Data Article

Data supporting the role of enzymes and polysaccharides during cassava postharvest physiological deterioration

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A R T I C L E   I N F O

A B S T R A C T

This data article is referred to the research article entitled *The role of ascorbate peroxidase, guaiacol peroxidase, and polysaccharides in cassava (Manihot esculenta Crantz) roots under postharvest physiological deterioration* by Uarrota et al. (2015). Food Chemistry 197, Part A, 737–746.

The stress duo to PPD of cassava roots leads to the formation of ROS which are extremely harmful and accelerates cassava spoiling. To prevent or alleviate injuries from ROS, plants have evolved antioxidant systems that include non-enzymatic and enzymatic defence systems such as ascorbate peroxidase, guaiacol peroxidase and polysaccharides. In this data article can be found a dataset

called "newdata", in RData format, with 60 observations and 06 variables. The first 02 variables (Samples and Cultivars) and the last 04, spectrophotometric data of ascorbate peroxidase, guaiacol peroxidase, tocopherol, total proteins and arcsined data of cassava PPD scoring. For further interpretation and analysis in R software, a report is also provided. Means of all variables and standard deviations are also provided in the Supplementary tables ("data. long3.RData, data.long4.RData and meansEnzymes.RData"), raw data of PPD scoring without transformation (PPDmeans.RData) and days of storage (days.RData) are also provided for data analysis reproducibility in R software.

Specifications Table

Subject area	Chemistry, Biology
More specific subject area	Postharvest Biology
Type of data	Table in RData format
How data was acquired	Spectroscopy and laboratory PPD induction of cassava roots
Data format	Raw data
Experimental factors	Four cassava cultivars and 05 different times of root storage
Experimental features	PPD scoring, ascorbate peroxidase activity, guaiacol peroxidase activity, total proteins and tocopherol
Data source location	Florianópolis, Santa Catarina, Brazil, 27°35'48" S, 48°32'57" W
Data accessibility	Data available within this article

Value of the data

- Correlation of ascorbate peroxidase, guaiacol peroxidase, proteins and polysachharides with postharvest deterioration of cassava roots;
- Understand the role of enzymatic activities and polysaccharides in delaying cassava PPD;
- Use datasets and tutorials as benchmark for future multivariate analysis in R software.

Table 1
Confusion matrix for LDA and PLS-DA models tested in our analysis.

Samples	Non-stored		3 days		5 days		8 days		11 days	
	LDA	PLS-DA	LDA	PLS-DA	LDA	PLS-DA	LDA	PLS-DA	LDA	PLS-DA
Non-stored	12.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 days	0.0	5.0	11.0	0.0	0.0	5.0	1.0	2.0	0.0	0.0
5 days	0.0	2.0	5.0	0.0	7.0	10.0	0.0	0.0	0.0	0.0
8 days	0.0	0.0	3.0	0.0	1.0	3.0	5.0	9.0	3.0	0.0
11 days	3.0	3.0	0.0	0.0	0.0	0.0	3.0	3.0	6.0	6.0

Error rate for LDA=0.3167.
Error rate for PLS-DA=0.383.