

Review Form 3

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| Journal Name: | International Journal of Plant & Soil Science |
| Manuscript Number: | Ms_IJPSS_125942 |
| Title of the Manuscript: | Study of the dissolution of Tahoua natural phosphate by mineral acids : hydrochloric acid and sulfuric acid |
| Type of the Article | |

Review Form 3

PART 1: Review Comments

| Compulsory REVISION comments | Reviewer's comment | Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i> |
|---|--|---|
| Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part. | The research presented in this manuscript provides valuable insights into the dissolution of natural phosphates from Tahoua using mineral acids. The authors have effectively investigated the influence of acid concentration and etching time on the dissolution rate. I recommend for publication after revision. | |
| Is the title of the article suitable? (If not please suggest an alternative title) | It is suitable | |
| 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. | The authors could suggest potential future research directions based on their findings. For example, they could explore the use of different acids or additives to improve the dissolution rate or the quality of the phosphate products. | We agree with this very pertinent suggestion. We will take it into account in our next search. |
| Are subsections and structure of the manuscript appropriate? | 2. Materials and methods Revise to “Experiment.” | |
| Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part. | the research presented in this manuscript is valuable and contributes to our understanding of phosphate dissolution and its potential applications in agriculture. | |
| Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. : | The reference is very old. Only one reference has been cited for a year 2023. At least, 50% reference must be within last two years. | |

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| Minor REVISION comments | | |
| Is the language/English quality of the article suitable for scholarly communications? | It must be improved. Many sentence are unclear and long. There is some spelling mistakes. | |
| Optional/General comments | <div>1. It would be beneficial to measure the pH of the acid solutions before and after the dissolution process to assess the impact of pH on the dissolution rate.</div> <div>2. The authors should characterize the phosphate products obtained after dissolution to determine their composition and suitability as plant nutrients. This could involve techniques such as X-ray diffraction (XRD) or Fourier-transform infrared spectroscopy (FTIR).</div> <div>3. The authors could discuss the implications of their findings for the development of phosphate fertilizers. Are there specific applications or advantages of using Tahoua natural phosphates as a source of plant nutrients?</div> <div>4. Author state: Figure 9 shows the phosphate dissolution rate (P₂O₅ rate) as a function of attack time and acid concentration. WHERE IS FIGURE 9 ?</div> <div>5. The language balance is not appropriate: Figure 5 shows ; shown in figure 6, Fig. 7 shows.</div> <div>6. The explanation of the dissolution mechanism remains focused on the attack by H⁺ protons, aligning with the original conclusion. However, the revised text could potentially be expanded to include additional insights or theoretical considerations if available.</div> <div>7. Expand the comparison with existing literature to highlight the unique contributions of this study.</div> | <div>1. La mesure du pH de l'acide avant et apres le processuce de la dissolution, sera notre prochaine publication où nous allons suivre le processus de la dissolution en fonction du pH.</div> <div>2. La caracterisation des produits phosphatés obtenus par les techniques comme la Diffraction de Rayon X (DRX) et la spectroscopie infrarouge (IR), n'est pas fixée comme objectif de la presente étude. Il faut noter que cette remaque ouvre une voie pour nous, pour la prochaine recherche.</div> <div>3. L'avantage de phosphate naturel de Tahoua est la facilité de son traitement pour le developpement des engrais phosphatés.</div> |

PART 2:

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| | Reviewer's comment | Author's comment (if agreed with 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 details) | |