 for contact details).
- For IT experts:
    - You can use the Developer console, check both the network and the console tab for issues
    - If you assume there are issues between the IIP server and the IUCLID instance: In the connection settings dialog (see chapter 4.16.2), activate the logging interceptor to trace the network traffic between the IIP server and the IUCLID instance. Please note that the logging interceptor settings is retained only during the current session and will be reverted to NONE in a new session, to avoid permanent logging.
    - Check the IIP installation manual and the IIP-specific settings

---------- end of the document ----------