Appendix 1

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Type of the Paper (Article, Review, Mini-review, Communication, etc.)

Title

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**Abstract:** An abstract for research articles should concisely summarise the study within a paragraph of no more than 200 words. Authors are encouraged to adopt a structured format without using specific headings. The abstract must objectively reflect the article's content and should not include results that are not discussed or supported in the main text. Additionally, it should avoid overstating the main conclusions.

|  |
| --- |
| **Citation:** To be added by editorial office during the production. Beisembayev, W., Maybolsynov, H., Ivanov, Y. (2025). The title of the paper. Bulletin of the L.N. Gumilyov ENU. Chemistry. Geography. Ecology Series, 150(1), 1-5. [*https://doi.org/10.3390/xxxxx*](https://doi.org/10.3390/xxxxx)Academic Editor: Firstname LastnameReceived: dateRevised: dateAccepted: datePublished: dateИзображение выглядит как символ, Шрифт, Графика, логотип  Автоматически созданное описание**Copyright:** © 2025 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY NC) license (https://creativecommons.org/licenses/by-nc/4.0/). |

**Keywords:** keyword 1; keyword 2; keyword 3 (List three to ten pertinent keywords specific to the article yet reasonably common within the subject discipline)

0. How to Use This Template

The template details the sections that can be used in a manuscript.

**Remove this paragraph and start section numbering with 1.** For any questions, please contact the journal's editorial office or vest\_chem@enu.kz. The authors are responsible for the correct spelling of personal data, including first and last names, affiliation, contact information, and the ORCID. The manuscript is submitted to the editors in Word format (page – A4, portrait orientation, margins on all sides – 20 mm. Font: type – Times New Roman, size (font) – 12).

1. Introduction

The introduction should provide a concise overview that situates the study within a broader context and emphasises its significance. It should clarify the objective of the research and its relevance. A thorough review of the existing literature in the field is essential, with critical studies being referenced. Controversial and differing viewpoints should be addressed when appropriate. Lastly, the main goal of the research should be briefly stated, along with the key conclusions drawn from it. Aim to make the introduction accessible to scientists who may not be specialists in your study area. References should be given in order of appearance and indicated as Author, Year in round brackets—e.g., (Smith et al., 2009) following the APA-7th edition referencing style. See the end of the document for further details on references.

2. Materials and methods

The Materials and Methods section must provide enough detail for others to replicate the work. By publishing your manuscript, you agree to share all materials, data, code, and protocols with readers, and any restrictions should be disclosed upon submission. New methods should be detailed, while established methods can be briefly mentioned and cited.

If authors have used AI tools in writing the article, the "Materials and Methods" section must indicate how the AI tool was employed and which tool was used. Authors are entirely responsible for the content of their manuscript, including those parts generated by the AI tool, and are therefore liable for any violation of publication ethics.

Manuscripts with large datasets must indicate where the data is stored and include accession numbers. If the numbers still need to be available at submission, note that they will be provided during the review process but must be included before publication. Studies involving animal or human interventions and other research requiring ethical approval must specify the approving authority and the corresponding ethical approval code.

**3. Results**

This part can be organised using subheadings. It should deliver a clear and succinct overview of the experimental findings, their analysis, and the conclusions that can be derived from the experiments.

*3.1. Subsection*

3.1.1. Subsubsection

Bulleted lists look like this:

* First bullet;
* Second bullet;
* Third bullet.

Numbered lists can be added as follows:

1. First item;
2. Second item;
3. Third item.

The text continues here.

3.2. Figures, Tables and Schemes

All figures and tables should be cited in the main text as Figure 1, Table 1, etc.\As much as possible, all data (in both tables and graphs) must be represented with statistical treatment results (mean, standard deviation, errors, etc.). In the graphs, please add the error bar elements. Tables are included directly in the work text. They should be numbered and accompanied by a reference to them in the text of the work. Figures and graphs should be presented in standard formats: TIFF, JPEG, or PNG. Bitmaps must be done with a resolution of 600 dpi. All details must be conveyed in the figures. When using drawings from other sources, a link to the source (Reprinted from [18] or Adapted and redrawn from Ref. [18]) and obtaining permission to use previously published material (Permission) is required. In the case of large tables, the font size can be reduced to 9 pt or 10 pt.



**Figure 1.** This is a figure. The formatting for schemes is consistent with this

**Table 1.** This is a table. It is essential to position tables within the main text close to the first instance they are mentioned

|  |  |  |
| --- | --- | --- |
| **Title 1** | **Title 2** | **Title 3** |
| entry 1 | data | data |
| entry 2 | data | data 1 |

1 Tables may have a footer.

The text continues here (Figure 2 and Table 2).

|  |  |
| --- | --- |
|      View Vol. 148 No. 3 (2024)      |      View Vol. 145 No. 4 (2023)      |
| (**a**) | (**b**) |

**Figure 2.** This is a figure. Diagrams should adhere to a different structure. When there are several panels, they need to be enumerated as (a) an explanation of the content in the first panel and (b) an explanation of the content in the second panel. Illustrations should be positioned in the main text close to their initial mention

**Table 2.** This is a table. It is essential to position tables within the main text close to the first instance they are mentioned

|  |  |  |  |
| --- | --- | --- | --- |
| **Title 1** | **Title 2** | **Title 3** | **Title 4** |
| entry 1 \* | data | data | data |
| data | data | data |
| data | data | data |
| entry 2 | data | data | data |
| data | data | data |
| entry 3 | data | data | data |
| data | data | data |
| data | data | data |
| data | data | data |
| entry 4 | data | data | data |
| data | data | data |

\* Tables may have a footer.

3.3. Formatting of Mathematical or Chemical Equations

This is example 1 of an equation:

y = ax + b, (1)

The text following an equation does not need to be in a new paragraph. Please punctuate equations as regular text.

This is example 2 of an equation:

ax2 + bx + c = 0 (2)

The text following an equation does not need to be in a new paragraph. Please punctuate equations as regular text.

4. Discussion

The authors must explore and interpret the results in light of earlier research and the established hypotheses. They should consider the significance of the findings within a wide-ranging context. Additionally, suggestions for future research avenues might be included.

5. Conclusion

This section is mandatory. A conclusion in a research paper is the final section where you summarise and conclude your research, highlighting your study's key findings and insights.

**6. Supplementary Materials**

The following supporting information can be downloaded at … (a link), Figure S1: title; Table S1: title; Video S1: title. If there is no supplemental material, please note as:

**6. Supplementary Materials:** there is no supplementary material.

**7. Author Contributions**

A short paragraph specifying their contributions must be provided for research articles with several authors. The following statements should be used “Conceptualization, X.X. and Y.Y.; methodology, X.X.; software, X.X.; validation, X.X., Y.Y. and Z.Z.; formal analysis, X.X.; investigation, X.X.; resources, X.X.; data curation, X.X.; writing—original draft preparation, X.X.; writing—review and editing, X.X.; visualisation, X.X.; supervision, X.X.; project administration, X.X.; funding acquisition, Y.Y. All authors have read and agreed to the published version of the manuscript.” Authorship must be limited to those who have contributed substantially to the work reported.

**8. Author Information**

This information must be given to all authors in the following form:

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**9. Funding:** Please add: “This research received no external funding” or “This research was funded by the name of FUNDER, grant number XXX” and “The APC was funded by XXX”.

**10. Acknowledgements:** You can acknowledge any support not included in the author’s contributions or funding sections in this section. This may encompass administrative and technical assistance.

**11. Conflicts of Interest:** Authors must declare any conflicts of interest or state, “The authors declare no conflicts of interest.” This includes personal circumstances or interests that may improperly influence the research results. This must be disclosed if funders were involved in the study's design, data collection, analysis, manuscript writing, or publication decisions. If they were not involved, state, “The funders had no role in the study’s design, data collection, analysis, manuscript writing, or publication decisions”.

12. References

Recommended article length and number of references: reviews (≥10,000 words and ≥100 references), mini reviews (6,000 to 10,000 words and ≥50 references), research papers (≥3,500 words and ≥25 references).

In the text of the article and tables and captions, references should be given in parentheses with the author and year, for example (Smith et al., 2009), by the bibliographic style of APA-7th edition. At the end of the article, the list of references should provide a complete list of sources in alphabetical order according to APA-7th edition. The list of sources should be numbered. (<https://apastyle.apa.org/instructional-aids/reference-examples.pdf>).

Example:

A bibliography software tool such as EndNote, Mendeley Reference Manager, or Zotero is advisable when preparing your references. This will help prevent typing errors and the inclusion of duplicate entries. Include the digital object identifier (DOI) where available for all references (Ge et al., 2023; Prokhorov et al., 2016; Zhang et al., 2023).

Citations and references in the Supplementary Materials are permitted, provided they appear in the reference list here.

References

*Journal Article*

1. Ge, W., Mao, H., Ling, Y., Min, F., Chen, J., Liu, L., Zhang, Y., Song, S. (2023). Insight into the adsorption mechanism between chitosan and kaolinite surface by density functional theory calculation. *Chem Phys* 575, 112069. <https://doi.org/10.1016/J.CHEMPHYS.2023.112069>

2. Prokhorov, E., Luna-Bárcenas, G., González-Campos, J.B., Kovalenko, Y., García-Carvajal, Z.Y., Mota-Morales, J. (2016). Proton conductivity and relaxation properties of chitosan-acetate films. *Electrochim Acta* 215, 600–608. <https://doi.org/10.1016/j.electacta.2016.08.148>

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If the authors cite original works (sources) in Kazakh or Russian, they must provide bibliographic details providing their transliteration, as shown below:

3. Beisembaev, В.B., Kunaev, A.M., Kenzhaliev, В.K. (1998). Theory and practice of heap’s leaching of copper (Teorija i praktika kuchnogo vyshhelachivanija medi in Russian), 1st ed. Gylym, Almaty. <https://doi.org/10.1016/galym.1998.08.148>

Or

4. Bukhtiyarov I.V. (2019). Sovremennoe sostoyanie i osnovnye napravleniya sohraneniya i ukrepleniya zdorov'ya rabotayushchego naseleniya Rossii. [Current state and main directions of maintaining and strengthening the health of the working population of Russia]. *Medicina truda i promyshlennaya ekologiya [Occupational medicine and industrial ecology]* 59(9), 527-532. doi: 10.31089/1026-9428-2019-59-9-527532

The following information must be given in Kazakh.

Мақаланың аты

Аты Тегі, Аты Тегі және Аты Тегі

**Аңдатпа:** Зерттеу мақалаларына арналған аңдатпа 200 сөзден аспайтын абзац ішінде зерттеуді қысқаша мазмұндауы керек. Авторларға арнайы тақырыптарды пайдаланбай құрылымдық форматты қабылдау ұсынылады. Аңдатпа мақаланың мазмұнын объективті түрде көрсетуі керек және негізгі мәтінде талқыланбаған немесе қолдалмаған нәтижелерді қамтымауы керек. Сонымен қатар, ол негізгі қорытындыларды асыра айтудан аулақ болу керек.

**Түйін сөздер:** түйін сөз 1; түйін сөз 2; түйін сөз 3 (мақалаға тән, бірақ пәндік пәнде жеткілікті түрде кең таралған 3-10 түйін сөзді тізімдеңіз)

The following information must be given in Russian.

Название статьи

Имя Фамилия, Имя Фамилия и Имя Фамилия

**Аннотация:** Аннотация для научных статей должна кратко резюмировать исследование в абзаце не более 200 слов. Авторам рекомендуется использовать структурированный формат без использования конкретных заголовков. Аннотация должна объективно отражать содержание статьи и не должна включать результаты, которые не обсуждаются или не поддерживаются в основном тексте. Кроме того, она должна избегать преувеличения основных выводов.

**Ключевые слова:** ключевое слово 1; ключевое слово 2; ключевое слово 3 (перечислите от трех до десяти соответствующих ключевых слов, относящихся к статье, но достаточно распространенных в рамках предметной области)