

toxvaldbBMDh

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Type Package

Title Calculates BMDh Values From Records in ToxValDB

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Description This package extracts data from the ToxValDB database, filters it for redundant records (this redundancy should be reduced in later versions), and calculates study-level and chemical-level BMD. To run the entire process, uses the functions `export.for.bmdh()`, `filter.for.bmdh()`, `bmd.per.study()`, `bmd.per.chemical()` and `bmdh.percentile.plot()`. The function `driver()` runs all of the methods sequentially. The last function provides the best percentile to use. All of the input and output data lives in the `data/` folder

License BSD3

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readxl,
stringr,
tidyr,
writexl

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bmdh.aurisano.check.plot

bmdh.aurisano.check.plot

Description

Plot the difference between the Aurisano and current BMDh values

Usage

```
bmdh.aurisano.check.plot(
  to.file = FALSE,
  toxval.db = "res_toxval_v95",
  sys.date = Sys.Date()
)
```

Arguments

to.file	If TRUE, send the plot to a file
toxval.db	Database version
sys.date	The date of the database export

Details

DETAILS

Value

None; writes plot to PDF

See Also

[read.xlsx](#), [ggplot](#), [aes](#), [labs](#), [geom_point](#), [ggtheme](#), [scale_continuous](#), [ggsave](#) dev

Examples

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

## End(Not run)
```

bmdh.cumdist.plot	<i>bmdh.cumdist.plot</i>
-------------------	--------------------------

Description

Plot the cumulative distribution of number of studies

Usage

```
bmdh.cumdist.plot(
  to.file = F,
  toxval.db = "res_toxval_v95",
  sys.date = Sys.Date()
)
```

Arguments

to.file	If TRUE, send the plot to a file
toxval.db	Database version
sys.date	The date of the database export

Details

DETAILS

Value

writes a plot to a file

See Also[read.xlsx](#) [ggplot](#), [aes](#), [labs](#), [stat_ecdf](#), [ggtheme](#), [lims](#), [ggsave](#) [ggarrange](#) [dev](#)**Examples**

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

## End(Not run)
```

bmdh.per.chemical	<i>bmdh.per.chemical</i>
-------------------	--------------------------

Description

Calculate BMDh values one per chemical

Usage

```
bmdh.per.chemical(
  toxval.db,
  run_name = Sys.Date(),
  regulatory.sources = c("source_atsdr_mrls", "source_epa_hhtv", "source_health_canada",
    "source_iris", "source_heast", "source_pprtv_cphea")
)
```

Arguments

toxval.db	Database name
run_name	The desired name for the output directory (Default: current date)
regulatory.sources	This is the list of sources that will be used to select the #' optimal quantile to use for selecting the final chemical-level BMDh.

Details

Calculates one BMDh value per chemical. This is done by taking various percentiles of the distribution of the BMDh values and building a table with one column per percentile per chemical. The values are calibrated against regulatory values. The list of high-quality, regulator sources is given as one of the calling arguments.

Value

Write a file with the results: toxval_PODs_for_BMDh chemical level toxval.db sys.date.xlsx

See Also

[read.xlsx](#), [createStyle](#), [write.xlsx](#) [sd](#), [quantile](#)

Examples

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

## End(Not run)
```

bmdh.per.study

bmdh.per.study

Description

Calculate the BMDh values per study

Usage

```
bmdh.per.study(toxval.db, run_name = Sys.Date())
```

Arguments

toxval.db	Database name
run_name	The desired name for the output directory (Default: current date)

Details

Calculates one BMDh value per study using the Aurisano algorithm. Because EPA has not fully developed the mapping from critical effects in ToxValDB to standardized effects, the values from Aurisano are used where records match. Aurisano used ToxValDB 9.1, whereas 9.5 is used here. There is also code here to do the other required mappings, and those may need to be updated. For records in both the old and new databases, an on-the-fly plot is produced to show the corresponded between study-level BMDh values.

Value

Write a file with the results: toxval_PODs_for_BMDh toxval.db sys.date.xlsx

See Also

[read.xlsx](#), [createStyle](#), [write.xlsx](#) [plot.default](#)

Examples

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

## End(Not run)
```

bmdh.percentile.plot *bmdh.percentile.plot*

Description

Plot the BMDs vs the regulatory values for different percentiles and determine the best fit

Usage

```
bmdh.percentile.plot(
  to.file = FALSE,
  toxval.db,
  run_name = Sys.Date(),
  minstudies = 3,
  cutoff.logsd = 2
)
```

Arguments

to.file	If TRUE, send the plot to a file
toxval.db	Database name
run_name	The desired name for the output directory (Default: current date)
minstudies	- only chemicals with this minimum number of studies will be used in the calculation
cutoff.logsd	Only chemicals with their log SD of BMDh values will be used in the calculation

Details

Helps determine the optimal percentile. The output file shows the fit statistics for different percentiles, and one should select the one with the lowest RMSE and highest R2.

Value

Write a file with the results: toxval_PODs_for_BMDh chemical level toxval.db sys.date.xlsx

See Also

`read.xlsx`, `write.xlsx` `lm` `character(0)` `ggplot`, `aes`, `labs`, `geom_point`, `ggtheme`, `facet_grid`, `lims`, `geom_segment`, `ggsave` `dev`

Examples

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

## End(Not run)
```

```
check_dcap_toxicological_effect_category_mappings
      check_dcap_toxicological_effect_category_mappings
```

Description

Attempts to remap previously-mapped toxicological_effect_category values to DCAP entries

Usage

```
check_dcap_toxicological_effect_category_mappings(
  toxval.db,
  get_suggestions = TRUE,
  input_file = "",
  output_dir = ""
)
```

Arguments

<code>toxval.db</code>	The version of ToxVal to use
<code>get_suggestions</code>	Whether to provide mapping suggestions (Default: TRUE)
<code>input_file</code>	The file to pull missing toxicological_effect_category from.
<code>output_dir</code>	The folder used to write output to

Details

The output Excel files are as follows: - `dcap_mappings_identified.xlsx`: All toxicological_effect_categories that could be confidently remapped - `dcap_mappings_still_missing.xlsx`: Full data for entries missing categorizations - `dcap_missing_categorization.xlsx`: Just toxicological_effect, study_type values missing categorizations - `dcap_mapping_suggestions.xlsx`: Mapping suggestions based on close, but not exact, matches

Value

None; output is written to Excel files

```
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
--------	----------------------------------

Details

DETAILS

Value

Values in JSON format

See Also

[summarise](#), [select](#), [bind toJSON](#), [fromJSON](#)

Examples

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

convert_get_conversion_factor	
	<i>convert_get_conversion_factor</i>

Description

A helper function to convert input values to desired units.

Usage

convert_get_conversion_factor(conv_factor = 1)

Arguments

conv_factor Conversion factor to use (such as Molecular weight, tissue Density, etc.)

Details

DETAILS

Value

List of conversion factors

Examples

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

## End(Not run)
```

convert_units	<i>FUNCTION_TITLE</i>
---------------	-----------------------

Description

A helper function to convert input values to desired units.

Usage

convert_units(x, units, desired, conv_factor = NA)

Arguments

x	Numeric to be converted
units	Original units to be converted
desired	Desired units to convert the input value into
conv_factor	Conversion factor to use (such as Molecular weight, tissue Density, etc.)
overwrite_units	Boolean to overwrite the 'units' with desired units.

Details

DETAILS

Value

OUTPUT_DESCRIPTION

Examples

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

## End(Not run)
```

dcap.counts	<i>dcap.counts</i>
-------------	--------------------

Description

Calculate some stats for DCAP

Usage

```
dcap.counts(toxval.db, run_name = Sys.Date())
```

Arguments

toxval.db	Database name
run_name	The desired name for the output directory (Default: current date)

Details

Gets some statistics for the DCAP project off of the current ToxValDB export

Value

Write a file with the filtered results:ToxValDB for BMDh filtered toxval.db sys.date.xlsx

See Also

[read.xlsx](#), [write.xlsx](#)

Examples

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

## End(Not run)
```

driver	<i>driver</i>
--------	---------------

Description

Run all of the calculations to go from database export to calculation of final BMDh values

Usage

```
driver(
  toxval.db,
  run_name = Sys.Date(),
  run.export = TRUE,
  include.pesticides = FALSE,
  include.drugs = FALSE,
  include.epa_dws = TRUE,
  include.food_add = FALSE,
  reset.study_group = FALSE
)
```

Arguments

- toxval.db Database name
- run_name The desired name for the output directory (Default: current date)
- run.export Whether to run the export.for.bmdh function (Default: TRUE)
- include.pesticides Flag to include pesticides in output or not
- include.drugs Flag to include drugs in output or not
- include.epa_dws Flag to include EPA DWS in output or not

```
include.food_add
                        Flag to include food additives in output or not
reset.study_group
                        Flag to reset study_group
```

Details

DETAILS

Value

None

Examples

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

## End(Not run)
```

export.for.bmdh	<i>export.for.bmdh</i>
-----------------	------------------------

Description

Export records required for calculating BMDh values.

Usage

```
export.for.bmdh(
  toxval.db,
  include.pesticides = FALSE,
  include.drugs = FALSE,
  include.epa_dws = TRUE,
  include.food_add = FALSE,
  reset.study_group = FALSE,
  run_name = Sys.Date()
)
```

Arguments

toxval.db	Database version
include.pesticides	Flag to include pesticides in output or not
include.drugs	Flag to include drugs in output or not

```

include.epa_dws          Flag to include EPA DWS in output or not
include.food_add         Flag to include food additives in output or not
reset.study_group        Flag to reset study_group
run_name                 The desired name for the output directory (Default: current date)

```

Details

Exports all of the data required for the BMDh calculations. The main query may need to be modified to extract more columns if needed for the final application. Certain sources have been excluded because they have a high percentage of read-across values. Species are filtered to only include Human, Dog, Mouse, Rat and Rabbit. If more species are to be included, then allometric scaling factors for those need to added to the function `bmd.per.study()`.

Value

Write a file with the results: ToxValDB for BMDh `toxval.db Sys.Date().xlsx`

See Also

[createStyle](#), [write.xlsx](#)

Examples

```

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

## End(Not run)

```

```

export.for.toxicological_effect_mapping
export.for.toxicological_effect_mapping

```

Description

Export records required for managing the critical effect categories for the BMD calculations.

Usage

```

export.for.toxicological_effect_mapping(
  toxval.db = "res_toxval_v95",
  user = "rjudson",
  password
)

```

Arguments

toxval.db	Database version
user	The username for the MySQL database. The database instance is #’ hard-coded in the function setDBConn().
password	The user’s MySQL database password.

Details

Exports all of the data required for performing the critical effect mapping for the BMDh calculations

Value

Write a file with the results: ToxValDB for BMDh toxval.db Sys.Date().xlsx

See Also

[createStyle](#), [write.xlsx](#)

Examples

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

## End(Not run)
```

filter.pods	<i>filter.pods</i>
-------------	--------------------

Description

Filter values for BMDh according to specified POD rules

Usage

```
## S3 method for class 'pods'
filter(toxval.db, run_name = Sys.Date())
```

Arguments

toxval.db	Database name
run_name	The desired name for the output directory (Default: current date)

Details

Filtering steps differ between authoritative and non-authoritative sources

Value

None; filtered results are recorded in Excel file

See Also

[read.xlsx](#), [createStyle](#), [write.xlsx](#)

Examples

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

## End(Not run)
```

filter.summary	<i>filter.summary</i>
----------------	-----------------------

Description

Summarize the filtering steps

Usage

```
## S3 method for class 'summary'
filter(toxval.db, run_name = Sys.Date(), do.load = TRUE)
```

Arguments

toxval.db	Database name
run_name	The desired name for the output directory (Default: current date)
do.load	Whether to load data from Excel, Default: TRUE

Details

Filters where multiple NOEL/NOEL etc. exist. For each study_group this will select the highest NO(A)EL below the lowest LO(A)EL and the lowest LO(A)EL. In all cases, all BMDx values are included

Value

Write a file with the filtered results:ToxValIDB for BMDh LEL NEL multiNOEL filtered toxval.db
sys.date.xlsx

See Also

[read.xlsx](#), [createStyle](#), [write.xlsx](#)

Examples

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

## End(Not run)
```

fix.replace.unicode	<i>fix.replace.unicode</i>
---------------------	----------------------------

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)
```

fix.study_group	Set the study_group field
-----------------	---------------------------

Description

Set the study_group field

Usage

fix.study_group(df)

Arguments

df Input dataframe to set study_group

Value

for each source writes an Excel file with the name ../export/export_by_source_data/toxval_all_toxval.db_source.xlsx

get.conceptual_model.by.toxicological_effect_category
<i>get.conceptual_model.by.toxicological_effect_category</i>

Description

Get the conceptual model based on toxicological_effect_category

Usage

get.conceptual_model.by.toxicological_effect_category(df)

Arguments

df Input dataframe of study_type and toxicological_effect data.

Details

DETAILS

Value

DataFrame map of models by toxicological_effect and study_type

See Also

[select](#), [distinct](#), [mutate](#), [context](#), [case_when](#), [mutate-joins](#), [rename](#), [across](#), [reexports](#), [group_by](#), [na_if](#) [separate_rows](#), [replace_na](#) [str_trim](#) [read_delim](#), [cols](#)

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

Value

print the database connection information

Examples

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

## End(Not run)
```

`get_chemcial_index`*get_chemical_index*

Description

Generate a chemical index based on ToxVal DTXSID list and QSAR Ready Smiles.

Usage

```
get_chemcial_index(input_toxval_file, input_qsar_file)
```

Arguments

input_toxval_file
Filepath to input ToxVal file with DTXSID values.

input_qsar_file
Filepath to input QSAR Ready Smiles file with DTXSID values.

Details

DETAILS

Value

Combined chemical index dataframe. A CSV file is also written to the input subfolder.

See Also

[read_delim](#), [cols](#), [write_delim](#) [select](#), [mutate_joins](#), [distinct](#), [c\("rowwise", "rowwise"\)](#),
[mutate](#), [group_by](#) [map_digest](#)

Examples

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

```
init.current.run.directory  
  init.current.run.directory
```

Description

Initialize output directory for current driver run

Usage

```
init.current.run.directory(run_name = Sys.Date())
```

Arguments

run_name The desired name for the output directory (Default: current date)

Details

DETAILS

Value

None; new directory is created

Examples

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

## End(Not run)
```

pod.per.chemical	<i>pod.per.chemical</i>
------------------	-------------------------

Description

Explore different methods for calculating PODs

Usage

```
pod.per.chemical(toxval.db = "res_toxval_v95", sys.date = Sys.Date())
```

Arguments

toxval.db	The version of ToxValDB to use
sys.date	Date of the most recent data export #' Make the rule #' filter LOELs when NOELs are present for the same study #' filter out redundant values for the same study group #' Perform the allometric scaling
t2	PARAM_DESCRIPTION
scale.mat	PARAM_DESCRIPTION

Details

Explore different methods for calculating PODs This uses the same input as the function bmdh.perstudy / bmdh.per.chemical

Value

Writes output to file

Examples

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

## End(Not run)
```

pod.per.chemical.eco *pod.per.chemical.eco*

Description

Calculate the eco PODs

Usage

```
pod.per.chemical.eco(toxval.db = "res_toxval_v95", sys.date = Sys.Date())
```

Arguments

toxval.db	The version fo the ToxValDB to use
sys.date	The date of the database export

Details

DETAILS

Value

Writes output to file

See Also

[read.xlsx](#), [write.xlsx](#) [quantile](#), [sd](#)

Examples

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

pod.rule.maker	<i>pod.rule.maker</i>
----------------	-----------------------

Description

Function to create/choose rule based on POD inputs

Usage

```
pod.rule.maker(  
  toxval,  
  hra.sources,  
  rule.name = "Rule 3",  
  rule.stype = "chronic",  
  rule.ttype = "LO(A)EL, NO(A)EL, BMD",  
  stype.list = c("chronic"),  
  ttype.list = c(loel.types, noel.types, bmdl.types)  
)
```

Arguments

toxval	Input dataframe of ToxVal data.
hra.sources	Human Risk Assessment source list
rule.name	PARAM_DESCRIPTION, Default: 'Rule 3'
rule.stype	PARAM_DESCRIPTION, Default: 'chronic'
rule.ttype	PARAM_DESCRIPTION, Default: 'LO(A)EL, NO(A)EL, BMD'
stype.list	PARAM_DESCRIPTION, Default: c("chronic")
ttype.list	PARAM_DESCRIPTION, Default: c(loel.types, noel.types, bmdl.types)

Details

DETAILS

Value

Modified version of input toxval dataframe.

See Also

[quantile](#), [sd](#)

Examples

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

## End(Not run)
```

<code>printCurrentFunction</code>	<code><i>printCurrentFunction</i></code>
-----------------------------------	--

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)
```

property.counter	<i>property.counter</i>
------------------	-------------------------

Description

Count proerties of records

Usage

```
property.counter(toxval.db = "res_toxval_v95", sys.date = Sys.Date())
```

Arguments

toxval.db	Database version
sys.date	The date of the database export
user	The username for the MySQL database. The database instance is #' hard-coded in the function setDBConn().
password	The user's MySQL database password.

Details

DETAILS

Value

Write a file with the results: ToxValDB for BMDh toxval.db Sys.Date().xlsx

See Also

[read.xlsx](#), [write.xlsx](#), [createStyle](#)

Examples

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

## End(Not run)
```

`runQuery`*runQuery*

Description

Runs a database query and returns a result set

Usage

```
runQuery(query = NULL, db, do.halt = TRUE, verbose = FALSE)
```

Arguments

<code>query</code>	a properly formatted SQL query as a string
<code>db</code>	the name of the database
<code>do.halt</code>	if TRUE, halt on errors or warnings
<code>verbose</code>	if TRUE, print diagnostic information

Details

DETAILS

Value

Query results

See Also

[character\(0\)](#), [MySQLDriver-class flush.console](#)

Examples

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

source_hash_vectorized	
	<i>source_hash_vectorized</i>

Description

Generate the hash key for a source table based on hashing columns

Usage

```
source_hash_vectorized(res, hashing_cols)
```

Arguments

res	The data frame to be processed
hashing_cols	Optional list of columns to use for generating source_hash

Details

DETAILS

Value

Input dataframe with new source_hash field

See Also

[digest distinct](#)

Examples

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

split.species.list	<i>Split species list</i>
--------------------	---------------------------

Description

Split species lists into multiple rows

Usage

```
## S3 method for class 'species.list'  
split(df)
```

Arguments

df Input dataframe with species lists to split

Details

DETAILS

Value

Modified input df with split species lists into multiple rows

See Also

[mutate](#), [case_when](#), [filter](#), [bind_rows](#), [group_by](#), [summarise](#) [separate_rows](#) [str_trim](#), [case](#)

Examples

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

studies.per.chemical	<i>studies.per.chemical</i>
----------------------	-----------------------------

Description

Calculate some stats for DCAP

Usage

```
studies.per.chemical(toxval.db, run_name = Sys.Date())
```

Arguments

toxval.db	Database name
run_name	The desired name for the output directory (Default: current date)

Details

Gets the number of studies per chemical from the current ToxValDB export

Value

Write a file with the filtered results:ToxValDB for BMDh filtered toxval.db sys.date.xlsx

See Also

[read_xlsx](#), [write_xlsx](#)

Examples

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

study_group.multichem *study_group.multichem*

Description

Find study groups that span multiple chemicals

Usage

```
study_group.multichem(toxval.db, run_name = Sys.Date())
```

Arguments

toxval.db	Database name
run_name	The desired name for the output directory (Default: current date)

Details

DETAILS

Value

Write a file with the filtered results:ToxValDB for BMDh LEL NEL multiNOEL filtered toxval.db
sys.date.xlsx

See Also

[read.xlsx](#), [createStyle](#), [write.xlsx](#)

Examples

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

```
toxicological_effect_source  
    toxicological_effect_source
```

Description

Find the source for odd critical effect chunks.

Usage

```
toxicological_effect_source(toxval.db = "res_toxval_v95", user, password)
```

Arguments

toxval.db	Database version
user	The username for the MySQL database. The database instance is #' hard-coded in the function setDBConn().
password	The user's MySQL database password.

Details

DETAILS

Value

Writes output to file

See Also

[read.xlsx](#), [write.xlsx](#)

Examples

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

toxval.redundancies	<i>toxval.redundancies</i>
---------------------	----------------------------

Description

Detect potential redundancies in ToxValDB.

Usage

```
toxval.redundancies(toxval.db = "res_toxval_v95", user, password)
```

Arguments

toxval.db	Database version
user	The username for the MySQL database. The database instance is #' hard-coded in the function setDBConn().
password	The user's MySQL database password.

Details

DETAILS

Value

Write a file with the results

See Also

[createStyle](#), [write.xlsx](#)

Examples

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

```
toxval.source.import.dedup  
  toxval.source.import.dedup
```

Description

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](#)

Examples

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

toxvaldb.statplots	<i>toxvaldb.statplots</i>
--------------------	---------------------------

Description

Plot statistics for ToxValDB for DCAP sources

Usage

```
toxvaldb.statplots(to.file = FALSE, toxval.db, run_name = Sys.Date())
```

Arguments

<code>to.file</code>	Whether to write plots to file or simply view them, Default: F
<code>toxval.db</code>	Database name
<code>run_name</code>	The desired name for the output directory (Default: current date)
<code>dir</code>	The directory where the lists are stored

Details

DETAILS

Value

None; plots are generated

See Also

[read.xlsx](#) [ggplot](#), [aes](#), [labs](#), [geom_boxplot](#), [scale_continuous](#), [scale_manual](#), [coord_flip](#), [ggtheme](#), [theme](#), [element](#), [geom_jitter](#), [geom_freqpoly](#), [facet_wrap](#), [lims](#), [ggsave](#) [fct_rev](#) [reorder.default](#) [arrangeGrob](#) [dev](#)

Examples

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

## End(Not run)
```

write_dcap_summary	<i>write_dcap_summary</i>
--------------------	---------------------------

Description

Output summary reports containing chemical and key field information

Usage

```
write_dcap_summary(toxval.db, sys.date = Sys.Date())
```

Arguments

toxval.db	The version of ToxVal to use
sys.date	The date of the export to use, Default: Sys.Date()

Details

DETAILS

Value

None; writes summary reports to file

See Also

[read_xlsx][readxl::read_xlsx] [mutate][dplyr::mutate], [filter][dplyr::filter], [select][dplyr::select], [distinct][dplyr::distinct], [left_join][dplyr::left_join], [pull][dplyr::pull], [ensym][dplyr::ensym] [replace_na][tidyr::replace_na] [tibble][tibble::tibble] [write_xlsx][openxlsx::write_xlsx]

Examples

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

`%>%`*Pipe operator*

Description

See `magrittr::%>%` for details.

Usage

```
lhs %>% rhs
```

Arguments

<code>lhs</code>	A value or the <code>magrittr</code> placeholder.
<code>rhs</code>	A function call using the <code>magrittr</code> semantics.

Value

The result of calling `'rhs(lhs)'`.

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