



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY

Policy and Administrative Support  
**Information Systems**

# **Pesticides – APIs V1.0**

**URLs, Metadata, explanations.**

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**Document history:**

Revision	Date	Created/updated by	Short Description of Changes
0.1	22/11/2023	OP	Draft
1.0	24/11/2023	OP	Final Pesticides APIs V1.0
1.0	30/11/2023	JC	Review and validation
1.1	11/04/2024	OP	URLs update APIs V1.0

## 1. INTRODUCTION

The purpose of this document is to provide information for the data structure, formats and the datasets harvesting options. The data exposed through these APIs are updated on a daily basis. The datasets available through these APIs are the same dataset used by the EU Pesticides database ([https://food.ec.europa.eu/plants/pesticides/eu-pesticides-database\\_en](https://food.ec.europa.eu/plants/pesticides/eu-pesticides-database_en))

The download APIs will provide flat files databases which are suitable to recreate the database on client side. On the other hand, the machine-to-machine APIs are more structured and work like a relational database. The data structure is explained below in this document.

Please note that the API version parameter is always mandatory for every API (api-version=v1.0).

## 2. DOWNLOAD OF A FULL DATASET APIs

### 2.1. Active substances download

#### 2.1.1. Access URL

[https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/active\\_substances/download\[?format\]&api-version=v1.0](https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/active_substances/download[?format]&api-version=v1.0)

#### 2.1.2. API Parameters

Name	Required	Type	Example	Description
format	false	string	json	Format of the output (json or csv)

By default, if the format is not specified, the file format will be in JSON. Please note that parameter must be lowercase.

Also, the Active substances dataset is only available in English.

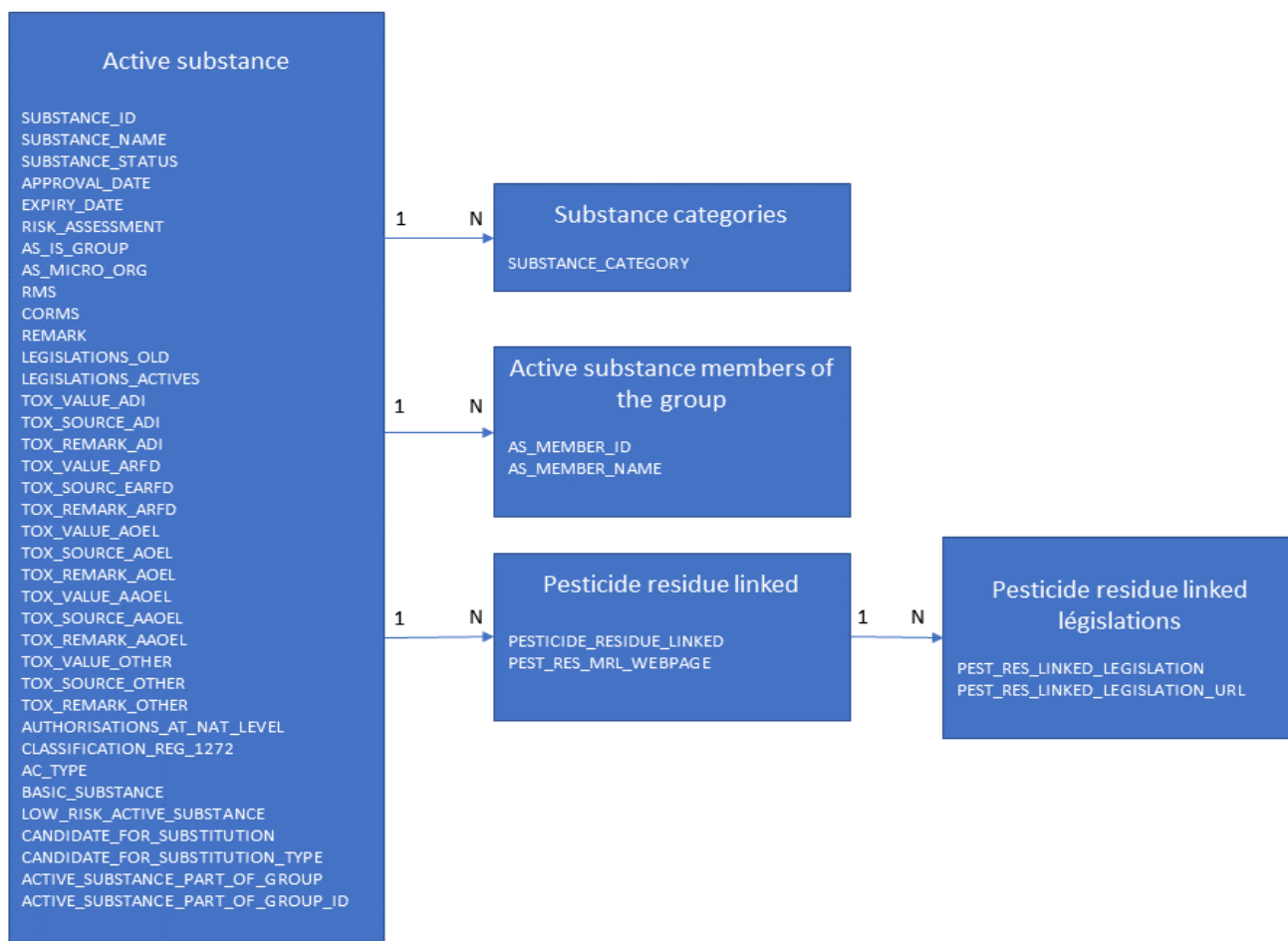
#### 2.1.3. Active substances Data Dictionary

Field	Type	Description
SUBSTANCE_ID	NUMBER(10,0)	Unique ID of the substance
SUBSTANCE_NAME	VARCHAR2(200 CHAR)	Name of the substance
SUBSTANCE_STATUS	VARCHAR2(50 CHAR)	Status of the substance (Pending, Approved, Not approved, ...)
APPROVAL_DATE	VARCHAR2(10 BYTE)	Date of approval

EXPIRY_DATE	VARCHAR2(10 BYTE)	Expiry date of the approval period
RISK_ASSESSMENT	VARCHAR2(10 CHAR)	Risk assessment done by
SUBSTANCE_CATEGORY	VARCHAR2(53 CHAR)	Categories of the substance (Yes/No)
AS_MICRO_ORG	VARCHAR2(3 BYTE)	Is this substance a micro-organism? (Yes/No)
RMS	VARCHAR2(4000 BYTE)	Rapporteur Member State
CORMS	VARCHAR2(4000 BYTE)	Co-Rapporteur Member State
REMARK	VARCHAR2(4000 CHAR)	Remark
LEGISLATIONS_OLD	VARCHAR2(4000 CHAR)	List of old legislations
LEGISLATIONS_ACTIVES	VARCHAR2(4000 CHAR)	List of active legislations
TOX_VALUE_ADI	VARCHAR2(42 CHAR)	ADI: ACCEPTABLE DAILY INTAKE value expressed in mg/kg bw per day
TOX_SOURCE_ADI	VARCHAR2(100 CHAR)	ADI regulation/legislation
TOX_REMARK_ADI	VARCHAR2(200 CHAR)	ADI remark
TOX_VALUE_ARFD	VARCHAR2(42 CHAR)	ARfD: ACUTE REFERENCE DOSE value expressed in mg/kg bw.
TOX_SOURC_EARFD	VARCHAR2(100 CHAR)	ARfD regulation/legislation
TOX_REMARK_ARFD	VARCHAR2(200 CHAR)	ARfD remark
TOX_VALUE_AOEL	VARCHAR2(42 CHAR)	AOEL: ACCEPTABLE OPERATOR EXPOSURE LEVEL Value expressed in mg/kg bw per day
TOX_SOURCE_AOEL	VARCHAR2(100 CHAR)	AOEL regulation/legislation
TOX_REMARK_AOEL	VARCHAR2(200 CHAR)	AOEL remark
TOX_VALUE_AAOEL	VARCHAR2(42 CHAR)	AAOEL: ACUTE ACCEPTABLE OPERATOR EXPOSURE LEVEL Value expressed in mg/kg bw per day
TOX_SOURCE_AAOEL	VARCHAR2(100 CHAR)	AAOEL regulation/legislation
TOX_REMARK_AAOEL	VARCHAR2(200 CHAR)	AAOEL remark
TOX_VALUE_OTHER	VARCHAR2(42 CHAR)	Other value
TOX_SOURCE_OTHER	VARCHAR2(100 CHAR)	Other regulation/legislation
TOX_REMARK_OTHER	VARCHAR2(200 CHAR)	Other remark
AUTHORISATIONS_AT_NAT_LEVEL	VARCHAR2(4000 CHAR)	Authorisations at national level, list of country codes
CLASSIFICATION_REG_1272	VARCHAR2(4000 CHAR)	Deprecated - not updated
AC_TYPE	NUMBER(10,0)	Technical ID
BASIC_SUBSTANCE	VARCHAR2(3 BYTE)	Basic substance (Yes/No)

LOW_RISK_ACTIVE_SUBSTANCE	VARCHAR2(3 BYTE)	Low risk active substance (Yes/No)
CANDIDATE_FOR_SUBSTITUTION	VARCHAR2(3 BYTE)	Candidate for substitution (Yes/No)
CANDIDATE_FOR_SUBSTITUTION_TYPE	VARCHAR2(40 CHAR)	Candidate for substitution type
ACTIVE_SUBSTANCE_PART_OF_GROUP	VARCHAR2(200 CHAR)	Is this substance part of a group of substances? (Yes/No)
ACTIVE_SUBSTANCE_PART_OF_GROUP_ID	NUMBER(10,0)	ID of the group the substance is a part of
AS_IS_GROUP	VARCHAR2(3 BYTE)	Is this substance a group? (Yes/No)
AS_MEMBER_ID	NUMBER(10,0)	Active substance ID of the group member
AS_MEMBER_NAME	VARCHAR2(200 CHAR)	Active substance name of the group member
PESTICIDE_RESIDUE_LINKED	VARCHAR2(511 CHAR)	Pesticide residue linked to this substance
PEST_RES_LINKED_LEGISLATION	VARCHAR2(100 CHAR)	Legislation linked to the pesticide residue
PEST_RES_LINKED_LEGISLATION_URL	VARCHAR2(200 CHAR)	URL of the legislation linked to the pesticide residue
PEST_RES_MRL_WEBPAGE	VARCHAR2(160 BYTE)	Pesticide residue webpage link on the EU Pesticides database

#### 2.1.4. Cardinality within the flat file



## 2.2. Pesticides residues and MRLs download

### 2.2.1. Access URL

[https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/pesticide\\_residue\\_s\\_mrls/download?language={language}&format\]&api-version=v1.0](https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/pesticide_residue_s_mrls/download?language={language}&format]&api-version=v1.0)

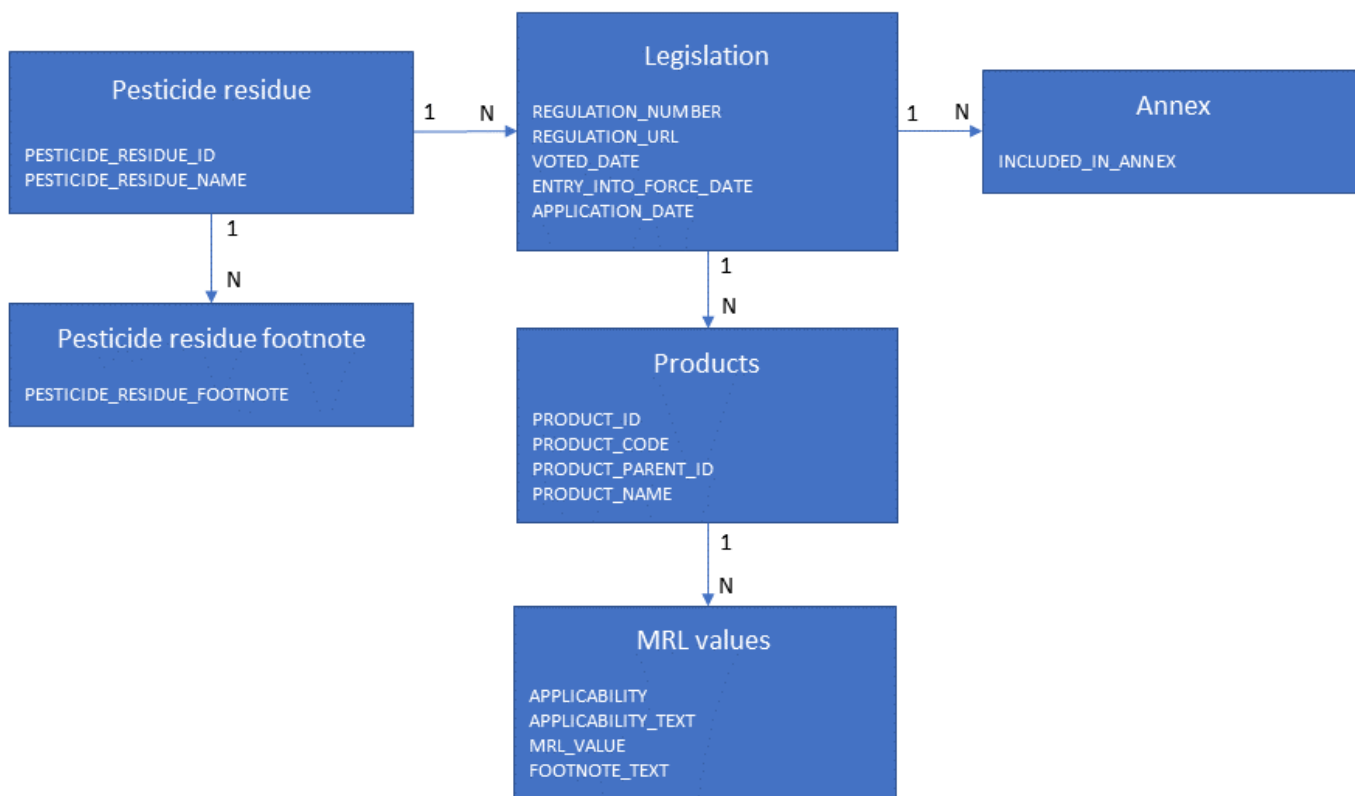
### 2.2.2. API Parameters

Name	Required	Type	Example	Description
Format	false	string	json	Format of the output (json or csv)
Language	true	string	EN	Language of the output (BG, CS, DA, DE, EL, EN, ES, ET, FI, FR, HR, HU, IT, LG, LT, LV, MT, NL, PL, PT, RO, SK, SL, SV)

### 2.2.3. Pesticides residues and MRLs Data Dictionary

Field	Type	Description
PESTICIDE_RESIDUE_ID	NUMBER(10,0)	Pesticide residue ID
PESTICIDE_RESIDUE_NAME	VARCHAR2(4000 BYTE)	Pesticide residue name
PESTICIDE_RESIDUE_FOOTNOTE	VARCHAR2(1014 CHAR)	Pesticide residue footnote
INCLUDED_IN_ANNEX	VARCHAR2(50 CHAR)	Include in Annex
REGULATION_NUMBER	VARCHAR2(100 BYTE)	Regulation reference
REGULATION_URL	VARCHAR2(200 CHAR)	Regulation URL
VOTED_DATE	VARCHAR2(10 BYTE)	Date of legislation vote
ENTRY_INTO_FORCE_DATE	VARCHAR2(10 BYTE)	Date of entry into force of the legislation
APPLICATION_DATE	VARCHAR2(10 BYTE)	Application date
PRODUCT_ID	NUMBER	Product ID
PRODUCT_CODE	VARCHAR2(7 CHAR)	Product code
PRODUCT_PARENT_ID	NUMBER	Product parent ID
PRODUCT_NAME	VARCHAR2(500 CHAR)	Product name
APPLICABILITY	NUMBER	Applicability code number: 0: used for future MRL values 1: used for applicable MRL values 2: used for previous MRL values
APPLICABILITY_TEXT	VARCHAR2(20 BYTE)	Applicability text
MRL_VALUE	VARCHAR2(15 BYTE)	MRL value in mg/Kg
FOOTNOTE_TEXT	VARCHAR2(4000 BYTE)	MRL value footnote

#### 2.2.4. Cardinality within the flat file



### 3. APIs TO BE USED MACHINE-TO-MACHINE

#### 3.1. Active substances API

##### 3.1.1. Access URL

[https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/active\\_substances?skip={skip}&take={take}&format\[\]={format}&substance\\_id\[\]={substance\\_id}&substance\\_name\[\]={substance\\_name}&substance\\_status\[\]={substance\\_status}&approval\\_date\[\]={approval\\_date}&expiry\\_date\[\]={expiry\\_date}&risk\\_assessment\[\]={risk\\_assessment}&substance\\_category\[\]={substance\\_category}&api-version=v1.0](https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/active_substances?skip={skip}&take={take}&format[]={format}&substance_id[]={substance_id}&substance_name[]={substance_name}&substance_status[]={substance_status}&approval_date[]={approval_date}&expiry_date[]={expiry_date}&risk_assessment[]={risk_assessment}&substance_category[]={substance_category}&api-version=v1.0)

##### 3.1.2. API Parameters

Name	Required	Type	Example	Description
Skip	TRUE	number	0	Skip the first amount of results given. This is used to apply filtering.
Take	TRUE	number	100	Take the amount of results given. This is used to apply pagination.
Format	FALSE	string	json	Format of the output (json or csv)
substance_id	FALSE	number	1	The ID of the substance



substance_name	FALSE	string	Fenhexamid	The name of the substance
substance_status	FALSE	string	Approved	The status of the substance
approval_date	FALSE	string	31/12/2020	The approval date, this needs to be in the following format: dd/MM/yyyy
expiry_date	FALSE	string	31/12/2020	The expiry date, this needs to be in the following format: dd/MM/yyyy
risk_assessment	FALSE	string	EFSA	The risk assessment is done by
substance_category	FALSE	string	FU - Fungicide	The category of the substance

By default, if the format is not specified, the file format will be in JSON. Please note that parameter must be lowercase.

The Active substances dataset is only available in English.

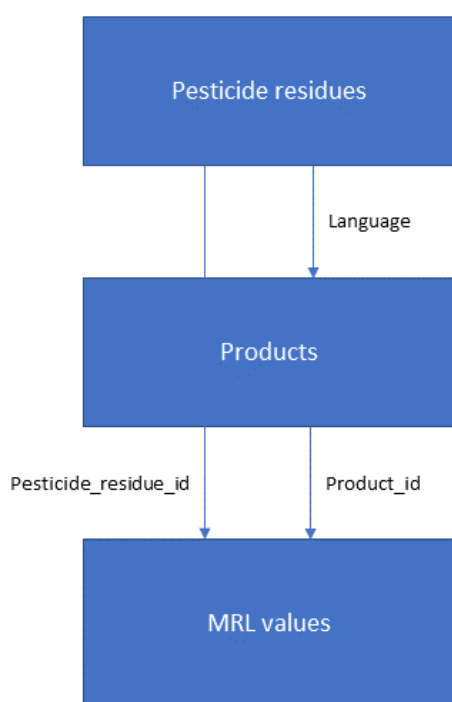
### *3.1.3. Active Substances Data Dictionary*

See point [2.1.3](#)

### 3.2. Data structure pesticide residues, products and MRL values

These APIs are working in 3 steps:

- Get the pesticide residue in the selected language.
- Get the list of food product in the corresponding language.
- Get the MRL values (past, current and future if exist) corresponding to every food product and a selected pesticide residue.



API	Parameter(s)
Get the pesticide residues list	language
Get the specific pesticide residues	Language + pesticide_residue_id

API	Parameter(s)
Get the product list	language
Get one specific product	Language + product_id

API	Parameter(s)
Get the MRL values	Pesticide_residue_id
Get the MRL values for a specific product	Pesticide_residue_id + product_id

### 3.3. Pesticide residues API

#### 3.3.1. Access URL

[https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/pesticide\\_residue\\_s?language={language}&format\[\]={&pesticide\\_residue\\_id}&pesticide\\_residue\\_name\[\]={&pesticide\\_residue\\_footnote\\_code}&api-version=v1.0](https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/pesticide_residue_s?language={language}&format[]={&pesticide_residue_id}&pesticide_residue_name[]={&pesticide_residue_footnote_code}&api-version=v1.0)

### 3.3.2. API Parameters

Name	Required	Type	Description
Language	TRUE	string	Language of the output (BG, CS, DA, DE, EL, EN, ES, ET, FI, FR, HR, HU, IT, LG, LT, LV, MT, NL, PL, PT, RO, SK, SL, SV)
Format	FALSE	string	Format of the output (json or csv)
pesticide_residue_id	FALSE	number	Pesticide residue ID
pesticide_residue_name	FALSE	string	Pesticide residue name
pesticide_residue_footnote_code	FALSE	string	Pesticide residue footnote code

By default, if the format is not specified, the file format will be in JSON. Please note that parameter must be lowercase.

### 3.3.3. Pesticide Residue Data Dictionary

Name	Type	Description
pesticide_residue_id	number	ID of the pesticide residue
pesticide_residue_name	string	Name of the pesticide residue
pesticide_residue_lg	string	Language
pesticide_residue_footnote_code	string	Pesticide residue footnote code
pesticide_residue_footnote_def	string	Pesticide residue footnote definition
pesticide_residue_footnote_txt	string	Pesticide residue footnote text

#### Default JSON

```
{
  "pesticide_residue_id": 0,
  "pesticide_residue_name": "string",
  "pesticide_residue_lg": "string",
  "pesticide_residue_footnote_code": "string",
  "pesticide_residue_footnote_def": "string",
  "pesticide_residue_footnote_txt": "string"
}
```

### 3.4. Pesticide residues products API

#### 3.4.1. Access URL

[https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/pesticide\\_residues\\_products?language={language}&format\]&product\\_id\]&product\\_parent\\_id\]&product\\_code\]&product\\_type\\_id\]&api-version=v1.0](https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/pesticide_residues_products?language={language}&format]&product_id]&product_parent_id]&product_code]&product_type_id]&api-version=v1.0)

#### 3.4.2. API Parameters

Name	In	Required	Type	Example	Description
Language	template	TRUE	string	EN	Language of the output (BG, CS, DA, DE, EL, EN, ES, ET, FI, FR, HR, HU, IT, LG, LT, LV, MT, NL, PL, PT, RO, SK, SL, SV)
Format	query	FALSE	string	json	Format of the output (json or csv)
product_id	query	FALSE	number	1	Product ID
product_parent_id	query	FALSE	number	1	Product parent ID
product_code	query	FALSE	string	110010	Product code
product_type_id	query	FALSE	number	1	Product type ID

By default, if the format is not specified, the file format will be in JSON. Please note that parameter must be lowercase.

#### 3.4.3. Pesticide residues products Data Dictionary

Name	Type	Description
product_id	number	Product ID
product_parent_id	number	Product parent ID, to build the hierarchy
product_code	string	Code of the product
product_lg	string	Language of the product
product_type_id	number	Technical ID usfull to build the product hierarchy
product_name	string	Name of the product
product_scientific_names	string	Scientific names of the product
product_synonym_names	string	Synonyms of the product
product_scientific_synonyms	string	Scientific synonyms of the product

## Default JSON

```
{
  "product_id": 0,
  "product_parent_id": 0,
  "product_code": "string",
  "product_lg": "string",
  "product_type_id": 0,
  "product_name": "string",
  "product_scientific_names": "string",
  "product_synonym_names": "string",
  "product_scientific_synonyms": "string"
}
```

### 3.5. Pesticide residue MRL values API

#### 3.5.1. Access URL

[https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/pesticide\\_residue\\_s\\_mrls\[?format\]\[&pesticide\\_residue\\_id\]\[&product\\_id\]&api-version=v1.0](https://api.datalake.sante.service.ec.europa.eu/sante/pesticides/pesticide_residue_s_mrls[?format][&pesticide_residue_id][&product_id]&api-version=v1.0)

#### 3.5.2. API Parameters

Name	Required	Type	Example	Description
Format	FALSE	string	json	Format of the output (json or csv)
pesticide_residue_id	FALSE	number	1	Pesticide residue ID
product_id	FALSE	number	1	Product ID

#### 3.5.3. Pesticide residue MRL values Data Dictionary

Name	Type	Description
pesticide_residue_id	number	Pesticide residue ID
included_in_annex	number	Include in Annex
regulation_number	string	Regulation reference
regulation_url	string	Regulation URL
voted_date	number	Date of legislation vote
entry_into_force_date	string	Date of entry into force of the legislation
application_date	string	Application date
product_id	number	Product ID
Applicability	number	Applicability code number: 0: used for future MRL values 1: used for applicable MRL values 2: used for previous MRL values
applicability_text	string	Applicability text

mrl_value	string	MRL value in mg/Kg
footnote_text	string	MRL value footnote

## Default JSON

```
{
  "pesticide_residue_id": 0,
  "included_in_annex": 0,
  "regulation_number": "string",
  "regulation_url": "string",
  "voted_date": 0,
  "entry_into_force_date": "string",
  "application_date": "string",
  "product_id": 0,
  "applicability": 0,
  "applicability_text": "string",
  "mrl_value": "string",
  "footnote_text": "string"
}
```

## 4. THE DEVELOPER PORTAL

This portal is dedicated to developers to perform APIs tests.

### 4.1. Access URL

<https://developer.datalake.sante.service.ec.europa.eu/api-details#api=api-SANTE-pesticide-v1-0>