

Package ‘AtmChile’

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Type Package

Title Download Air Quality and Meteorological Information of Chile

Version 1.0.0

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Description Download air quality and meteorological information of Chile from the National Air Quality System (S.I.N.C.A.)<<https://sinca.mma.gob.cl/>> dependent on the Ministry of the Environment and the Meteorological Directorate of Chile (D.M.C.)<<http://www.meteochile.gob.cl/>> dependent on the Directorate General of Civil Aeronautics.

License GPL-3

URL <https://github.com/franciscoxaxo/AtmChile>

Encoding UTF-8

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Imports data.table, plotly, shiny, openair, lubridate, shinycssloaders, DT

NeedsCompilation no

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ChileAirQuality	<i>ChileAirQuality</i>
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Description

function that compiles air quality data from the National Air Quality System (S.I.N.C.A.)

Usage

```
ChileAirQuality(
  Comunas = "INFO",
  Parametros,
  fechadeInicio,
  fechadeTermino,
  Site = FALSE,
  Curar = TRUE,
  st = FALSE
)
```

Arguments

Comunas	data vector containing the names or codes of the monitoring stations. Available stations: "P. O'Higgins", "Cerrillos 1", "Cerrillos", "Cerro Navia", "El Bosque", "Independencia", "La Florida", "Las Condes", "Pudahuel", "Puente Alto", "Quilicura", "Quilicura 1", "Alto Hospicio", "Arica", "Las Encinas Temuco", "Nielol Temuco", "Museo Ferroviario Temuco", "Padre Las Casas I", "Padre Las Casas II", "La Union", "CESFAM Lago Ranco", "Mafil", "Fundo La Ribera", "Vivero Los Castanos", "Valdivia I", "Valdivia II", "Osorno", "Entre Lagos", "Alerce", "Mirasol", "Trapen Norte", "Trapen Sur", "Puerto Varas", "Coyhaique I", "Coyhaique II", "Punta Arenas". To see the full list of stations use ChileAirQuality()
Parametros	data vector containing the names of the air quality parameters. Available parameters: "PM10", "PM25", "CO", "SO2", "NOX", "NO2", "NO", "O3", "temp" (temperature), "RH" (relative humidity), "ws" (wind speed), "wd" (wind direction).
fechadeInicio	text string containing the start date of the data request
fechadeTermino	text string containing the end date of the data request
Site	logical value that allows entering the code of the monitoring station in the variable "Comunas"
Curar	logical value that activates data curation for particulate matter, nitrogen oxides, relative humidity and wind direction.
st	logical value that includes validation reports from S.I.N.C.A. "NV": No validated, "PV": Pre-validated, "V": Validated.

Value

A data frame with air quality data.

Source

`<https://sinca.mma.gob.cl/>`

Examples

```
try({
  stations <- ChileAirQuality()
}, silent =TRUE)

try({
  data <- ChileAirQuality(Comunas = "El Bosque",
    Parametros = c("PM10", "PM25"), fechadeInicio = "01/01/2020",
    fechadeTermino = "02/01/2020")
}, silent =TRUE)

try({
  head(ChileAirQuality(Comunas = c("EB", "SA"),
    Parametros = "PM10", fechadeInicio = "01/01/2020",
    fechadeTermino = "01/03/2020", Site = TRUE))
}, silent = TRUE)
```

ChileAirQualityApp *Title ChileAirQualityApp*

Description

This tool is a dashboard that allows you to use the data download functions of this package enhanced with analysis, visualization and descriptive statistics tools.

Usage

```
ChileAirQualityApp()
```

Value

A shiny dashboard to work with the package

See Also

`<https://chileairquality.shinyapps.io/chileairquality/>`

Examples

```
## Not run: ChileAirQualityApp()
```

ChileClimateData	<i>Title ChileClimateData</i>
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Description

function that compiles climate data from Climate direction of Chile (D.M.C.)

Usage

```
ChileClimateData(Estaciones = "INFO", Parametros, inicio, fin, Region = FALSE)
```

Arguments

Estaciones	data vector containing the codes of the monitoring stations. To see the table with the monitoring stations use ChileClimateData()
Parametros	data vector containing the names of the climate parameters. Available parameters: "Temperatura", "PuntoRocio", "Humedad", "Viento", "PresionQFE", "PresionQFF".
inicio	text string containing the start year of the data request.
fin	text string containing the end year of the data request.
Region	logical parameter. If region is true it allows to enter the administrative region in which the station is located instead of the station code.

Value

A data frame with climate data of Chile.

Source

<<http://www.meteochile.gob.cl/>>

Examples

```
try({ChileClimateData()}, silent = TRUE)

try({
  data <- ChileClimateData(Estaciones = "180005",
    Parametros = c("Temperatura", "Humedad"),
    inicio = "2020", fin = "2020")
}, silent = TRUE)

try({
  head(ChileClimateData(Estaciones = "II",
    Parametros = "Temperatura", inicio = "2020",
    fin = "2020", Region = TRUE))
}, silent = TRUE)
```

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