Package 'metabolighteR'

March 29, 2021

Type Package

Title Interface to the 'Metabolights' RESTful API

Version 0.1.2

Date 2021-03-29

Description Access to the 'Metabolights' REST API <https://www.ebi.ac.uk/metabolights/index>. Retrieve elements of publicly available 'Metabolights' studies.

Depends magrittr

Imports httr,
 dplyr,
 purrr,
 crayon

License GPL (>= 3)

LazyData true

URL https://github.com/aberHRML/metabolighteR

BugReports https://github.com/aberHRML/metabolighteR/issues

RoxygenNote 7.1.0

Encoding UTF-8

Suggests covr,
 testthat,
 tibble,
 knitr,
 rmarkdown,
 tidyr

Roxygen list(markdown = TRUE)

VignetteBuilder knitr

R topics documented:

download_study_file   *Download Study File Contents*

Description

Download the contents of a specified file from a public study

Usage

```
download_study_file(study_id, filename)
```

Arguments

study_id   a character string of a valid MTBLS study id

filename   a character of the full filename and extension to download

Value

a `tibble` of file contents

---

get_isa_investigation   *Get ISA Investigation File*

Description

Retrieve the ISA Investigation for a specified Metabolights Study

Usage

```
get_isa_investigation(study_id)
```

Arguments

study_id   A character string of a valid MTBLS study id

Value

the ISA-tab Investigation output

Examples

```
## Not run:
ISA <- get_isa_investigation('MTBLS375')
writeLines(isa_investigation_parse, con = paste0('outpath/ISA.txt'))

## End(Not run)
```

---

get_private_studies   *Get Private Studies*

Description

Retrieve all private studies which belong to your user account

Usage

```
get_private_studies()
```

Value

a `tibble` of your private Study IDs

Examples

```
## Not run:
get_private_studies()

## End(Not run)
```

---

get_studies *Get Studies*

Description

Retrieve a list of all publically available Metabolights studies

Usage

```
get_studies()
```

Value

a `tibble` of Study IDs

Examples

```
get_studies()
```

---

get_study_contacts *Get Study Contacts*

Description

Retrieve the contact details for a specified public study '

Usage

```
get_study_contacts(study_id)
```

Arguments

study_id   a character string of a valid MTBLS study id

Value

a `tibble` of study contacts

Examples

```
get_study_contacts('MTBLS375')
```

---

get_study_desc *Get Study Description*

Description

Retrieve the abstract based description of a public study

Usage

```
get_study_desc(study_id)
```

Arguments

study_id   A character string of a valid MTBLS study id

Value

a character string of the study description

Examples

```
get_study_desc('MTBLS375')
```

---

get_study_descriptors *Get Study Descriptors*

Description

Retrieve the study descriptors and annotation values for a publically available study

Usage

```
get_study_descriptors(study_id)
```

Arguments

study_id   A character string of a valid MTBLS study id

Value

a `tibble` of study descriptors

Examples

```
get_study_descriptors('MTBLS375')
```

---

get_study_factors   *Get Study Factors*

Description

Retrieve the study factors and annotation values for a publically available study

Usage

```
get_study_factors(study_id)
```

Arguments

study_id   A character string of a valid MTBLS study id

Value

a `tibble` of study factors

Examples

```
get_study_factors('MTBLS375')
```

---

get_study_files   *Get Study Files*

Description

Retrieve the names and type of all files that have been deposited with the public study. If `raw_data` is TRUE then details of raw data files(ie, `.mzML`) are also returned.

Usage

```
get_study_files(study_id, raw_data = FALSE)
```

Arguments

study_id   A character string of a valid MTBLS study id

raw_data   logical; if TRUE then raw data file info is also returned. (Default is `FALSE`)

Value

a `tibble` of file info

Examples

```
get_study_files('MTBLS375', raw_data = FALSE)
```

---

get_study_meta   *Get Study Meta*

Description

Retrieve the meta data for a publically available study

Usage

```
get_study_meta(study_id)
```

Arguments

study_id   A character string of a valid MTBLS study id

Value

a `tibble` of study meta data

Examples

```
get_study_meta('MTBLS375')
```

---

get_study_org   *Get Study Organisms*

Description

Retrieve the organisms used within a study

Usage

```
get_study_org(study_id)
```

Arguments

study_id   A character string of a valid MTBLS study id

Value

a `tibble` of study organism data

Examples

```
## Not run:
get_study_org('MTBLS375')

## End(Not run)
```

---

get_study_protocols   *Get Study Protocols*

Description

Retrieve the protocol information that has been deposited for a public study

Usage

```
get_study_protocols(study_id)
```

Arguments

study_id   A character string of a valid MTBLS study id

Value

a `tibble` of study protocols

Examples

```
get_study_protocols('MTBLS375')
```

---

get_study_pubs   *Get Study Publications*

Description

Retrieve details on any publications that have been associated with the study

Usage

```
get_study_pubs(study_id)
```

Arguments

study_id   A character string of a valid MTBLS study id

Value

a `tibble` of study publications

Examples

```
get_study_pubs('MTBLS375')
```

---

get_study_samples   *Get Study Samples*

Description

Get a list of all sample names mapped to files within the study

Usage

```
get_study_samples(study_id)
```

Arguments

study_id   A character string of a valid MTBLS study id

Value

a `tibble` of filename sample name and reliability score. 1.0 indicates a perfect match

Examples

```
## Not run:
get_study_samples('MTBLS375')

## End(Not run)
```

---

get_study_tech   *Get Study Technology*

Description

Retrieve a `tibble` of all Study IDs and the analytical technology used in the study

Usage

```
get_study_tech()
```

Value

a `tibble` of study id and technology

Examples

```
get_study_tech()
```

get_study_title   *Get Study Title*

Description

Retrieve the full title of the study

Usage

```
get_study_title(study_id)
```

Arguments

study_id   A character string of a valid MTBLS study id

Value

a character string of the study title

Examples

```
get_study_title('MTBLS375')
```

get_webservice   *Get Web-service details*

Description

Retrieve details about the Metabolights RESTful WebService

Usage

```
get_webservice()
```

Value

a list of the MTBLS webservice information

Examples

```
get_webservice()
```

---

mtbls_key   *Set API Token*

Description

Set your Metabolights API Token as global option. If MTBLS_API_KEY is set in .Renviron then this variable will be passed directly to the MTBLS_API_KEY option. If no MTBLS_API_KEY is set in .Renviron, then the API Token must be passed as an input in the set_api_token function

Usage

```
mtbls_key(API_KEY = NULL)
```

Arguments

API_KEY   a character string of your Metabolights API Token (Default is NULL)

Examples

```
## Not run:

# If API Token is set in `.Renviron`

mtbls_key()

# If API Token is not set in `.Renviron`

mtbls_key('XXXX-0000-XXXX-0000')

## End(Not run)
```

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