Package 'flaskcycle'

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Type Package

Title Control and tracking of flasks for atmospheric sampling of greenhouse gases

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Description This package contains a set of functions to track flasks sampled with an ICOS automated flaks sampler, their location, and laboratory submissions.

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Imports csvy, yaml

RoxygenNote 7.3.2.9000

NeedsCompilation no

Contents

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checkBox   *Check if flasks in a box have been recorded as sampled from the autosampler*

Description

Check if flasks in a box have been recorded as sampled from the autosampler

Usage

```
checkBox(samplerBoxData, manualList)
```

Arguments

samplerBoxData	A data.frame of sampled boxes produced as a report from the autosampler and loaded using the function selectBox
manualList	a data.frame with flask IDs manually produced at the time of checking a box.

Value

a logical vector of flasks that match both lists.

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getBox   *Get box data and metadata from control file*

Description

Get box data and metadata from control file

Usage

```
getBox(cf, box)
```

Arguments

cf	control file as list. This is produced by function load_cf
box	character string with the ID of the box to extract

Value

a list with data and metadata for a single box

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load_cf   *Load control file, data and metadata*

Description

Load control file, data and metadata

Usage

```
load_cf(cf)
```

Arguments

cf	character string to the path to the control file. Usually a .csv file with a yaml metadata header.

Value

list with a data.frame with data, and a list with metadata information

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plotBox	*Plots the box with the containing flasks*

Description

Plots the box with the containing flasks

Usage

```
plotBox(box_list)
```

Arguments

box_list   a list with data and metadata for a box

Value

a plot

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sampledBoxes	*Collect all information from the report produced by the autosampler about packed boxes and prints a report*

Description

Collect all information from the report produced by the autosampler about packed boxes and prints a report

Usage

```
sampledBoxes(
  fromWhere = "~/Repos/ATTO_flask_sampling/FlaskCycle/packedBoxes",
  toWhere = fromWhere
)
```

Arguments

fromWhere   a character string with the path with the reports are stored.

toWhere   a character string with the path to store the report.

Value

a csv file with the data of all sampled boxes

Examples

```
sampledBoxes()
```

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selectBox *Selects data for a single box from all sampled boxes*

Description

Selects data for a single box from all sampled boxes

Usage

```
selectBox(box, year = NULL, sampledBoxes)
```

Arguments

box	character string with box ID
year	integer with the year of sampling
sampledBoxes	character string with the path of the report of all sampled boxes

Value

sampling report for one selected box

Examples

```
selectBox(box="B0171", year=2023, sampledBoxes = "~/Repos/ATTO_flask_sampling/FlaskCycle/packedBoxes/sampled
selectBox(box="B0171", sampledBoxes = "~/Repos/ATTO_flask_sampling/FlaskCycle/packedBoxes/sampledBoxes.csv")
```

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submissionInfo *Extracts required information for submitting sampled flasks to a laboratory*

Description

Extracts required information for submitting sampled flasks to a laboratory

Usage

```
submissionInfo(
  box,
  file = "~/Repos/ATTO_flask_sampling/FlaskCycle/SubmissionFiles/Aug2024.csv"
)
```

Arguments

box	data.frame with the sampler report for a specific box ID
file	character string with the path and file name to write output

Value

writes a csv file at the specified path

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unzipBox	*Unzip files containing reports of sampled flasks from autosampler*

Description

Unzip files containing reports of sampled flasks from autosampler

Usage

```
unzipBox(year, path)
```

Arguments

year	character vector of years of data to unzip
path	character string with the path where zip files are stored

Value

a file containing all data from a box report

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