

Review of: "Identity"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

The manuscript by Joshi examines the pedogenic characterization of alluvial soils from Rajasthan, India. The author has performed extensive physical and chemical tests as part of the study to understand the soil illuviation process. The manuscript will benefit if the author can address the following issues:

1. The author should state the implications of the study. It is not clear (other than the stated objective) as to who would benefit from the findings of the study and where the findings are useful. Are the findings useful in the fields of agriculture or soil science? If so, how are they useful?
2. Depth of soil sampling is not provided by the author in the Materials and Methods section. Tables 2 and 3 provide the sample depths. Please clarify if the soil samples were collected pertaining to the depths specified in Tables 2 and 3.
3. Sieve analysis study is typically performed by following a standard. The Indian Standard IS 2720 Part-1 (1983) gives details of sieve sizes, weight of sample to be taken for sieve analysis, preparation of sample for sieve analysis. The IS 2720 specifies 400 g of soil must be taken for soils dominating in sand-sized particles (4.75 mm to 0.075 mm). The author used 25 g of sample which could affect the quality of the results. Can the author justify the use of such a small mass of sample used in the sieve analysis?
4. Please provide the appropriate reference or standard for information provided in Tables 1 and 2. A few sentences about the rationale of the classification system will benefit readers.
5. The reasons and implications of variations in humic carbon and organic carbon with depth (Table 6) need to be explained.
6. In Pedon 6, the organic C ranges from 0.35% to 0.49%, while the inorganic C (calcium carbonate) ranges from 4.6% to 43.8% (Table 3). What is the source of the high CaCO₃ content in Pedon 6? Why was it absent in the other Pedons? Is atmospheric C getting trapped in the fine sand deposits as carbonates?
7. The conclusion section is missing. The study will benefit if the author can explain the context of this study in the Introduction and Conclusions.