**README file**

Data Set Title: **“Database postharvest chard rocket trial”**

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**Data set Contents**

The data set consists of:

* 1 tabular file saved in .xlsx format

**Database\_postharvest\_chard\_rocket\_trial.xlsx**

* 1 README file saved in .docx format

**Database\_postharvest\_chard\_rocket\_trial\_README.docx**

**Data set Documentation**

Abstract

This dataset contains experimental data to evaluate the physiological and quality changes of fresh-cut red chard (*Beta vulgaris*) and rocket (*Diplotaxis tenuifolia*) leaves illuminated during storage with monochromatic light emitting diode (LED) lamps, featuring different spectral component (red, green, yellow, white, blue and far-red) and same light intensity (35 μmol m−2 s-1). In particular, the dataset contains biomass, colorimetric and microbiological data determined up to 10 days of storage at 5 °C. Also, data on total antioxidant activity along the shelf-life were provided. The results were presented in the publication: Pennisi, G., Orsini, F., Castillejo, N., Gómez, P. A., Crepaldi, A., Fernández, J. A., Egea-Gilabert, C., Artés-Hernández, F., Gianquinto, G. (2021). Spectral composition from led lighting during storage affects nutraceuticals and safety attributes of fresh-cut red chard (Beta vulgaris) and rocket (Diplotaxis tenuifolia) leaves. Postharvest Biology and Technology, 175, 111500. <https://doi.org/10.1016/j.postharvbio.2021.111500>.

Content of the file

The file **Database\_postharvest\_chard\_rocket\_trial.xlsx** contains the experimental data used in the above publication. The data used have been divided by species (sheet “Chard” and sheet “Rocket”, respectively), and organized according to the analyzed variables. In particular, the analyzed variables are:

|  |  |
| --- | --- |
| **Variable** | **Description** |
| **lighting treatments** | Six lighting treatments were applied, using LED lamps featuring red (peak at 660 nm) [“RED”], green (peak at 517 nm) [“GREEN”], yellow (peak at 600 nm) [“YELLOW”], white (peak at 610 nm) [“WHITE”], blue (peak at 465 nm) [“BLUE”] or far red (peak at 730 nm) [“FAR RED”] diodes. Furthermore, a control treatment in darkness [“DARK”] was included. |
| **Lightness** | The lightness value L\* measures one property of a colour and defines black at 0 and white at 100. It is measured by a colorimeter. |
| **Hue Angle** | Hue angle is one of the properties (called color appearance parameters) of a color and can typically be represented quantitatively by a single number, often corresponding to an angular position around a central or neutral point or axis on a color space coordinate diagram. It is measured by a colorimeter. |
| **Carotenoids** | Total carotenoids accumulated in leaf sample expressed as mg per kg of fresh biomass. |
| **Chlorophyll** | Total chlorophylls accumulated in leaf sample expressed as mg per kg of fresh biomass. |
| **Phenoles** | Total phenols accumulated in leaf sample expressed as mg chlorogenic acid equivalents (CAE) per kg of fresh biomass. |
| **Enterobacteria** | Total enterobacteria counted after incubation and expressed as log colony forming units per gram of product (log CFU g−1) |
| **Psychrophilic** | Total psychrophilic bacteria counted after incubation and expressed as log colony forming units per gram of product (log CFU g−1) |
| **Moulds & Yeasts** | Total mould and yeast counted after incubation and expressed as log colony forming units per gram of product (log CFU g−1) |
| **ABTS** | 2,2′-azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) radical scavenging assay |
| **DPPH** | DPPH (2,2-diphenyl-1-picryl-hydrazyl-hydrate free radical method |
| **FRAP** | Ferric Reducing Antioxidant Power |
| **TAC** | Total Antioxidant Capacity |