

Sample preparation (protocols)

LNLS - Brazilian Synchrotron Light Laboratory

Contents

1	Contextualization / Introduction	5
2	Document structure	7
3	Cells	9
3.1	Animal cells	9
3.2	Vegetable cells	9
4	Hello bookdown	11
4.1	A section	11
5	Cross-references	13
5.1	Chapters and sub-chapters	13
5.2	Captioned figures and tables	13
6	Parts	17
7	Footnotes and citations	19
7.1	Footnotes	19
7.2	Citations	19
8	Blocks	21
8.1	Equations	21
8.2	Theorems and proofs	21
8.3	Callout blocks	21
9	Sharing your book	23
9.1	Publishing	23
9.2	404 pages	23
9.3	Metadata for sharing	23

Chapter 1

Contextualization / Introduction

Insuring.....

Chapter 2

Document structure

The structure of

```
# codigo
```


Chapter 3

Cells

3.1 Animal cells

3.1.1 Mammalian cells

3.1.2 Adherent mammalian cells

Mtheus, ...

$$x1 = (pH - 10)/1.2$$

$$x2 = (Temperature - 80)/11.9$$

$$x3 = ([TEOS]/[CTAB] - 1.4)/0.71$$

where the values of 1.2, 11.9 and 0.71 corresponds to

As these

3.1.3 Non-adherent mammalian cells

3.2 Vegetable cells

3.2.1 Roots

3.2.2 Leaves

Chapter 4

Hello bookdown

All chapters start with a first-level heading followed by your chapter title, like the line above. There should be only one first-level heading (#) per .Rmd file.

4.1 A section

All chapter sections start with a second-level (##) or higher heading followed by your section title, like the sections above and below here. You can have as many as you want within a chapter.

An unnumbered section

Chapters and sections are numbered by default. To un-number a heading, add a {.unnumbered} or the shorter {-} at the end of the heading, like in this section.

Chapter 5

Cross-references

Cross-references make it easier for your readers to find and link to elements in your book.

5.1 Chapters and sub-chapters

There are two steps to cross-reference any heading:

1. Label the heading: `# Hello world {#nice-label}`.
 - Leave the label off if you like the automated heading generated based on your heading title: for example, `# Hello world = # Hello world {#hello-world}`.
 - To label an un-numbered heading, use: `# Hello world {-#nice-label}` or `{# Hello world .unnumbered}`.
2. Next, reference the labeled heading anywhere in the text using `\@ref(nice-label)`; for example, please see Chapter 5.
 - If you prefer text as the link instead of a numbered reference use: any text you want can go here.

5.2 Captioned figures and tables

Figures and tables *with captions* can also be cross-referenced from elsewhere in your book using `\@ref(fig:chunk-label)` and `\@ref(tab:chunk-label)`, respectively.

See Figure 5.1.

```
par(mar = c(4, 4, .1, .1))
plot(pressure, type = 'b', pch = 19)
```

Don't miss Table 5.1.

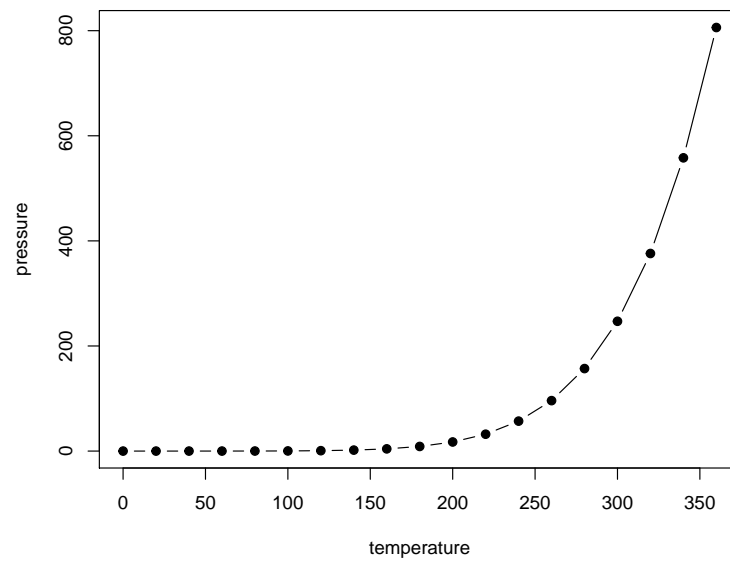


Figure 5.1: Here is a nice figure!

```
knitr::kable(  
  head(pressure, 10), caption = 'Here is a nice table!',  
  booktabs = TRUE  
)
```

Table 5.1: Here is a nice table!

temperature	pressure
0	0.0002
20	0.0012
40	0.0060
60	0.0300
80	0.0900
100	0.2700
120	0.7500
140	1.8500
160	4.2000
180	8.8000

Chapter 6

Parts

You can add parts to organize one or more book chapters together. Parts can be inserted at the top of an .Rmd file, before the first-level chapter heading in that same file.

Add a numbered part: `# (PART) Act one {-}` (followed by `# A chapter`)

Add an unnumbered part: `# (PART*) Act one {-}` (followed by `# A chapter`)

Add an appendix as a special kind of un-numbered part: `# (APPENDIX) Other stuff {-}` (followed by `# A chapter`). Chapters in an appendix are prepended with letters instead of numbers.

Chapter 7

Footnotes and citations

7.1 Footnotes

Footnotes are put inside the square brackets after a caret `^[]`. Like this one ¹.

7.2 Citations

Reference items in your bibliography file(s) using `@key`.

For example, we are using the **bookdown** package [?] (check out the last code chunk in `index.Rmd` to see how this citation key was added) in this sample book, which was built on top of R Markdown and **knitr** [?] (this citation was added manually in an external file `book.bib`). Note that the `.bib` files need to be listed in the `index.Rmd` with the YAML `bibliography` key.

The RStudio Visual Markdown Editor can also make it easier to insert citations: <https://rstudio.github.io/visual-markdown-editing/#/citations>

¹This is a footnote.

Chapter 8

Blocks

8.1 Equations

Here is an equation.

$$f(k) = \binom{n}{k} p^k (1-p)^{n-k} \quad (8.1)$$

You may refer to using `\@ref{eq:binom}`, like see Equation (8.1).

8.2 Theorems and proofs

Labeled theorems can be referenced in text using `\@ref{thm:tri}`, for example, check out this smart theorem 8.1.

Theorem 8.1. *For a right triangle, if c denotes the length of the hypotenuse and a and b denote the lengths of the **other** two sides, we have*

$$a^2 + b^2 = c^2$$

Read more here <https://bookdown.org/yihui/bookdown/markdown-extensions-by-bookdown.html>.

8.3 Callout blocks

The R Markdown Cookbook provides more help on how to use custom blocks to design your own callouts: <https://bookdown.org/yihui/rmarkdown-cookbook/custom-blocks.html>

Chapter 9

Sharing your book

9.1 Publishing

HTML books can be published online, see: <https://bookdown.org/yihui/bookdown/publishing.html>

9.2 404 pages

By default, users will be directed to a 404 page if they try to access a webpage that cannot be found. If you'd like to customize your 404 page instead of using the default, you may add either a `_404.Rmd` or `_404.md` file to your project root and use code and/or Markdown syntax.

9.3 Metadata for sharing

Bookdown HTML books will provide HTML metadata for social sharing on platforms like Twitter, Facebook, and LinkedIn, using information you provide in the `index.Rmd` YAML. To setup, set the `url` for your book and the path to your `cover-image` file. Your book's `title` and `description` are also used.

This `gitbook` uses the same social sharing data across all chapters in your book—all links shared will look the same.

Specify your book's source repository on GitHub using the `edit` key under the configuration options in the `_output.yml` file, which allows users to suggest an edit by linking to a chapter's source file.

Read more about the features of this output format here:

<https://pkgs.rstudio.com/bookdown/reference/gitbook.html>

Or use:

```
?bookdown::gitbook
```


Bibliography

Yihui Xie. *Dynamic Documents with R and knitr*. Chapman and Hall/CRC, Boca Raton, Florida, 2nd edition, 2015. URL <http://yihui.org/knitr/>. ISBN 978-1498716963.

Yihui Xie. *bookdown: Authoring Books and Technical Documents with R Markdown*, 2021. URL <https://CRAN.R-project.org/package=bookdown>. R package version 0.24.