

1 Early Career Paper

2
3 **LaTeX submission template for Advances in**
4 **Geochemistry and Cosmochemistry**
5 **(2025-03-03)**

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10 Online supplementary material: <https://journals.uu.se/AGC/about/submissions>

11 **Abstract**

12 This document explains the use of the LaTeX template for submission of manuscripts
13 to *Advances in Geochemistry and Cosmochemistry* (AGC). It contains the relevant
14 technical information for authors who wish to submit their article in LaTeX format.
15 The general guidelines for manuscripts to be submitted to AGC can be found in the
16 [Guide for Authors](#).

17 **1 File structure**

18 The template consists of several files which are explained in the following. All of
19 these files and the directories (aka. folders) “figures” and “tables” need to be placed
20 in the same parent directory. Additional information on the usage of these files
21 is contained in some of the files themselves in the form of comments. Some of
22 the content of the manuscript (e.g. the abstract) is outsourced to separate files
23 to facilitate the copyediting process. For initial submission, only the compiled PDF
24 file “AGC_Submission.pdf” is required. For final submission after acceptance of a
25 manuscript for publication, all source files described below must also be submitted.

1.1 AGC_Submission.tex

This is the main LaTeX file, which can be compiled (see [2 Compiling](#)) and calls other files to produce the manuscript PDF file AGC_Submission.pdf. To ensure compatibility with the LaTeX template that will be used for final production, this file should not be modified except where input files are loaded. Instructions for which lines need to be modified are found near the top of the file.

1.2 abstract.tex

This file contains only the abstract. An example version of this file is included with this template to demonstrate its usage, called abstract_example.tex.

1.3 manuscript.tex

This file contains the main text body of the manuscript. If the manuscript contains additional abstracts in languages other than english or a plain language summary, these should be included at the beginning of this file as starred subsections, e.g. `\subsection*{Resumen}`. An example version of this file is included with this template to demonstrate its usage, called manuscript_example.tex.

1.4 authorinfo.tex

This file contains the title of the manuscript as well as the names and affiliations of the authors and the optional link to any supplementary data, code or outputs archived in an external, online repository. If the authors wish to remain anonymous to the reviewers during the review process (blind review), they nevertheless need to use this file but should enter "Anonymous" as the only author and comment out the affiliation fields. The line for the corresponding author should be commented out for initial submission and only be put back for final submission. Details on the use of this file are explained with comments in the file itself. An example version of this file is included with this template to demonstrate its usage, called authorinfo_example.tex.

1.5 `addpackages.tex`

This file should be used to load additional packages as needed. Please only load packages that are essential to specific needs of the manuscript and do not modify the general design or behavior of the template. This file is also where individual hyphenation rules can be defined.

1.6 `bibfile.bib`

For final submission, this is the bibliography file in BibTeX format and should only contain the references, which are actually cited in the manuscript, not the entire literature database of the author(s). During preparation of the manuscript for initial submission, authors may use their entire database, if they find it more convenient to do so. The `.bib` file for final submission is best exported from a reference manager and should not contain excessive information, such as abstracts. All entries in the `.bib` file must be in Latin script (aka. Roman script). If this is absolutely impossible for certain entries, please communicate this issue to the editor in the cover letter during initial submission. Please make sure that all entries contain a DOI if the respective documents have one. Some reference management software can retrieve DOIs from the internet for database entries that are missing the DOI. Authors should take care that the year of publication in all entries conforms to the citation suggestion of the publication itself. This may either be the year of the print release of, e.g. the respective journal volume or issue or the year of online availability. An example version of this file is included with this template to demonstrate its usage, called `bibfile_example.bib`.

1.7 `figures (folder)`

This is a folder containing all figures (see [3.4 Figures](#)). If the manuscript contains no figures, this folder is not needed. The figure files should be given short, concise, and meaningful names.

1.8 tables (folder)

This folder should contain all CSV files, which are loaded by tables (see 3.5 Tables). If the manuscript contains no tables, this folder is not needed. The CSV files should be given short, concise, and meaningful names.

2 Compiling

The template was developed for use with pdfTeX and BibTeX; it is not compatible with XeTeX or LuaTeX. For full compilation of the manuscript, run the following sequence with pdflatex:

- pdflatex AGC_Submission
- bibtex AGC_Submission
- pdflatex AGC_Submission
- pdflatex AGC_Submission

If the compilation fails due to an error in the source code and keeps failing after correction of the error, it may help to delete all auxiliary files and try again. Please check if the line numbers appear as they should throughout the manuscript (running text only, not in captions or tables). It can occasionally occur that lines shift even on the third compilation of the same file, leading to lines without numbers or numbers without lines. In these cases, an additional compilation run with pdflatex AGC_Submission may be necessary.

3 Formatting of text elements

3.1 Headings

There are three heading levels:

1. \section{Top level heading}
2. \subsection{Secondary heading}
3. \subsubsection{Tertiary heading}

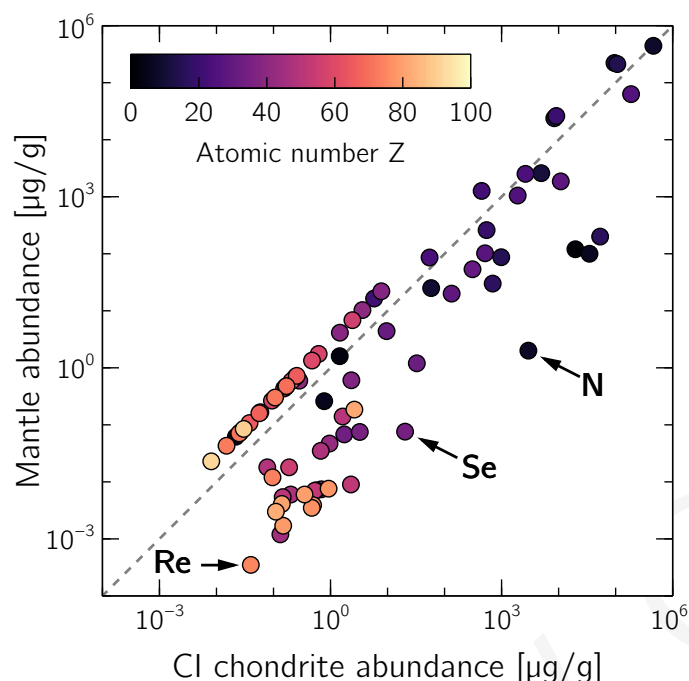


Figure 1: Comparison of elemental abundance between Earth's mantle and CI chondrite (Palme and O'Neill, 2014). Figure captions should contain all information that is essential for understanding the figure. The color map used to indicate Z is called "Magma".

102 Please do not use any additional subdivisions of the text except unnamed para-
103 graphs.

104 3.2 Citations

105 For citations in the text flow, e.g. Pourret et al. (2022), use \citet{...}. For
106 citations in parentheses, e.g. (Pourret et al., 2022), use \citep{...}. For citations
107 in parentheses containing additional text, e.g. (see Pourret et al., 2022, for a review),
108 use \citep[text-before][text-after]{...}.

109 3.3 Equations

110 Authors should carefully consider, which expressions should be typeset in-line (e.g.
111 $a^2 + b^2 = c^2$) and which should go on a separate line or lines as a referencable equation.
112 In-line format should generally be used for very short and simple mathematical expres-

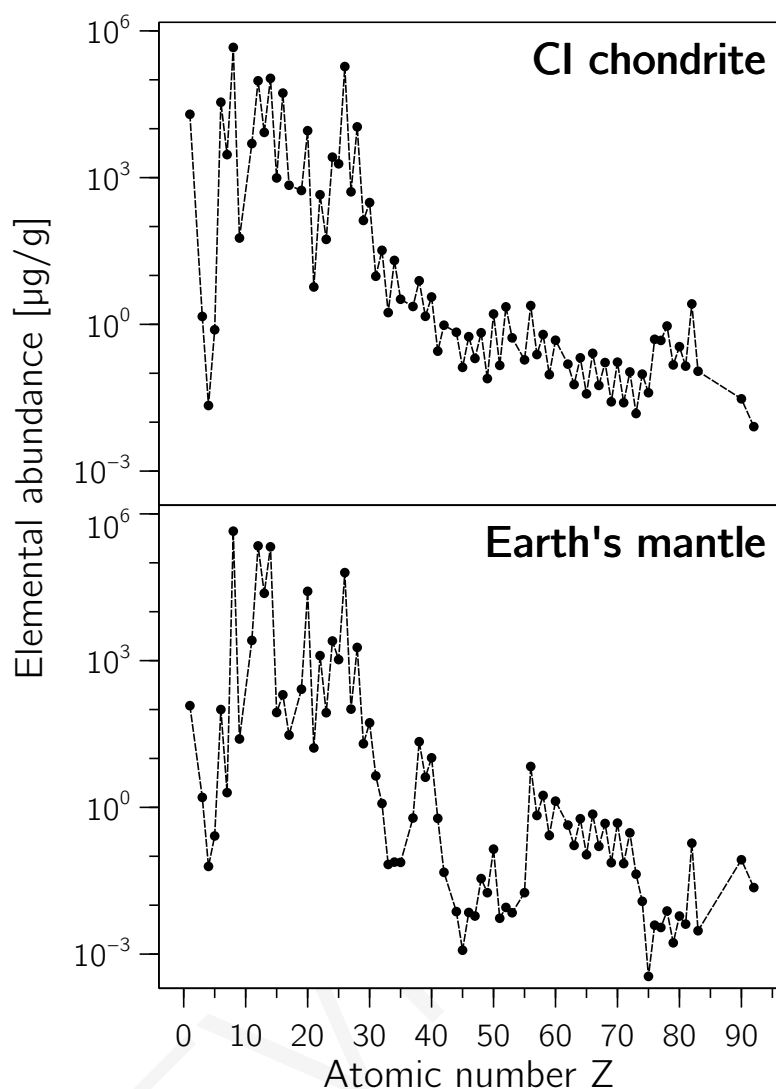


Figure 2: Abundance of elements in CI chondrite and Earth's mantle (Palme and O'Neill, 2014). Subfigures can either be directly labeled (such as "CI chondrite" and "Earth's mantle" here), or by using lower case letters.

113 sions. Short referencable equations, such as Bragg's law (Eq. 1) will normally be type-
 114 set in a single line, using the equation environment (see manuscript_example.tex):

$$n\lambda = 2d \sin \theta \quad (1)$$



wherein $n = 1, 2, 3 \dots$ = order, λ = wavelength, d = grating constant, and θ = angle of incidence. Equations that require multiple lines should be typeset using the `align` environment:

$$\Delta S = S_{T2} - S_{T1} \quad (2)$$

$$= \int_{T1}^{T2} \frac{C_p}{T} dT \quad (3)$$

$$= \int_{T1}^{T2} C_p d \ln T \quad (4)$$

In these cases, every line gets its own reference number, which can be referred to in the text. If necessary, equations can also span the entire width of the page, as seen in Equations 5 and 6. Such equations will not be printed at the specified place in the text but at the top of the following page; authors should account for that when referring to the equation. Some equations are too long to be typeset in a single column in the final document. If authors anticipate that an equation will fall into this category, they should indicate this by enclosing the corresponding equation or `align` environment in a `fullwidthblock*` environment (see `manuscript_example.tex`). It is often useful to gather several or even all such full-width equations in a single `fullwidthblock*` environment, which will cause them to be printed together on the same page.

3.4 Figures

Figures can be submitted in various formats, and can also be included in the latex template in all of these formats. For best results, we suggest to use PDF (.pdf) for vector graphics and TIFF (.tif) for pixel graphics. When using PDF format, all fonts must be embedded. If and only if certain fonts cannot be embedded for some reason, the respective glyphs must be converted to paths before the graphic is included in the

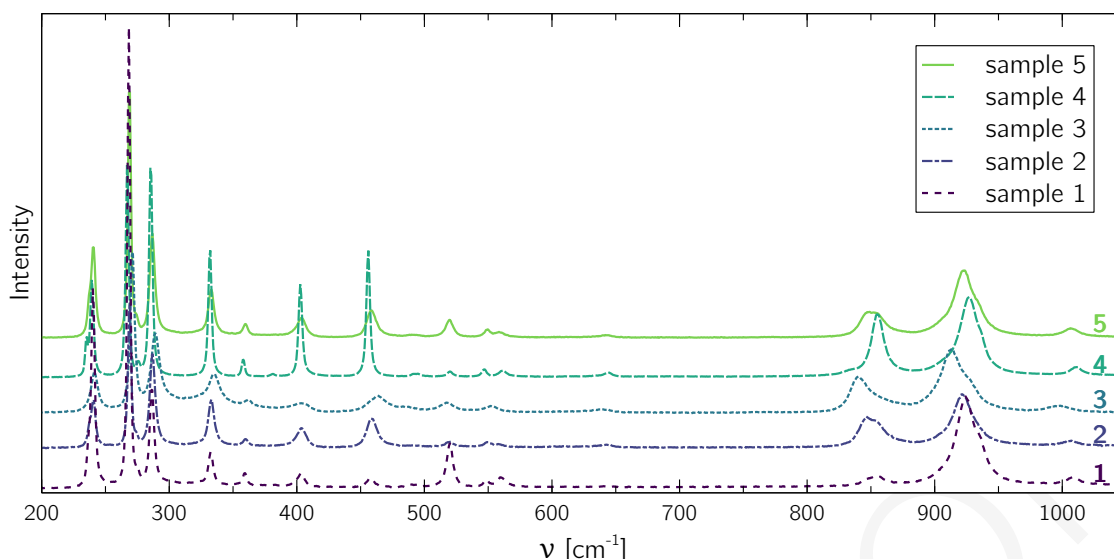


Figure 3: Raman spectra of 5 samples. The spectra are shown in different colors (“Viridis” color palette) and different line types. Two different methods of labeling are shown: direct labeling near the right edge of the figure, as well as with a key in the box in the upper right corner. While both methods are permissible, direct labeling is often quicker to read and understand.

manuscript. Be aware that this can significantly slow down rendering of the resulting PDF, which is annoying to readers on less powerful hardware. In extreme cases, the copyediting team may convert overly complex vector graphics into pixel graphics to speed up rendering. All figures must be included via the `includegraphics` command inside a `figure` environment. Please do not use the LaTeX template itself to draw figures or add elements to figures because this may cause problems when converting the article from PDF into the online version for the webpage. You may of course draw figures in a separate LaTeX document and then include the resulting PDF figure as usual. For examples how to typeset single column figures, see Fig. 1 and 2. Some figures may be too large for a single column in the final paper and will have to span the full page width. Please indicate these figures by using the `figure*` environment instead of the non-star version (see Fig. 3) and be aware that such figures will be placed at the top of the next page after all previous floats have been placed. It may be necessary to experiment with the placement of the figures in the `manuscript.tex` file to get the desired result, especially if the ratio of floats to text is high. Figures may need to be placed in the source code significantly before the place where they

are supposed to appear in the PDF, but must always remain in the intended order. All figures should be referenced in the text at least once (see [3.8 Referencing figures](#) for how to). The order of the figures should generally follow the order in which they are first referenced.

3.5 Tables

The best design for a table is largely dictated by the content of the table. Therefore, AGC does not impose specific design rules apart from those detailed in the Guide for Authors. However, all tables must be typeset using the `table` environment and must contain a caption, which must be placed above the table body. All tables should be referenced in the text at least once. If they are not referenced, then they probably do not need to be in the manuscript at all. Since tables are floating objects, the same considerations apply to their placement as to that of figures (see [3.4 Figures](#)). Similarly to figures, the starred version of the `table` environment should be used to typeset page-width tables (e.g. [Tab. 2](#)).

Small tables (e.g. [Tab. 1](#)) and tables which primarily contain text (e.g. [Tab. 2](#)) may be typeset manually directly in the `manuscript.tex` file. Larger tables, which contain numerical data should source their input from external CSV files using the `pgfplotstable` package (e.g. [Tab. 3](#)). Any relevant CSV files obviously need to be submitted along with the other files during final submission. Using external CSV files greatly reduces errors during typesetting and speeds up the publishing process. The CSV files should be stored in a dedicated folder called `tables`. The font size may be set to `\small` or `\footnotesize` or even `\scriptsize` in tables if necessary.

3.6 Physical quantities

Quantities (numbers with units) should always be typeset using version 3 of the `siunitx` package. Please do not deviate from this recommendation unless absolutely necessary! Please refer to the package documentation for usage (<https://ctan.org/pkg/siunitx>). Reciprocal units can be displayed with a forward slash, e.g. 5021.3 kJ/mol or with a negative exponent, e.g. 5021.3 kJ mol⁻¹. Authors are

Table 1: Theoretical compositions of K-feldspar, muscovite, and quartz, based on published atomic weights (Wieser and Coplen, 2011). For abbreviations see Whitney and Evans (2010).

Mineral Formula	Kfs KAlSi_3O_8	Ms $\text{KAl}_3\text{Si}_3\text{O}_{10}(\text{OH})_2$	Qz SiO_2
SiO_2 [wt.%]	64.76	45.25	100.00
Al_2O_3 [wt.%]	18.32	38.40	0.00
K_2O [wt.%]	16.92	11.82	0.00
H_2O [wt.%]	0.00	4.52	0.00

Table 2: List and description of rock samples collected during field seasons 2019 and 2020.

Rock type	Samples	Comments
Coarse granite	XY01, XY04, XY05	Dark and white mica present, slight metamorphic overprint
Aplite	XY02, XY03	10 cm wide vein, one single outcrop (6 m length) near XY04
Mica schist	XY06, XY07, XY08	Biotite-muscovite schist with occasional garnet and staurolite
Dark gneiss	XY12, XY13, XY15	Fine grained, homogeneous in appearance
Marble	XY 18	Lense between dark gneiss and mica schist, origin unclear

advised to choose one style and not switch back and forth within a single manuscript. The `siunitx` package can also be used in math mode. As an example, compare the following to the respective line in the source code (`manuscript_example.tex`):

$$1 \text{ W} = 1 \text{ kg m}^2 \text{ s}^{-3} = 1 \text{ A}^2 \Omega.$$

3.7 Chemical notation

It is recommended to use version 4 of the `mhchem` package to display chemical formulas and the like. The package is loaded in the main `.tex` file by default. Please refer to the package documentation for usage (<https://ctan.org/pkg/mhchem>).

3.8 Referencing figures

Figures, tables, numbered equations, and sections can be referenced in the text with hyperlinks, if they are marked with a unique label. The following labeling scheme should be used:

- Figures: `\label{fig:...}` directly following the closing curly brace of the caption.
- Tables: `\label{tab:...}` directly following the closing curly brace of the caption.

- Equations: `\label{eq:...}` at the end of the first line or at the end of each line which shall be referenced individually.
- Sections and sub(sub)sections: `\label{sec:...}` directly following the closing curly brace of the (sub(sub))section header.

The “...” obviously needs to be replaced with a unique and sensible name which should not be excessively long. For example, `sec:intro` would be a good label for the section Introduction. It is generally preferable not to use numbers (e.g. `fig:3`) but rather short descriptors (e.g. `fig:XRDdraw`), because the figure order might change during writing or revisions. Using the identifier (e.g. `XRDdraw` in our example) as file names (e.g. “`XRDdraw.tif`”) helps avoiding confusion and is considered good practice.

Referencing of figures, tables, and equations should normally be done with the `autoref` command, e.g. `\autoref{fig:XRDdraw}`. If only the number of the referenced object is required, e.g. for all but the first of a list of several referenced figures, the `\ref{...}` command can be used. To reference ((sub)sub)sections, the `autoref` or `ref` command should be used in combination with the `nameref` command, e.g. `\ref{sec:intro} \nameref{sec:intro}`.

3.9 Some more conventions

3.9.1 Quotations

Please use ```` as opening quotation marks and `''` as closing quotation marks, e.g. “quotation” (compare source code).

“Blockquotes will rarely be necessary, except possibly in review papers.

These should be typeset using the `\begin{quote}...\end{quote}` environment and also be enclosed in quotation marks to avoid ambiguity (for usage see this section in the `manuscript_example.tex` file).”

3.9.2 Footnotes

Use of footnotes¹ is discouraged but permissible where necessary.

¹such as this one

216 3.10 Source code style

217 For the initial submission, where only the PDF is submitted, the style of the source
218 code is obviously of no concern to the journal. However, the copyediting team will
219 eventually have to work with the .tex files after acceptance of a manuscript. It is,
220 therefore, in the best interest of the authors to keep their source code as orderly
221 as possible. Empty lines should be used deliberately to structure the manuscript. It
222 is good practice in LaTeX (although not mandatory) to start a new line after each
223 sentence, because this makes automatic text processing and navigation in some text
224 editors easier. Please remove any chunks of old text that has been commented out
225 as well as comments only relevant for the authors before submitting the final files.
226 Adding comments to the copyeditors wherever the authors may feel they are necessary
227 (e.g. unusual formatting requirements in equations or tables) is appreciated and may
228 speed up the typesetting process.

229 4 Revisions

230 If a manuscript is returned to authors by the handling editor with requests for revisions,
231 the manuscript must be resubmitted in form of two separate PDF files: (1) the revised
232 manuscript with all changes highlighted, and (2) the clean revised manuscript. The
233 highlighted version should be produced by comparing the `manuscript.tex` file of the
234 original submission (which needs to be renamed first, e.g. to `old.tex`) with that of
235 the revised submission (now called `manuscript.tex`) using the program `latexdiff`,
236 which is part of most LaTeX installations. The command line syntax is as follows:

```
237 latexdiff old.tex manuscript.tex > diff.tex
```

238 This will produce a new .tex file called `diff.tex`, which contains the new manuscript
239 including highlighting of changes. The file `AGC_Submission.tex` normally calls
240 `manuscript.tex`. To produce the document with highlighted changes, the line
241 `\input{manuscript.tex}` needs to be changed to `\input{diff.tex}`. Afterwards,
242 compile as usual and rename the resulting PDF file to make clear that it is the

243 highlighted version. Revert the changes in `AGC_Submission.tex` to compile the
244 clean revised manuscript.

245 Authors should also upload all [Files for final submission](#) at this point unless it
246 is clear that there will be another round of reviews and revisions. This allows the
247 editorial team to move to production of the proofs immediately, if the revised version
248 is accepted for publication without further changes and thus speeds up publication.
249 Any missing files will be requested after final acceptance of the manuscript.

250 5 Files for final submission

251 After final acceptance of a manuscript in its current form, authors will be asked to
252 upload all source files, which are required to produce the proofs for authors to check
253 and ultimately the published article. The following files need to be submitted:

- 254 • The latest `manuscript.tex` file.
- 255 • The latest `abstract.tex` file.
- 256 • The `authorinfo.tex` file. Do not forget to include all authors, especially if initial
257 review was anonymous.
- 258 • The `bibfile.bib` file, containing only the cited references. Check that all available
259 DOIs are included and abstracts are not included.
- 260 • The `addpackages.tex` file. Consider commenting packages you loaded there if
261 you think it may help the copyediting team to understand what you were doing.
- 262 • All figures in the appropriate formats. Check if resolution of pixel graphics is high
263 enough for the final article and if all fonts are embedded in vector graphic figures.
- 264 • All CSV files for tables.
- 265 • The latest `AGC_submission.pdf` file compiled from the files above. This file will
266 not directly be used in the production of the final PDF but allows copyeditors to
267 see what the authors intended in cases where the final production template may
268 yield different results than the submitted template.
- 269 • The `AGC_Submission.tex` file that was used to compile the `AGC_submission.pdf`
270 file. This file will not directly be used in the production of the final PDF but helps

271 with debugging issues if problems arise during compilation of the final production
272 template.

273 Licence agreement

274 By submitting an article to *Advances in Geochemistry and Cosmochemistry*, the
275 authors agree that their article will, upon acceptance for publication, be distributed
276 under the Creative Commons Attribution 4.0 International licence ([CC BY 4.0](#)), with
277 copyright retained by authors by default. Articles will generally contain the following
278 statement after the Acknowledgements and before the References:

279 This article is distributed under the terms of the Creative Commons Attri-
280 bution 4.0 International Licence ([CC BY 4.0](#)), which permits unrestricted
281 use, distribution, and reproduction in any medium, provided appropriate
282 credit is given to the original author(s) and source, as well as a link to
283 the Creative Commons licence, and an indication of changes that were
284 made.

285 Should any author(s) require that the published article deviate from the above (e.g.
286 copyright needs to reside with your employer or an alternative licence is required – e.g.
287 authors who are Crown employees), you must add this request to your cover letter
288 to the editor. The submitting author is responsible for requesting (and following up)
289 this deviation from the standard licensing agreement. All deviations from the above
290 must be agreed in writing as early as possible in the submission process and must be
291 in place before the article is sent for typesetting.

292 References

293 Palme, H. and O'Neill, H. (2014). Cosmochemical Estimates of Mantle Composition. In *Treatise on*
294 *Geochemistry*. Elsevier, 1–39, doi:[10.1016/B978-0-08-095975-7.00201-1](#).

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296 More Inclusive Metrics and Open Science to Measure Research Assessment in Earth and Natural
297 Sciences. *Frontiers in Research Metrics and Analytics* 7: 850333, doi:[10.3389/frma.2022.850333](https://doi.org/10.3389/frma.2022.850333).
- 298 Whitney, D. L. and Evans, B. W. (2010). Abbreviations for names of rock-forming minerals. *American*
299 *Mineralogist* 95: 185–187, doi:[10.2138/am.2010.3371](https://doi.org/10.2138/am.2010.3371).
- 300 Wieser, M. E. and Coplen, T. B. (2011). Atomic weights of the elements 2009 (IUPAC Technical
301 Report). *Pure and Applied Chemistry* 83: 359–396, doi:[10.1351/PAC-REP-10-09-14](https://doi.org/10.1351/PAC-REP-10-09-14).

Table 3: Example of a table with data loaded from an external CSV file.

t [s]	T [°C]	NaCl [$\mu\text{g/g}$]	pH
10	25	$1.204 \cdot 10^3$	6.8
20	25	$1.199 \cdot 10^3$	6.8
30	25	$1.205 \cdot 10^3$	6.8
40	25	$1.200 \cdot 10^3$	6.8
50	25	$1.203 \cdot 10^3$	6.8
60	25	$1.200 \cdot 10^3$	6.9
70	25	$1.198 \cdot 10^3$	6.8
80	25	$1.201 \cdot 10^3$	6.8
90	25	$1.203 \cdot 10^3$	6.8
100	25	$1.200 \cdot 10^3$	6.8
110	25	$1.199 \cdot 10^3$	6.8
120	25	$1.205 \cdot 10^3$	6.9
130	25	$1.204 \cdot 10^3$	6.9
140	25	$1.204 \cdot 10^3$	6.8
150	25	$1.200 \cdot 10^3$	6.8
160	25	$1.203 \cdot 10^3$	6.8
170	25	$1.200 \cdot 10^3$	6.8
180	25	$1.198 \cdot 10^3$	6.8
190	30	$1.204 \cdot 10^3$	6.8
200	35	$1.199 \cdot 10^3$	7.0
210	40	$1.205 \cdot 10^3$	7.0
220	45	$1.200 \cdot 10^3$	7.1
230	50	$1.203 \cdot 10^3$	7.0
240	55	$1.203 \cdot 10^3$	7.2
250	60	$1.200 \cdot 10^3$	7.2
260	65	$1.199 \cdot 10^3$	7.3
270	70	$1.205 \cdot 10^3$	7.4
280	75	$1.204 \cdot 10^3$	7.4
290	80	$1.200 \cdot 10^3$	7.5
300	85	$1.198 \cdot 10^3$	7.4
310	90	$1.201 \cdot 10^3$	7.5
320	95	$1.203 \cdot 10^3$	7.5
330	100	$1.200 \cdot 10^3$	7.6
340	100	$1.199 \cdot 10^3$	7.6
350	100	$1.205 \cdot 10^3$	7.6
360	100	$1.204 \cdot 10^3$	7.6