# toxvaldbstage

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Type Package

magrittr, methods, purrr, readr, readxl, stringi,

```
Title Builds the ToxValDB V9.5 Stage Database
Version 9.5
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Description
      ToxValDB is a database containing quantitative records form in vivo toxicology studies from
      many sources. The database has 2 main parts - toxval_source containing
      source data in separate tables, and the main toxval schema which combines data from multi-
      ple sources
      into a single format. This project moves data from toxval_source to toxval.
      Data is read from files or other databases into toxval_source and then pulled
      into toxval where terms are converted to standard values. The ToxValDB SOPs describe in more
      detail how to run the code. This version is setup to build ToxValDB v9.5
Imports DBI,
      RMySQL,
      openxlsx,
      dplyr,
      tidyr,
      stringr,
      tibble,
      janitor,
      XML,
      miniUI,
      RCurl,
      gsubfn,
      textclean,
      RPostgreSQL,
      data.table,
      digest,
      httr,
      isonlite,
```

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tidyselect, writexl
License MIT + file LICENSE
Encoding UTF-8
LazyData true
RoxygenNote 7.3.1
Suggests knitr, rmarkdown
VignetteBuilder knitr

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as_checkSum
-------------

### **Description**

Check CAS RN validity via checksum method

For a suspected CAS RN, determine validity by calculating final digit checksum

#### Usage

```
cas\_checkSum(x, checkLEN = TRUE)
```

#### **Arguments**

x chr. Input vector of values to check. Standard CAS notation using hyphens is

fine, as #' all non-digit characters are stripped for checksum calculation. Each

element of x should contain #' only one suspected CAS RN to check.

checkLEN logi. Should the function check that the non-digit characters of x are at least 4,

but no #' more than 10 digits long? Defaults to TRUE. #'

#### **Details**

This function performs a very specific type of check for CAS validity, namely whether the final digit checksum follows the CAS standard. By default, it also ensures that the digit length is compatible with CAS standards. It does nothing more.

This means that there is no check for valid CAS format. Use the cas\_detect function to check CAS format beforehand, or write your own function if necessary.

# Value

A logical vector of length x denoting whether each x is a valid CAS by the checksum method. NA input values will remain NA.

#### Note

This is a vectorized, reasonably high-performance version of the is.cas function found in the webchem package. The functionality encompasses only the actual checksum checking of webchem::is.cas; as mentioned in details, use cas\_detect to recreate the CAS format + checksum checking in webchem::is.cas. See examples.

Short of looking up against the CAS registry, there is no way to be absolutely sure that even inputs that pass the checksum test are actually registered CAS RNs. The short digit length of CAS IDs combined with the modulo 10 single- digit checksum means that even within a set of randomly generated validly-formatted CAS entities,  $\sim 10\%$  will pass checksum.

### See Also

```
str_detect, str_pad
```

chem.check.v2 5

#### **Examples**

```
cas_good <- c("71-43-2", "18323-44-9", "7732-18-5") #benzene, clindamycin, water cas_bad <- c("61-43-2", "18323-40-9", "7732-18-4") #single digit change from good cas_checkSum(c(cas\_good, cas\_bad))
```

chem.check.v2

chem.check.v2

#### **Description**

Check the chemicals from a file Names with special characters are cleaned and trimmed CASRN are fixed (dashes put in, trimmed) and check sums are calculated The output is sent to a file called chemcheck.xlsx in the source data file One option for using this is to edit the source file until no errors are found

### Usage

```
chem.check.v2(res0, source = NULL, verbose = FALSE)
```

#### **Arguments**

res0 The data frame in which chemicals names and CASRN will be replaced

source The source to be processed. If source=NULL, process all sources

verbose If TRUE, print diagnostic messages

# **Details**

**DETAILS** 

#### Value

Return a list with fixed CASRN and name and flags indicating if fixes were made: res0=res0,name.OK=name.OK,casrn.C

#### See Also

[stri\_escape\_unicode][stringi::stri\_escape\_unicode] [str\_replace\_all][stringr::str\_replace\_all], [str\_squish][stringr::str\_select][dplyr::rowwise], [mutate][dplyr::mutate], [ungroup][dplyr::ungroup], [filter][dplyr::filter], [select][dplyr::select], [rename][dplyr::rename], [distinct][dplyr::distinct] [separate][tidyr::separate] [write\_xlsx][write\_xlsx]

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

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```
clean.last.character clean.last.character
```

# Description

Clean unneeded characters from the end of a string

### Usage

```
clean.last.character(x)
```

# Arguments

Χ

String to be cleaned

### **Details**

**DETAILS** 

### Value

The cleaned string

# See Also

```
str_trim
```

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
{\tt convert.fields.to.json}
```

convert.fields.to.json

# Description

Combine non-ID columns from audit table into JSON format for audit storage

# Usage

```
convert.fields.to.json(in_dat)
```

# **Arguments**

in\_dat

data to translate to JSON format

```
create_source_table_SQL
```

#### **Details**

**DETAILS** 

### Value

Values in JSON format

### See Also

```
summarise, select, bind toJSON, fromJSON
```

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
create_source_table_SQL
```

 $create\_source\_table\_SQL$ 

# Description

Input source data is used to generate the SQL for the source's toxval\_source table. SQL is based off a generic SQL file

# Usage

```
create_source_table_SQL(
   source,
   res,
   src_version,
   db,
   do.halt = TRUE,
   verbose = FALSE
)
```

# Arguments

```
source name of the source being processed
res input dataframe of source data
src_version Version date of the source
db version of toxval_source to use
do.halt if TRUE, halt on errors or warnings
verbose if TRUE, print diagnostic information
```

#### **Details**

**DETAILS** 

### Value

New SQL table as a tibble

#### See Also

```
str_trim
```

# **Examples**

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

DAT.pipe.source.audit DAT.pipe.source.audit

### **Description**

Processes DAT QC audit information into database

#### Usage

```
DAT.pipe.source.audit(
   source_table,
   db,
   live_df,
   audit_df,
   hashing_type = "vectorized"
)
```

### **Arguments**

source\_table name of ToxVal source table audit information is associated with

db the name of the database

live\_df a filepath to the DAT live data to push to the 'source' table audit\_df a filepath to the DAT audit data to push to source\_audit #'

hashing\_type character string of 'vectorized' or 'base' representing which source\_hash gener-

ation approach to use for the data based on how the original source was hashed.

# **Details**

**DETAILS** 

#### Value

None

#### See Also

```
read_excel rename, mutate, mutate-joins, select, filter reexports write_xlsx
```

### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
\label{lineage_sync_clowder_metadata} doc\_lineage\_sync\_clowder\_metadata
```

# Description

Utility script to sync the Clowder metadata to the database based on Clowder ID

# Usage

```
doc_lineage_sync_clowder_metadata(
  source_table,
  db,
  clowder_url,
  clowder_api_key,
  batch_size = 100,
  dsID = "5e31dc1e99323f93a9f5cec0"
)
```

### **Arguments**

```
source_table
                The source table name (e.g. source_test)
db
                the name of the database
clowder_url
                URL to Clowder
clowder_api_key
                API key to access Clowder resources
                PARAM_DESCRIPTION, Default: 250
batch_size
dsID
                Clowder Dataset ID
baseurl
                PARAM_DESCRIPTION
                PARAM_DESCRIPTION
apiKey
```

### **Details**

**DETAILS** 

#### Value

Clowder metadata

#### See Also

```
GET, add_headers, content toJSON, fromJSON nest, reexports filter, mutate, select, bind keep str_replace, str_trim
```

### **Examples**

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

### **Description**

Export XLSX files by source for chemical curation

### Usage

```
export_chemicals_to_curate(db, export_all = FALSE)
```

### **Arguments**

db Version of toxval\_source to use
export\_all Whether to export all chemicals, Default: FALSE

### **Details**

**DETAILS** 

# Value

None

#### See Also

```
[separate][tidyr::separate] [bind_rows][dplyr::bind_rows], [filter][dplyr::filter], [select][dplyr::select], [mutate][dplyr::mutate], [rowwise][dplyr::rowwise], [case_when][dplyr::case_when], [ungroup][dplyr::ungroup], [group_split][dplyr::group_split] [read_xlsx][read_xlsx] [write_xlsx][write_xlsx]
```

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### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

fix.casrn

fix.casrn

# Description

Fix a CASRN that has one of several problems

# Usage

```
fix.casrn(casrn, cname = "", verbose = FALSE)
```

# Arguments

casrn Input CASRN to be fixed
cname An optional chemical name
verbose if TRUE, print the input values

# **Details**

**DETAILS** 

# Value

the fixed CASRN

### See Also

reexports

```
## Not run:
if(interactive()){
  fix.casrn("107028")
  # Expected output "107-02-8"
}
## End(Not run)
```

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```
fix.non_ascii.v2 fix.non_ascii.v2
```

### **Description**

Flag and fix non-ascii characters in the database

### Usage

```
fix.non_ascii.v2(df, source)
```

# Arguments

df The dataframe to be processed

source Current ToxVal source
The source to be fixed

### **Details**

**DETAILS** 

### Value

The dataframe with non ascii characters replaced with cleaned versions

#### See Also

```
read.xlsx, write.xlsx str_trim stri_escape_unicode
```

# **Examples**

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

fix.replace.unicode fix.replace.unicode

# Description

A function to check all character fields and handle unicode symbols, either by removing them or replacing them with alphabetic equivalents.

### Usage

```
fix.replace.unicode(df)
```

### **Arguments**

df

Character vector to check/replace unicode symbols.

#### **Details**

**DETAILS** 

#### Value

Returns a modified version of the input vector with unicode replacements.

#### See Also

```
[stri_escape_unicode][stringi::stri_escape_unicode] [str_extract][stringr::str_extract]
```

### **Examples**

```
## Not run:
if(interactive()){
   #EXAMPLE1
  }
## End(Not run)
```

# Description

get chemical info from source db tables

#### Usage

```
get.chemical.info.by.source(source.db, source_table, source, file_id)
```

#### **Arguments**

source.db The version of toxval source to use.

source\_table The name of toxval source table to use.

The name of toxval source to use.

file\_id The suffixed 5 digit identifiers specified in the file names in the folder ./chemi-

cal\_mapping/source\_chemical\_files

### **Details**

**DETAILS** 

#### Value

database info collected

### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

# Description

get chemical info from source db tables for curation, create chemical table to map curated chemicals to.

#### Usage

```
get.chemical.info.by.source.combined(source.db, source_table, source)
```

# **Arguments**

source.db The version of toxval source to use.

source\_table The name of toxval source table to use.

source The name of toxval source to use.

### **Details**

**DETAILS** 

#### Value

database info collected

# See Also

```
bind, mutate, context
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

get.num.decimal.count 15

```
get.num.decimal.count get.num.decimal.count
```

### **Description**

A function count the length of an input numeric and its decimal places

# Usage

```
get.num.decimal.count(in_num)
```

### **Arguments**

in\_num

PARAM\_DESCRIPTION

### **Details**

**DETAILS** 

# Value

Returns a dataframe of the length of the numeric and decimal places

#### See Also

```
str_count
```

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

getDBConn

getDBConn

# Description

Get the names the database server, user, and pass or returns error message

# Usage

```
getDBConn()
```

### **Details**

**DETAILS** 

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### Value

print the database connection information

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

 ${\tt getPSQLDBConn}$ 

getPSQLDBConn

# Description

Get the names the database server, user, and pass or returns error message

# Usage

```
getPSQLDBConn()
```

# **Details**

**DETAILS** 

# Value

print the database connection information

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

import.driver 17

import.driver

import.driver

# Description

Function to run all import scripts to fill toxval\_source

# Usage

```
import.driver(db, chem.check.halt = FALSE, do.clean = FALSE)
```

# Arguments

db The version of toxval\_source into which the source is loaded.

chem.check.halt

PARAM\_DESCRIPTION, Default: FALSE

do.clean If TRUE, delte data from all tables before reloading

chem.chek.halt If TRUE and there are bad chemical names or casrn, #' stop to look at the results

in indir/chemcheck.xlsx

# **Details**

**DETAILS** 

# Value

None

### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

import.dup.log.info

FUNCTION\_TITLE

### **Description**

FUNCTION\_DESCRIPTION

### Usage

```
import.dup.log.info(db, dups_log_file = "True_Duplicate_for_DAT.xlsx")
```

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### **Arguments**

```
db The version of toxval into which the source info is loaded.

dups_log_file The name of the duplicates log file to load
```

# **Details**

#' Data Profiling Dups Log Load Source Info into toxval source. The information is in the file ./data\_profile/data\_profile\_files/data\_profiling\_dups\_log3.xlsx

**DETAILS** 

### Value

```
OUTPUT_DESCRIPTION
```

### See Also

[read\_xlsx][readxl::read\_xlsx] [separate\_rows][tidyr::separate\_rows], [unite][tidyr::unite] [filter][dplyr::filter], [select][dplyr::select]

### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
}
## End(Not run)
```

import\_actor\_source

FUNCTION\_TITLE

# Description

Extract ACToR1 data to toxval source

### Usage

```
import_actor_source(toxval.db, infile, filepath, verbose = F)
```

# Arguments

toxval.db	The version of toxval source into which the tables are loaded.
infile	The input file ./ACToR replacements/ACToR_2021/assay_table_hazard prioritized for use.xlsx
filepath	The path for all the input xlsx files ./ACToR replacements/ACToR_2021
verbose	Whether the loaded rows should be printed to the console.
do.init	if TRUE, read the data in from the res_actor_2021q4 database and set up the matrix

#### **Details**

**DETAILS** 

#### Value

OUTPUT\_DESCRIPTION

### See Also

```
read.xlsx, write.xlsx str_replace group_by, select, mutate-joins, mutate_all spread
aggregate, na.fail
```

# **Examples**

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

# Description

Load ATSDR PFAS 2021 data to toxval\_source

# Usage

```
import_atsdr_pfas_2021_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

### **Arguments**

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

# **Details**

**DETAILS** 

#### Value

None; data is pushed to ToxVal

#### See Also

read\_excel remove\_empty bind\_rows, summarise, mutate, arrange, distinct, case\_when,
select, group\_by separate\_rows, separate, pivot\_longer, drop\_na str\_trim, str\_extract,
str\_replace enframe all\_of

# **Examples**

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

```
import_copper_source import_copper_source
```

### **Description**

Load Copper Manufacturers data into toxval\_source

### Usage

```
import_copper_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,
```

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

#### **Details**

**DETAILS** 

### Value

None; data is pushed to toxval\_source

#### See Also

```
read_excel rename, mutate, row_number, case_when, filter, select, bind_rows, distinct
drop_na, separate str_extract, str_trim
```

### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
import_dod_ered_source
```

import\_dod\_ered\_source

# Description

Load DOD ERED data into toxval\_source

### Usage

```
import_dod_ered_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

### **Arguments**

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before do.insert If TRUE, insert data into the database, default FALSE

#### **Details**

**DETAILS** 

#### Value

None; the script sends data to toxval\_source

### See Also

```
{\tt read\_excel\,mutate, across, reexports, case\_when, rename, distinct\,str\_extract, str\_trim\,replace\_na, drop\_na}
```

### **Examples**

```
## Not run:
if(interactive()){
   #EXAMPLE1
  }
## End(Not run)
```

import\_dod\_meg\_source import\_dod\_meg\_source

# Description

Load DOD MEG to toxval\_source.

### Usage

```
import_dod_meg_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# **Arguments**

db The version of toxval\_source into which the source is loaded. chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before do.insert If TRUE, insert data into the database, default FALSE

**Details** 

**DETAILS** 

### Value

None. Data is processed into the database

### See Also

read\_excel mutate, case\_when, distinct str\_trim unite

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

### **Description**

Load DOE Wildlife Benchmarks data into toxval\_source

#### Usage

```
import_doe_benchmarks_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

#### **Arguments**

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

### **Details**

**DETAILS** 

### Value

None; data is pushed to toxval\_source

# See Also

```
read_excel mutate, row_number, select, rename, bind_rows, across, case_when, distinct str_trim, str_extract reexports, pivot_longer, drop_na, separate
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
import\_doe\_lanl\_ecorisk\_source \\ import\_doe\_lanl\_ecorisk\_source
```

### **Description**

Import doe\_lanl\_ecorisk source into ToxVal

#### Usage

```
import_doe_lanl_ecorisk_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

### Arguments

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before do.insert If TRUE, insert data into the database, default FALSE

# **Details**

**DETAILS** 

### Value

OUTPUT\_DESCRIPTION

# See Also

```
\label{longer} read\_excel\ str\_trim,\ str\_remove\ fixed,\ str\_squish\ pivot\_longer\ mutate,\ distinct,\ rename\ all\_of
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

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```
import_doe_pac_source import_doe_pac_source
```

### **Description**

Load DOE Source into toxval\_source

# Usage

```
import_doe_pac_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE, stop if there are problems with the chemical mapping

do.reset PARAM_DESCRIPTION, Default: FALSE

do.insert PARAM_DESCRIPTION, Default: FALSE
```

### **Details**

**DETAILS** 

### Value

OUTPUT\_DESCRIPTION

#### See Also

[read\_xlsx][readxl::read\_xlsx] [str\_squish][stringr::str\_squish], [str\_extract\_all][stringr::str\_extract\_all] [mutate][dplyr::mutate], [across][dplyr::across], [rename][dplyr::rename], [select][dplyr::select], [rowwise][dplyr::rowwise], [ungroup][dplyr::ungroup] [pivot\_longer][tidyr::pivot\_longer]

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

26 import\_efsa\_source

import\_doe\_source

 $FUNCTION\_TITLE$ 

### **Description**

Load doe Source into dev\_toxval\_source\_v4.

# Usage

```
import_doe_source(toxval.db, infile)
```

# **Arguments**

toxval.db The version of toxval into which the source is loaded. infile The input file ./doe/doe\_files/Revision\_29.xlsx

#### **Details**

**DETAILS** 

#### Value

OUTPUT\_DESCRIPTION

#### See Also

```
read.xlsx distinct, filter-joins
```

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

import\_efsa\_source

FUNCTION\_TITLE

### **Description**

Import of EFSA OpenFoodTox 2022 source into toxval\_source

### Usage

```
import_efsa_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

### **Arguments**

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before do.insert If TRUE, insert data into the database, default FALSE

### **Details**

**DETAILS** 

#### Value

OUTPUT\_DESCRIPTION

### See Also

read\_excel str\_trim rename, mutate, recode, across, select, distinct separate, reexports

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

import\_envirotox\_source

FUNCTION\_TITLE

### **Description**

Load EnviroTox.V2 Source data into dev\_toxval\_source\_v4.

### Usage

```
import_envirotox_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

#### **Arguments**

toxval.db The version of toxval into which the source info is loaded.

infile The input file ./envirotox/envirotox\_files/envirotox\_taxonomy.xlsx

#### **Details**

**DETAILS** 

#### Value

OUTPUT\_DESCRIPTION

#### See Also

```
read.xlsx
```

#### **Examples**

```
## Not run:
if(interactive()){
   #EXAMPLE1
  }
## End(Not run)
```

import\_envirotox\_source

import\_envirotox\_source

# **Description**

Load EnviroTox.V2 Source data into toxval\_source

# Usage

```
import_envirotox_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE, stop if there are problems with the chemical mapping

do.reset If TRUE, delete data from the database for this source before inserting new data

do.insert If TRUE, insert data into the database, default FALSE

### **Details**

**DETAILS** 

### Value

None; data is loaded into toxval\_source

import\_flex\_source 29

#### See Also

```
read_excel mutate-joins, mutate, na_if, case_when str_match, str_trim
```

### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

import\_flex\_source

FUNCTION\_TITLE

### **Description**

Load the FLEX data (old ACToR data) from files to toxval source. This will load all Excel file in the folder ACToR replacements/

# Usage

```
import_flex_source(
  db,
  filepath = "ACTOR replacements",
  verbose = F,
  chem.check.halt = F,
  do.clean = F
```

# Arguments

db The version of toxval\_source into which the tables are loaded.

filepath The path for all the input xlsx files ./ACToR replacements

verbose Whether the loaded rows should be printed to the console.

chem.check.halt

If TRUE and there are problems with chemicals CASRN checks, halt the pro-

gram

do.clean If true, remove data for these sources before reloading

#### **Details**

**DETAILS** 

#### Value

OUTPUT\_DESCRIPTION

#### See Also

```
read.xlsx
```

### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

 ${\tt import\_generic\_source} \quad \textit{FUNCTION\_TITLE}$ 

### **Description**

A generic template for adding data to toxval\_source for a new source
Import FDA CEDI data into source\_fda\_cedi
Import USGS HBSL data into toxval\_source
Import of WHO IPCS data
Import of WHO JECFA ADI data

# Usage

```
import_generic_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
import_source_fda_cedi(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
import_source_usgs_hbsl(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
import_who_ipcs(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
import_source_who_jecfa_adi(
```

```
db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# **Arguments**

db The version of toxval\_source into which the source is loaded. chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

#### **Details**

**DETAILS** 

**DETAILS** 

**DETAILS** 

**DETAILS** 

**DETAILS** 

### Value

OUTPUT\_DESCRIPTION

OUTPUT\_DESCRIPTION

OUTPUT\_DESCRIPTION

None. Data is processed into the toxval\_source database

OUTPUT\_DESCRIPTION

#### See Also

```
read_excel str_trim
read_excel str_trim
read_excel str_trim
read_excel str_trim
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }

## End(Not run)
## Not run:
if(interactive()){
    #EXAMPLE1
    }
```

```
## End(Not run)
## Not run:
if(interactive()){
    #EXAMPLE1
    }

## End(Not run)
## Not run:
if(interactive()){
    #EXAMPLE1
    }

## End(Not run)
## Not run:
if(interactive()){
    #EXAMPLE1
    }

## End(Not run)
## Not run:
if(interactive()){
    #EXAMPLE1
    }

## End(Not run)
```

import\_hawc\_pfas\_source

import\_hawc\_pfas\_source

### **Description**

Load HAWC PFAS data into toxval\_source

### Usage

```
import_hawc_pfas_source(
  db,
  hawc_num = NULL,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# **Arguments**

db The version of toxval\_source into which the source is loaded.

hawc\_num The HAWC number being processed (e.g. 150, 430)

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

# Details

**DETAILS** 

import\_hawc\_source 33

#### Value

None; data is added to toxval\_source

#### See Also

```
read_excel mutate, select, distinct, arrange, count, mutate-joins, filter, rename, case_when
all_of pivot_wider, unite, pivot_longer, separate, drop_na, separate_rows str_trim,
str_detect, str_extract map2 digest
```

### **Examples**

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

import\_hawc\_source

import\_hawc\_source

### **Description**

Load HAWC Project data into toxval\_source

### Usage

```
import_hawc_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

#### **Details**

**DETAILS** 

### Value

None; data is pushed to toxval\_source

#### See Also

```
getSheetNames, read.xlsx select, distinct, mutate, arrange, count, mutate-joins, bind_rows,
context, reexports, across, na_if pivot_wider, unite, reexports, drop_na setops digest
str_extract, str_trim
```

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
import_health_canada_source
```

import\_health\_canada\_source

#### **Description**

Transforms and loads Health Canada data into toxval\_source

### Usage

```
import_health_canada_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

# **Details**

**DETAILS** 

# Value

None; data is pushed to toxval\_source

### See Also

```
read\_excel\ mutate, across, reexports, case\_when, na\_if\ str\_extract, str\_trim, modifiers, str\_count
```

import\_heast\_source 35

#### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

import\_heast\_source

import\_heast\_source

# Description

Load HEAST data into toxval\_source

# Usage

```
import_heast_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

### **Arguments**

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before do.insert If TRUE, insert data into the database, default FALSE

### **Details**

**DETAILS** 

#### Value

None; data is pushed to toxval\_source

#### See Also

```
read_excel filter, select, c("rowwise", "rowwise"), mutate, group_by, na_if, row_number,
rename, bind_rows, case_when all_of, starts_with str_trim, str_extract drop_na
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

36 import\_hpvis\_source

```
import_hpvis_source import_hpvis_source
```

### **Description**

Load HPVIS data into toxval\_source

# Usage

```
import_hpvis_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

### **Arguments**

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE
```

### **Details**

**DETAILS** 

#### Value

None; data is pushed to toxval\_source

### See Also

```
read.xlsx setNames mutate, setops, filter, across, reexports, na_if, case_when, row_number,
select, bind_rows type.convert str_trim, str_replace, str_extract
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

import\_niosh\_source 37

```
import\_niosh\_source \\ import\_niosh\_source
```

# **Description**

Load NIOSH data into toxval\_source

# Usage

```
import_niosh_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE
```

## **Details**

**DETAILS** 

#### Value

None; data is pushed to toxval\_source

#### See Also

```
read_excel mutate, case_when str_trim, str_extract separate, drop_na pivot_longer
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

38 import\_oppt\_source

```
import_oppt_source
```

 $FUNCTION\_TITLE$ 

# Description

```
FUNCTION_DESCRIPTION
```

# Usage

```
import_oppt_source(db, infile = "OPPT_data_20181219.xlsx", chem.check.halt = T)
```

# Arguments

```
db The version of toxval_source into which the source info is loaded. infile The input file ./oppt/oppt_files/OPPT_data_20181219.xlsx chem.check.halt
```

If TRUE, stop if there are problems with the chemical mapping

## **Details**

```
#' Load OPPT Source Info into toxval_source DETAILS
```

## Value

```
OUTPUT_DESCRIPTION
```

#### See Also

```
read.xlsx
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

import\_opp\_source 39

```
import_opp_source
```

import\_opp\_source

## **Description**

Load EPA OPP data to toxval\_source

# Usage

```
import_opp_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

## **Arguments**

db The version of toxval\_source into which the source is loaded. chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.insert If TRUE, insert data into the database, default FALSE

## **Details**

**DETAILS** 

#### Value

None; data is pushed to toxval\_source

## See Also

```
read\_excel\ pivot\_longer,\ separate\ filter,\ mutate,\ row\_number,\ case\_when,\ select,\ bind\_rows\ str\_trim,\ str\_extract
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

```
import\_ow\_dwsha\_source \\ import\_ow\_dwsha\_source
```

Load OW Drinking Water Standards data into toxval\_source

#### Usage

```
import_ow_dwsha_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

## **Arguments**

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

# **Details**

**DETAILS** 

## Value

None; data is added to toxval\_source

# See Also

```
{\tt read\_excel\ mutate,\ case\_when,\ filter,\ row\_number,\ bind\_rows\ separate,\ pivot\_longer\ str\_trim}
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

Load PFAS 150 SEM V2 Source data into toxval\_source

## Usage

```
import_pfas_150_sem_v2_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# **Arguments**

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE
```

#### **Details**

**DETAILS** 

## Value

None; data is pushed to toxval\_source

# See Also

```
read_excel str_trim
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

42 import\_rsl\_source

## **Description**

Import of RSL 2023 source into toxval\_source

## Usage

```
import_rsl_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

## **Arguments**

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset PARAM_DESCRIPTION, Default: FALSE

do.insert PARAM_DESCRIPTION, Default: FALSE

infile1 The input file ./rsl/rsl_files/rsl_thq10_nov_2022.xlsx

infile2 The input file ./rsl/rsl_files/rsl_thq01_nov_2022.xlsx

infile3 The input file ./rsl/rsl_files/rsl_subchronic_nov_2022.xlsx
```

## **Details**

**DETAILS** 

#### Value

None; data is sent to toxval\_source

### See Also

```
read_excel bind_rows, mutate_all, mutate, na_if, across, reexports, case_when unite,
pivot_longer, separate, drop_na str_trim
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
import\_source\_atsdr\_mrls \\ import\_source\_astdr\_mrls
```

Send ASTDR MRLs data to toxval\_source

# Usage

```
import_source_atsdr_mrls(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE,
  do.toxicological_profile = FALSE)
```

# **Arguments**

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

do.toxicological_profile

If TRUE, add toxicological profile data to table before insertion
```

# Details

**DETAILS** 

## Value

None; data is pushed to toxval\_source

# See Also

```
read_excel separate mutate, case_when str_trim
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

```
import_source_caloehha
```

import\_source\_caloehha

## **Description**

Load caloehha Source file into toxval\_source The raw data can be exported as an Excel sheet from the web site https://oehha.ca.gov/chemicals, selecting the link "Export database as .CSV file"

This method parses that file and prepares for loading into toxval source

## Usage

```
import_source_caloehha(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE,
  do.summary_data = FALSE
)
```

## **Arguments**

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are problems with chemicals CASRN checks, halt the pro-

gram

do.reset PARAM DESCRIPTION, Default: FALSE

do.insert PARAM\_DESCRIPTION, Default: FALSE

do.summary\_data

If TRUE, add Cal OEHHA Summary data to table before insertion

 $infile \qquad \qquad The input file = ".../caloehha/caloehha\_files/OEHHA-chemicals\_2018-10-30T08-10-30508-10-30508-10-30508-10-30508-10-30508-10-30508-10-30508-10-30508-10-30508-10-30508-10-30508-10-3008-10-3008-10-3008-10-3008-10-3008-10-3008-10-3008-10$ 

50-47.xlsx",

# **Details**

**DETAILS** 

### Value

None; data is pushed to ToxVal\_Source

#### See Also

```
read.xlsx
```

45

## **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
import_source_cosmos import_source_cosmos
```

# **Description**

Load COSMOS source data into toxval\_source

## Usage

```
import_source_cosmos(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# **Arguments**

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE, stop if there are problems with the chemical mapping

do.reset

If TRUE, delete data from the database for this source before inserting new data

do.insert

If TRUE, insert data into the database, default FALSE
```

# **Details**

**DETAILS** 

#### Value

None; data is loaded into toxval\_source

## See Also

```
read_excel mutate, case_when, filter str_trim separate_rows, drop_na, separate
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

Import EPA AEGL data into toxval\_source

#### Usage

```
import_source_epa_aegl(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

## **Arguments**

```
db PARAM_DESCRIPTION

chem.check.halt

If TRUE, stop if there are problems with the chemical mapping

do.reset PARAM_DESCRIPTION, Default: FALSE

do.insert PARAM_DESCRIPTION, Default: FALSE
```

# **Details**

**DETAILS** 

# Value

OUTPUT\_DESCRIPTION

# See Also

```
read_excel filter, mutate, select, distinct, mutate-joins separate_rows, pivot_longer,
reexports modifiers, str_remove, str_split, str_trim
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
import\_source\_epa\_hhtv \\ import\_source\_epa\_hhtv
```

Push EPA HHTV data to toxval\_source

## Usage

```
import_source_epa_hhtv(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE
```

#### **Details**

**DETAILS** 

## Value

None; data is pushed to toxval\_source

# See Also

```
read_excel str_trim
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
import\_source\_epa\_ow\_npdwr \\ FUNCTION\_TITLE
```

FUNCTION\_DESCRIPTION

#### Usage

```
import_source_epa_ow_npdwr(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

## **Arguments**

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before do.insert If TRUE, insert data into the database, default FALSE

## **Details**

```
#' Import of EPA OW NPDWR source into toxval_source DETAILS
```

# Value

```
OUTPUT_DESCRIPTION
```

## See Also

```
read_excel rename, mutate, across pivot_longer, separate str_trim
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

Import of EPA OW NRWQC-ALC source into toxval\_source

## Usage

```
import_source_epa_ow_nrwqc_alc(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

### **Arguments**

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset PARAM_DESCRIPTION, Default: FALSE

do.insert PARAM_DESCRIPTION, Default: FALSE
```

# **Details**

**DETAILS** 

### Value

OUTPUT\_DESCRIPTION

# See Also

```
read_excel str_trim rename, c("rowwise", "rowwise", "rowwise"), mutate, group_by, across,
case_when pivot_longer, separate, reexports, separate_rows
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
\label{local_import_source_epa_ow_nrwqc_hhc} import\_source\_epa\_ow\_nrwqc\_hhc\\ FUNCTION\_TITLE
```

Import of EPA OW NRWQC-HHC source into toxval\_source

## Usage

```
import_source_epa_ow_nrwqc_hhc(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

### **Arguments**

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.insert If TRUE, insert data into the database, default FALSE

# **Details**

**DETAILS** 

### Value

OUTPUT\_DESCRIPTION

## See Also

```
read_excel rename, mutate, across, c("rowwise", "rowwise", "rowwise") pivot_longer,
reexports, separate str_detect, str_trim
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
import\_source\_epa\_ow\_opp\_alb\\ FUNCTION\_TITLE
```

Import of EPA OW OPP-ALB source into toxval\_source

# Usage

```
import_source_epa_ow_opp_alb(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# **Arguments**

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE
```

## **Details**

**DETAILS** 

## Value

OUTPUT\_DESCRIPTION

# See Also

read\_excel rename, mutate, across reexports, pivot\_longer, separate str\_trim

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

Import GESTIS DNEL into toxval\_source

#### Usage

```
import_source_gestis_dnel(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

#### **Arguments**

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

## **Details**

**DETAILS** 

## Value

OUTPUT\_DESCRIPTION

# See Also

[read\_xlsx][readxl::read\_xlsx] [str\_squish][stringr::str\_squish] [mutate][dplyr::mutate], [across][dplyr::across], [select][dplyr::select], [distinct][dplyr::distinct], [filter][dplyr::filter] [pivot\_longer][tidyr::pivot\_longer]

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

import\_source\_hess 53

```
import_source_hess
```

import\_source\_hess

## **Description**

Load HESS data into toxval\_source

# Usage

```
import_source_hess(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

## **Arguments**

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

## **Details**

**DETAILS** 

#### Value

None; data is pushed to toxval\_source

## See Also

```
read_excel pivot_longer, unite, drop_na mutate, across, reexports, na_if, case_when, tidyeval-compat, select, rename, mutate-joins str_replace, str_trim, case, str_extract
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

54 import\_source\_iris

# Description

```
Import of IRIS 2023-05-09 source into toxval_source
Import PPRTV (CPHEA) source data into toxval_source
```

# Usage

```
import_source_iris(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE,
  do.summary_data = FALSE
)

import_source_pprtv_cphea(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE,
  do.summary_data = FALSE
)
```

## **Arguments**

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset

If TRUE, delete data from the database for this source before

do.insert

If TRUE, insert data into the database, default FALSE

do.summary\_data

If TRUE, add PPRTV CPHEA Summary data to table before insertion

## **Details**

DETAILS DETAILS

#### Value

```
None; data is pushed to toxval_source
None; data is pushed to toxval_source
```

import\_source\_iuclid 55

#### See Also

```
read_excel mutate, filter, select, across, rename, c("rowwise", "rowwise", "rowwise"), distinct pivot_longer, reexports, separate, replace_na str_trim, str_replace, str_extract read_excel pivot_longer, reexports, separate, replace_na, drop_na mutate, across, case_when, select, reexports, distinct str_trim, str_extract all_of
```

## **Examples**

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }

## End(Not run)
## Not run:
if(interactive()){
    #EXAMPLE1
    }

## End(Not run)
```

import\_source\_iuclid import\_source\_iuclid

## **Description**

Import IUCLID data to ToxVal Source

#### Usage

```
import_source_iuclid(
  db,
  subf,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

#### **Arguments**

db The version of toxval\_source into which the source is loaded.

subf The subfolder containing the IUCLID subsource

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

# Details

**DETAILS** 

#### Value

None; data is pushed to toxval\_source

#### See Also

read\_excel filter, group\_by, mutate, row\_number, context, case\_when, pull, rename, select
separate\_rows, reexports, separate, unite, pivot\_longer, pivot\_wider, drop\_na str\_trim,
str\_extract, modifiers str\_detect str\_split str\_unique mgsub

## **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
import\_source\_iuclid\_orchestrate \\ import\_source\_iuclid\_orchestrate
```

## **Description**

Load the various IUCLID subsources into ToxVal

# Usage

```
import_source_iuclid_orchestrate(
  dir = paste0(toxval.config()$datapath, "iuclid")
)
```

# Arguments

dir directory containing the various IUCLID subsource subdirectories

db The version of toxval\_source into which the source is loaded.

do.insert If TRUE, insert data into the database, default TRUE

chem.check.halt

If TRUE, stop the execution if there are errors in the

## **Details**

**DETAILS** 

## Value

None, subsources loaded

## **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
{\tt import\_source\_mass\_mmcl}
```

import\_source\_mass\_mmcl

# Description

Load Mass. Drinking Water Standards into toxval\_source

# Usage

```
import_source_mass_mmcl(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE, stop if there are problems with the chemical mapping

do.reset If TRUE, delete data from the database for this source before inserting new data

do.insert If TRUE, insert data into the database, default FALSE

# **Details**

**DETAILS** 

# Value

None; data is loaded into toxval\_source

## See Also

```
read_excel mutate, across, reexports, rename, coalesce, filter, case_when reexports
pivot_longer, drop_na, separate str_match, str_trim
```

## **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
import_source_ntp_pfas
.
```

import\_source\_ntp\_pfas

# Description

A function for adding source NTP PFAS data to toxval\_source

# Usage

```
import_source_ntp_pfas(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

db The version of toxval\_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALSE

# **Details**

**DETAILS** 

# Value

None; data is pushed to toxval\_source

## See Also

```
read_excel rename, mutate, across, bind_rows, distinct, c("rowwise", "rowwise"), select, filter, mutate-joins, case_when pivot_longer, separate, unite, drop_na str_trim, str_extract
```

#### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

## **Description**

Load Pennsylvania DEP MCLs into toxval\_source

## Usage

```
import_source_penn_dep_mcls(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset

If TRUE, delete data from the database for this source before

do.insert

If TRUE, insert data into the database, default FALSE
```

## **Details**

**DETAILS** 

## Value

None; data is loaded to MySQL server

# See Also

```
read_excel mutate, case_when, distinct str_trim unite, pivot_longer, separate
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
}
## End(Not run)
```

```
import\_source\_penn\_dep\_tox values \\ import\_source\_penn\_dep\_tox values
```

Load Penn DEP ToxValues Source into toxval\_source

## Usage

```
import_source_penn_dep_toxvalues(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# Arguments

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE, stop if there are problems with the chemical mapping

do.reset If TRUE, delete data from the database for this source before inserting new data

do.insert If TRUE, insert data into the database, default FALSE
```

#### **Details**

**DETAILS** 

## Value

None; data is loaded into toxval\_source

# See Also

```
read_excel mutate, filter, case_when str_trim unite, pivot_longer, separate
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

Import of WHO JECFA Tox Studies data

## Usage

```
import_source_who_jecfa_tox_studies(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

# **Arguments**

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE and there are bad chemical names or casrn,

do.reset If TRUE, delete data from the database for this source before

do.insert If TRUE, insert data into the database, default FALS
```

#### **Details**

**DETAILS** 

## Value

None; data is pushed to toxval\_source

# See Also

```
read_excel mutate, case_when, filter separate_rows str_trim str_extract
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

62 import\_test\_source

```
import_test_source
```

## **Description**

Load TEST Source data into toxval\_source

# Usage

```
import_test_source(
  db,
  chem.check.halt = FALSE,
  do.reset = FALSE,
  do.insert = FALSE
)
```

## **Arguments**

```
db The version of toxval_source into which the source is loaded.

chem.check.halt

If TRUE, stop if there are problems with the chemical mapping

do.reset If TRUE, delete data from the database for this source before inserting new data

do.insert If TRUE, insert data into the database, default FALSE
```

# Details

**DETAILS** 

## Value

None; data is loaded into toxval\_source

## See Also

```
read_excel read.table select, mutate-joins, join_by, mutate, case_when str_trim pivot_longer,
drop_na
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

init.audit.table 63

init.audit.table

init.audit.table

# Description

Create audit table and add BEFORE UPDATE audit triggers to source\_\* tables
Create audit table and add BEFORE UPDATE audit triggers to source\_\* tables

List of current field names in source table

# Usage

```
init.audit.table(db, do.halt = FALSE, verbose = FALSE)
```

## **Arguments**

db the name of the database
do.halt if TRUE, halt on errors or warnings
verbose if TRUE, print diagnostic information
s\_tbl Source table name to apply changes to

## **Details**

**DETAILS** 

 $field\_list$ 

#### Value

None

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
initialize\_source\_iuclid\_directory \\ FUNCTION\_TITLE
```

# Description

Initialize Source IUCLID Directory into subdirectory based on input files

## Usage

```
initialize_source_iuclid_directory()
```

parse\_sql\_file

## **Details**

**DETAILS** 

#### Value

None, file directory structure generated

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

parse\_sql\_file

parse\_sql\_file

# Description

Function to parse SQL file into SQL query strings

# Usage

```
parse_sql_file(filepath = NULL)
```

# Arguments

filepath

Input SQL filepath

# **Details**

**DETAILS** 

#### Value

SQL query strings

## See Also

```
read_lines str_trim
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

prep.DAT.conversion 65

```
prep.DAT.conversion prep.DAT.conversion
```

# Description

Select and rename DAT audit columns for toxval\_source, calculate new source\_hash

## Usage

```
prep.DAT.conversion(in_dat = NULL, hash_id_list = NULL, hashing_type = "base")
```

## **Arguments**

```
in_dat Input DAT data
hash_id_list List of hash values to keep
```

## **Details**

**DETAILS** 

#### Value

Updated DAT tibble

#### See Also

rename, select, mutate unite, reexports map

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

printCurrentFunction printCurrentFunction

# Description

Print the name of the current function

# Usage

```
printCurrentFunction(comment.string = NA)
```

# **Arguments**

comment.string An optional string to be printed

#### **Details**

**DETAILS** 

#### Value

None

#### See Also

flush.console

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
qc_prescreening_summary
```

qc\_prescreening\_summary

## **Description**

Runs a database query and returns a result set

#### Usage

```
qc_prescreening_summary(
   src_tbl = NULL,
   source_name = NULL,
   outputDir = NULL,
   db = NULL
)
```

# Arguments

src\_tbl a toxval source table name.

source\_name a toxval source name (used for direct load types).

outputDir optional directory path to save output file in.

db the name of the database.

# **Details**

**DETAILS** 

## Value

Result set of QC prescreenig information

runInsert 67

#### See Also

```
pivot_longer reexports, group_by, summarise write_xlsx
```

## **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

runInsert

runInsert

## **Description**

Insert a record into a database. if auto.increment=TRUE, return the auto incremented primary key of the record. otherwise, return -1

## Usage

```
runInsert(query, db, do.halt = F, verbose = F, auto.increment.id = F)
```

a properly formatted SQL query as a string

# Arguments

query

```
db the name of the database

do.halt if TRUE, halt on errors or warnings

verbose if TRUE, print diagnostic information

auto.increment.id

PARAM_DESCRIPTION, Default: F

auto.increment if TRUE, add the auto increment primary key even if not part of the query
```

#### **Details**

**DETAILS** 

## Value

Returns the database table auto incremented primary key ID

# See Also

```
character(0), MySQLDriver-class
```

runInsertTable

## **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

runInsertTable

runInsertTable

# Description

Inserts multiple rows into a database table

# Usage

```
runInsertTable(mat, table, db, do.halt = T, verbose = F, get.id = T)
```

# Arguments

ing

#### **Details**

**DETAILS** 

# Value

ID or None

## See Also

```
character(0), MySQLDriver-class
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
}
## End(Not run)
```

runQuery 69

# Description

Runs a database query and returns a result set

# Usage

```
runQuery(query = NULL, db, do.halt = T, verbose = F)
```

# Arguments

query a properly formatted SQL query as a string

db the name of the database

do.halt if TRUE, halt on errors or warnings

verbose if TRUE, print diagnostic information

# **Details**

**DETAILS** 

# Value

Query results

## See Also

```
character(0), MySQLDriver-class flush.console
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

70 runQuery\_psql

runQuery\_psql

runQuery\_psql

# Description

Runs a PSQL database query and returns a result set

# Usage

```
runQuery_psql(query, db, do.halt = T, verbose = T)
```

# Arguments

query a properly formatted SQL query as a string

db the name of the database

do.halt if TRUE, halt on errors or warnings

verbose if TRUE, print diagnostic information

# **Details**

**DETAILS** 

## Value

Query results

## See Also

```
character(0) PostgreSQL dbGetQuery
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

runStatement 71

runStatement runStatement

# Description

Run a SQL statement, such as an ALTER or UPDATE

# Usage

```
runStatement(query, db, do.halt = F, verbose = F)
```

# **Arguments**

query a properly formatted SQL query as a string

db the name of the database

do.halt if TRUE, halt on errors or warnings

verbose if TRUE, print diagnostic information

# **Details**

**DETAILS** 

# Value

None. SQL statement is run.

## See Also

```
character(0), MySQLDriver-class
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

72 runUpdate

runUpdate

runUpdate

## **Description**

Runs a database query and returns a result set

## Usage

```
runUpdate(
  table,
  updateQuery = NULL,
  updated_df = NULL,
  db,
  do.halt = TRUE,
  verbose = FALSE,
  trigger_check = TRUE
)
```

# **Arguments**

table table to update

updateQuery a properly formatted SQL query as a string in the form of an UPDATE INNER

JOIN

updated\_df a dataframe of updated data to temporarily write to database for INNER JOIN

db the name of the database

do.halt if TRUE, halt on errors or warnings verbose if TRUE, print diagnostic information

trigger\_check if FALSE, audit triggers are ignored/bypassed

## **Details**

**DETAILS** 

## Value

None

## See Also

 $character (\tt 0), My SQLDriver-class\ db Send Statement$ 

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

setDBConn 73

setDBConn setDBConn

# Description

set SQL connection to the database

# Usage

```
setDBConn(
   server = "ccte-mysql-res.epa.gov",
   user = NULL,
   password = NULL,
   api_auth = NULL,
   port = 3306
)
```

# Arguments

server SQL server on which relevant database lives
user SQL username to access database
password SQL password corresponding to username
api\_auth API Key for CCTE API's
port Port for the server connection. Default of 3306.

### **Details**

**DETAILS** 

# Value

None

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

setPSQLDBConn

setPSQLDBConn

# Description

```
set PSQL connection to the database
```

# Usage

```
setPSQLDBConn(server, port, user, password, api_auth)
```

### **Arguments**

server SQL server on which relevant database lives

port port to use

user SQL username to access database

password SQL password corresponding to username

api\_auth API Key for CCTE API's

#### **Details**

**DETAILS** 

# Value

None

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
set_clowder_doc_type
set_clowder_doc_type
```

# Description

Update documents table entries "document\_type" field based on Clowder organization

set\_clowder\_doc\_type 75

#### Usage

```
set_clowder_doc_type(
  source_table = NULL,
  source_version_date = NULL,
  clowder_url = NULL,
  clowder_api_key = NULL,
  source.db = NULL,
  ds_id = NULL,
  clowder_id_list = NULL
)
```

### Arguments

# **Details**

DETAILS

#### Value

None. SQL statements are performed.

#### See Also

```
read_excel rename, filter, select, mutate-joins, mutate separate_rows, unite
```

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

Create document records and associations in toxval\_source based on input source table and document map

# Usage

```
set_clowder_id_lineage(
   source_table,
   map_clowder_id_field,
   map_file,
   clowder_url,
   clowder_api_key,
   sync_clowder_metadata = FALSE,
   source.db,
   toxval.db
)
```

### **Arguments**

```
source_table
                 The source table name (e.g. source_test)
map_clowder_id_field
                 Column name for the Clowder ID field of the map
                 A dataframe of Clowder document mapping info. If NULL, will try to load a
map_file
                 hardcoded map for the source
                 URL to Clowder
clowder_url
clowder_api_key
                 API key to access Clowder resources
sync_clowder_metadata
                 Boolean whether to sync Clowder metadata for new document records. Default
                 is False.
source.db
                 The source database name
                 The database version to use
toxval.db
```

#### **Details**

**DETAILS** 

### Value

Returns an updated map with newly associated toxval\_source table ID values

#### See Also

```
read_excel rename, filter, select, mutate-joins, mutate separate_rows, unite
```

set\_field\_SQL\_type 77

### **Examples**

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

```
set_field_SQL_type
```

 $set\_field\_SQL\_type$ 

# Description

Helper function to generate SQL field types based on dataframe field types

# Usage

```
set_field_SQL_type(src_f = NULL, default_fields = NULL)
```

# Arguments

```
src_fDataframe to generate field types fromdefault_fieldsDefault fields already handled by input generic SQL
```

# **Details**

**DETAILS** 

# Value

SQL string for the input dataframe's fields

# See Also

bind

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

78 source.table.to.DAT

```
source.table.to.DAT source.table.to.DAT
```

# Description

Convert toxval source table to DAT format for loading to DAT application

# Usage

```
source.table.to.DAT(source.db, source_table, limit = 1e+06, sample_p = NA)
```

# Arguments

source.db The version of toxval source to use.

source\_table The name of toxval source table to use. If a DataFrame, input data will be #' processing and returned without saving to file.

limit Excel file grouping limit (default is max XLSX row limit)

sample\_p Percentage of records to sample down to

source The name of toxval source to use.

### **Details**

**DETAILS** 

### Value

Processed source table to DAT format cached and returned.

### See Also

```
rename, filter, slice, select pivot_longer, reexports write_xlsx
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
source_chemical.process
source_chemical.process
```

Deal with the process of making the source\_chemical information

# Usage

```
source_chemical.process(
  db,
  res,
  source,
  table,
  chem.check.halt = FALSE,
  casrn.col = "casrn",
  name.col = "name",
  verbose = FALSE
)
```

### **Arguments**

db The version of toxval into which the source info is loaded.

res The input dataframe to which chemical information will be added

source The source to process

table Name of the database table

chem.check.halt

If TRUE, stop if there are problems with the chemical mapping

casrn.col The name of the column containing the CASRN

name . col The name of hte column containing hte chemical name

verbose If TRUE, write out diagnostic messages #'

### **Details**

**DETAILS** 

### Value

Returns the original dataframe with a chemical\_id appended

### See Also

```
unite head digest
```

### **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

source\_hash\_vectorized

source\_hash\_vectorized

### **Description**

Generate the hash key for a source table based on hashing columns Add the hash key to the source tables and add the new rows

#### Usage

```
source_hash_vectorized(res, hashing_cols)

toxval_source.hash.and.load(
    db = "dev_toxval_source_v5",
    source,
    table,
    do.reset = FALSE,
    do.insert = FALSE,
    res,
    hashing_cols = NULL
)
```

# Arguments

res The data frame to be processed

hashing\_cols Optional list of columns to use for generating source\_hash

db The version of toxval\_source into which the source is loaded.

source Name of the source

table Name of the database table

do.reset If TRUE, delete data from the database for this source before #' inserting new

data. Default FALSE

do.insert If TRUE, insert data into the database, default False

### **Details**

**DETAILS** 

**DETAILS** 

source\_prep\_and\_load

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#### Value

Input dataframe with new source\_hash field None

### See Also

```
digest distinct
digest distinct
```

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }

## End(Not run)
## Not run:
if(interactive()){
  #EXAMPLE1
  }

## End(Not run)
```

```
source_prep_and_load source_prep_and_load
```

# Description

Prep the source data aand load

# Usage

```
source_prep_and_load(
  db,
  source,
  table,
  res,
  do.reset = FALSE,
  do.insert = FALSE,
  chem.check.halt = FALSE,
  verbose = FALSE,
  hashing_cols = NULL
)
```

# Arguments

db The version of toxval\_source into which the source is loaded.

source Name of the source

table Name of the database table

82 source\_set\_defaults

res The data frame to be processed

do.reset If TRUE, delete data from the database for this source before #' inserting new

data. Default FALSE

do.insert If TRUE, insert data into the database, default FALSE

chem.check.halt

If TRUE, stop the execution if there are errors in the #' chemical mapping

verbose If TRUE, write out diagnostic messages #'

hashing\_cols Optional list of columns to use for generating source\_hash

#### **Details**

**DETAILS** 

#### Value

None

#### See Also

reexports

# **Examples**

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

source\_set\_defaults source

source\_set\_defaults

# Description

Set default value for NAs - just set NA to "-" for columns of type character

# Usage

```
source_set_defaults(res, source)
```

### **Arguments**

res The input dataframe source The data source name

# **Details**

**DETAILS** 

toxval.config 83

### Value

Returns the input dataframe with defaults set

# See Also

```
[pull][dplyr::pull]
```

# **Examples**

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

toxval.config

toxval.config

# Description

Define a set of global variables. These include the source path (datapath) and the source databases (e.g. dev\_toxval\_version and dev\_toxval\_source\_version).

# Usage

```
toxval.config()
```

# **Details**

**DETAILS** 

### Value

Returns a set of parameters to be used throughout the package

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

```
toxval.source.import.dedup

toxval.source.import.dedup
```

Perform deduping on data before it is sent to toxval\_source

# Usage

```
toxval.source.import.dedup(
  res,
  dedup_fields = NULL,
  hashing_cols = NULL,
  delim = " |::| "
)
```

# **Arguments**

res	dataframe containing the source data to dedup
dedup_fields	vector containing field names to dedup, Default: NULL (all fields but hashing cols)
hashing_cols	$vector\ containing\ field\ names\ of\ hashing\ columns,\ Default:\ toxval.config() \$ hashing\_cols$
delim	string used to separate collapsed values, Default: ' !::  '

# **Details**

**DETAILS** 

# Value

dataframe containing deduped source data

### See Also

```
select, group_by, summarise, context, filter, mutate, across, reexports, na_if, distinct
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

```
toxval.source\_push\_mapped\_chemicals\\ toxval.source\_push\_mapped\_chemicals
```

Orchestrates the push of mapped chemical information to the selected toxval\_source database. Uses the map\_curated\_chemicals() helper function to generate mapped input.

### Usage

```
toxval.source_push_mapped_chemicals(
  db,
  source.index,
  curated.path,
  ignore.curation.dups = FALSE,
  match.chemical.id = TRUE,
  reset.mapping = FALSE,
  bulk.push = TRUE
)
```

### **Arguments**

db The version of toxval source database to use. source.index The source chemical index. Can be full or just numeric (ex. ToxVal00001 vs. 00001)Input path to the folder directory with expected subdirectories of #' 'BIN Files', curated.path 'DSSTox Files', and 'jira\_chemical\_files' ignore.curation.dups Boolean whether to match with any curated records flagged as "unresolved duplicates" (Default FALSE) match.chemical.id Boolean whether to match by provided chemical\_id external identifier (Default reset.mapping Boolean whether to reset chemical mappings in source\_chemical table of database Boolean whether to bulk push updates, or one at a time. Default is TRUE bulk.push

#### **Details**

**DETAILS** 

#### Value

None. Update SQL statements are executed.

### See Also

```
read_excel rename, distinct, mutate, select, mutate-joins, filter, bind
```

### **Examples**

```
## Not run:
if(interactive()){
    #EXAMPLE1
    }
## End(Not run)
```

# Description

Set the name and casrn in the source\_chemical table based on CCTE API

#### Usage

```
update_chemical_preferred_info_by_dtxsid(source.db)
```

### **Arguments**

source.db

The database version to use

#### **Details**

**DETAILS** 

### Value

None

### See Also

```
[GET][httr::GET], [content][httr::content], [POST][httr::POST], [accept_json][httr::accept_json], [content_type_json][httr::content_type_json], [add_headers][httr::add_headers] [bind_rows][dplyr::bind_rows], [select][dplyr::select], [mutate][dplyr::mutate], [n][dplyr::n]
```

```
## Not run:
if(interactive()){
  #EXAMPLE1
  }
## End(Not run)
```

*%>%* 

%>%

Pipe operator

# Description

See magrittr::%>% for details.

# Usage

lhs %>% rhs

# Arguments

1hs A value or the magrittr placeholder.

rhs A function call using the magrittr semantics.

# Value

The result of calling 'rhs(lhs)'.

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