# Package 'ec50estimator'

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Type Package
Title An Automated Way to Estimate EC50 for Stratified Datasets
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<b>Description</b> An implementation for estimating Effective control to 50% of growth inhibition (EC50) for multi isolates and stratified datasets. It implements functions from the drc package in a way that is displayed a tidy data.frame as output. Info about the drc package is available in Ritz C, Baty F, Streibig JC, Gerhard D (2015) <doi:10.1371 journal.pone.0146021="">.</doi:10.1371>
License MIT + file LICENSE
Encoding UTF-8
LazyData true
Imports dplyr, tidyr, tibble, magrittr, drc
RoxygenNote 7.0.2
VignetteBuilder knitr
Suggests knitr, rmarkdown, ggplot2, ggridges, cowplot
<pre>URL https://github.com/AlvesKS/ec50estimator</pre>
<pre>BugReports https://github.com/AlvesKS/ec50estimator/issues</pre>
NeedsCompilation no
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Repository CRAN
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Estimate Efective dose (EC50) for multi isolate data set

# Description

Estimate Efective dose (EC50) for multi isolate stratified data set.

# Usage

```
estimate_EC50(formula, data, EC_lvl = 50, isolate_col,
strata_col = NULL,
fct,interval = c("none", "delta", "fls", "tfls"))
```

# Arguments

formula	An object of class "formula.(e.g. growth ~ dose")
data	A data.frame in which the dose-response data is in
EC_lvl	Define the EC level. Default is 50
isolate_col	indicate the isolate column. Indicate the name inside "". (e.g. "isolates")
strata_col	indicate the strata columns. If there are more then one columns, indicate as a vector (e.g. $c("region", "field"))$
fct	A list with three or more elements specifying the non-linear function. Please, inform the model function with the :: operator to inform the drc package (e.g. drc::LL.4()). For more info, see "drm".
interval	A character string specifying the type of confidence intervals to be supplied. For more information see "ED"

# Examples

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multi\_isolate

Multi isolate dataset

#### **Description**

Dataset containing simulated data of mycelial growth under increasing fungicide doses for 50 fungal isolates, two types of field (conventional and organic), and two different fungicides.

#### Usage

```
data("multi_isolate")
```

#### **Format**

A data frame with 3500 observations on the following 5 variables.

```
isolate a numeric vector
field a factor with levels Conventional Organic
fungicida a factor with levels Fungicide A Fungicide B
dose a numeric vector
growth a numeric vector
```

# **Examples**

```
data(multi_isolate)
## maybe str(multi_isolate) ; plot(multi_isolate) ...
```

# **Index**