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| Book Name: | [**Chemistry and Biochemistry: Research Progress**](https://www.bookpi.org/bookstore/product/chemistry-and-biochemistry-research-progress-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4863** |
| Title of the Manuscript:  | **Distribution of chemical elements in River waters** |
| Type of the Article | **Book Chapter** |

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| PART 1: Comments |
|  | Reviewer’s comment**Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | **The manuscript has significance in the academic fraternity working on the surface water chemistry. The usage of statistical tools would add significance for the readers.**  |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | **No, Revision is needed.** **Suggested - River water chemistry in Romania: An overview**  |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | 1. It is advised to reframe the statement “A comprehensive overview of the surface water status of Romania collected from five main river streams was pursued.” for better manifestation. [Suggestion - A comprehensive overview of the surface water status of Romania has been done by evaluating five main river streams.” for better manifestation]
2. It is advise to reconsider the highlighted word in the statement “In this context, waters sampled from five different locations of Romanian rivers were examined to study the chemical composition of macro elements, heavy metals, respectively "exotic" elements (REEs).” for better grammatical manifestation.
3. It is advise to reconsider the highlighted word in the statement “Analysis of variance (ANOVA) was applied to highlight the variation of representative variables among in the target rivers: Aries, Somes, Mures, Olt, and Prut.” for better grammatical manifestation.
4. Highlighted part in the statement “Analysis of variance (ANOVA) was applied to highlight the variation of representative variables among the five main surface water rivers differentiation after LDA analysis.” is repetitive, as it has been already mentioned earlier.
5. Increase number of relevant keywords.
6. The format of Abstract has not been followed. The abstract should not contain paragraphs, separate conclusion. The abstract should be only a paragraph with maximum word limit of 300-40 manifesting the entire work, right from introduction of problem, objectives, methods, result and conclusion in brief.
7. The abstract needs a major revision.
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| **Is the manuscript scientifically, correct? Please write here.**  | **Yes** |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.****-** | **No,****Suggestions are given in the general comment.**  |  |
| Is the language/English quality of the article suitable for scholarly communications? | **No,****Suggestions are given in the general comment.** |  |
| Optional/General comments | **Introduction** 1. It is advised to reframe the statement “Inductively coupled plasma-quadrupole-mass spectrometry (ICP-Q-MS) has come to be one of the most attractive detection systems and is routinely used in many diverse research fields such as environmental, life, and forensic sciences and in food; is a multi-element technique for analyzing liquid samples, characterized by high selectivity, sensitivity, and detection limits much lower than other multi-element techniques [4].” for better manifestation.
2. It is advised to review the statement “The composition of suspended rare earth elements in river water reflects the rock composition of its drainage basin, so the greater the basin dimensions and its rock variation, the higher the resemblance of the suspended matter to that of shale [13].”
3. It is advised to add a citation for the statement “Determination of rare earths can be used in hydrogeochemical studies because of their potential to provide information about the interactions between water and rocks and, in some cases, to determine groundwater flow.” To support the claim. A suggestion is given below

Ganvir, P.S. (2023). Hydro-geochemical plots: an efficient tool for the elucidation of groundwater chemistry. *International Journal of Innovative Science and Research Technology*, *8*(2), 95-100.1. It is advised to reframe the statement “Surveillance programs provide large amounts of data, which are sometimes difficult to interpret and, thus, make extracting important and reliable information difficult [14, 15].” for better manifestation.
2. It is advised to put all the in text citation at the end of the statement “The latest trends in monitoring water programs use chemometric approaches [16], which allow a better understanding or a more comprehensive view of the data without losing any vital information [17].”
3. It is advised to add the following works in the introduction section as per suggestions.

For Heavy metals and Human healthGanvir PS, and Papadkar JN, HYDRO-GEOCHEMISTRY AND HUMAN HEALTH: A BRIEF. International Journal of Food and Nutritional Sciences, 2022:11(11); 223-227.For rock-water interactions Singh, V. B., Madhav, S., Pant, N. C., & Shekhar, R. (Eds.). (2023). *Weathering and Erosion Processes in the Natural Environment*. John Wiley & Sons.For bio-toxicity, bioaccumulation and bio-magnificationPapadkar JN, Ganvir PS, Nimbarte GR, Patre PP, Barsagade AU and Chandekar RD. A REVIEW OVER THE CAUSAL RELATIONSHIP BETWEEN HYDRO-GEOCHEMISTRY AND BIOACCUMULATION IN SPECIAL REFERENCE TO COALFIELDS. 2023:12(4);15288-15297. Papadkar, J. N., Ganvir, P. S., Nimbarte, G. R., Patre, P. P., Pusala, S. V., Sakhare, S. K., & Ghagargunde, P. G. (2024). Implications of Coalfield Dynamics on Associated Ecosystems: A Tangential Review. *UTTAR PRADESH JOURNAL OF ZOOLOGY*, *45*(20), 34-43. <https://doi.org/10.56557/upjoz/2024/v45i204563> **Experimental Procedures** 1. Give systematic details of sampling method and technique for surface water collection, transportation. Also, cite any standard work to justify it.
2. Elaboration of the section is needed.
3. A map along with the sampling locations would be good for presentation.

**Result and Discussion** 1. It is advised to reframe the statement “Table 1 presents the element concentration in the five rivers studied.” to put the highlighted part at the end of the statement within bracket. {Suggestion - The min., max., and average element concentration were calculated from the observed values in the fiver rivers [Table 1] }
2. It is advised to add an additional citation in the statement “Calcium and magnesium are the most available alkali metals in the environment, and the concentrations of these elements in groundwater and surface waters increase as they are washed out of the bedrock [21]. The effect of the geological structure is an important natural factor, the main source of these cations being probably calcite, which may be dominant in that watershed [22].” to support the claim. Suggestions are given below.

Ganvir PS, and Guhey R, An Implication of Enhanced Rock Weathering on the Groundwater Quality: A Case Study from Wardha Valley Coalfields, Central India. *Weathering and Erosion Processes in the Natural Environment*, 2023:215-242. <https://doi.org/10.1002/9781394157365.ch9>Ganvir, P. S., & Guhey, R. (2022, June). Hydro-geochemical elucidation and its implications in the Wardha valley coalfields of central India. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1032, No. 1, p. 012015). IOP Publishing. <https://doi:10.1088/1755-1315/1032/1/012015>1. It is advised to add an additional citation in the statement “Cr can be derived from anthropogenic activities, fertilizer use, and coal mining [25, 26].” to support the claim. Suggestions are given below.

Ganvir, P. S., & Guhey, R. (2020, December). Groundwater quality assessment with reference to some heavy metals toxicity and its probable remediation around Ballarpur area of Wardha valley coalfields, Maharashtra. In *IOP Conference Series: Earth and Environmental Science* (Vol. 597, No. 1, p. 012001). IOP Publishing. <https://doi:10.1088/1755-1315/597/1/012001>Ganvir, P. S., & Guhey, R. (2021). Geochemical Studies of some Heavy Metals’ Toxicity in Groundwater with their Plausible Sources around Gondwana Supergroup, Wardha valley Coalfields, Maharashtra. *Journal of the Geological Society of India*, *97*(11), 1415-1421. <https://doi.org/10.1007/s12594-021-1881-1>1. It is advised to add citation in the statement “Even at low exposure levels, REEs can cause a range of adverse effects on health, such as growth stunting, liver function impairment, and abnormalities in red blood cell function.” to support the claim.

**Conclusion** 1. **Try to make conclusion part concise yet inclusive.**
2. **Avoid paragraphs.**
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| **PART 2:**  |
|  | Reviewer’s comment | Author’s comment *(if agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?**  | *(If yes, Kindly please write down the ethical issues here in detail)* |  |

**Reviewers:**

**Priyadarshan Sham Ganvir, Mahatma Gandhi Arts, Science and Late N. P. Commerce College, India**