Package 'CardinalWorkflows'

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Type Package

Title Datasets and workflows for the Cardinal MSI

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Description Datasets and workflows for Cardinal:
DESI and MALDI examples including pig fetus,
cardinal painting, and human RCC.

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Depends R (>= 2.10), Cardinal, methods

Suggests BiocStyle, knitr, rmarkdown

VignetteBuilder knitr

biocViews ExperimentData, MassSpectrometryData,
ImagingMassSpectrometryData

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Contents

CardinalWorkflows-package 2
cardinal-data 3
pig206-data 3
rcc-data 4

Index **5**

`CardinalWorkflows-package` *Datasets and workflows for the Cardinal mass spectrometry imaging package*

Description

Datasets and workflows for Cardinal: MS imaging data examples including cardinal painting, pig fetus, and human RCC.

Usage

```
# Load and return an example MSI dataset
exampleMSIData(name = c("cardinal", "pig206", "rcc"))
```

Arguments

`name`	The name of the dataset.

Details

CardinalWorkflows provides datasets and example workflows of mass spectrometry imaging experiments using the Cardinal package for MS imaging analysis.

To view the example workflows, use `browseVignettes("CardinalWorkflows")`.

Value

The dataset as an `MSImagingExperiment`.

Author(s)

Kylie A. Bemis

See Also

`cardinal`, `pig206`, `rcc`

cardinal-data *Cardinal Painting*

Description

DESI-imaging mass spectra collected from the oil painting of a cardinal. Should be loaded with `exampleMSIData()`.

Source

Aston Labs (Livia S. Eberlin, Christina Ferreira, and R. Graham Cooks).

Examples

```
cardinal <- exampleMSIData("cardinal")
cardinal
```

pig206-data *Cross-Section of a Whole Pig Fetus*

Description

DESI-imaging mass spectra collected from the cross-section of a whole pig fetus. Should be loaded with `exampleMSIData()`.

Source

Aston Labs (Livia S. Eberlin, Christina Ferreira, and R. Graham Cooks).

Examples

```
pig206 <- exampleMSIData("pig206")
pig206
```

rcc-data *Human Renal Cell Carcinoma*

Description

Eight matched pairs of human renal cell carcinoma (RCC) labeled as cancer or normal.

Data are DESI-imaging mass spectra with each matched pair as a separate sample on a separate slide.

Should be loaded with `exampleMSIData()`.

Source

Aston Labs (Livia S. Eberlin and R. Graham Cooks).

References

Dill, A. L., Eberlin, L. S., Zheng, C., Costa, A. B., Ifa, D. R., Cheng, L., et al. (2010). Multivariate statistical differentiation of renal cell carcinomas based on lipidomic analysis by amvient ionization imaging mas spectrometry. Analytical and Bioanalystical Chemistry, 298(7-8), 2969-2978.

Dill, A. L., Eberlin, L. S., Zheng, C., Costa, A. B., Ifa, D. R., Cheng, L., et al. (2010). Multivariate Statistical Identification of Human Bladder Cardinomas Using Ambient Ionization Imaging Mass Spectrometry. Chemistry - a European Journal, 17(10), 2897-2902.

Examples

```
rcc <- exampleMSIData("rcc")
rcc
```

Index

∗ **datasets**
    cardinal-data, 3
    pig206-data, 3
    rcc-data, 4
∗ **package**
    CardinalWorkflows-package, 2

cardinal, *2*
cardinal *(*cardinal-data*)*, 3
cardinal-data, 3
CardinalWorkflows
        *(*CardinalWorkflows-package*)*, 2
CardinalWorkflows-package, 2

data:cardinal *(*cardinal-data*)*, 3
data:pig206 *(*pig206-data*)*, 3
data:rcc *(*rcc-data*)*, 4

exampleMSIData
        *(*CardinalWorkflows-package*)*, 2

pig206, *2*
pig206 *(*pig206-data*)*, 3
pig206-data, 3

rcc, *2*
rcc *(*rcc-data*)*, 4
rcc-data, 4