



## **Effect of Sedimentary Source on the Properties of Sphericity and Roundness of Feldspar Minerals in Some Soils of the Alluvial Plain**

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**Abstract:** This study was conducted on the effect of the sedimentary source (the sediments coming from both the Iraqi-Iranian borderline and the Tigris river) on the optical and textural features, especially sphericity and roundness of feldspar minerals (potassium and plagioclase types) in soils of the southern part of the alluvial plain. Eight pedons were selected to represent the study area, five of them represented sediments coming from the borderline, which included pedons of (Badra, Taj Al-Din, Al-Shihabi, Jassan, and Galati), while two of them represent the sediments of the Tigris River (Essaouira, Al-Dabouni), the pedon of Ali Al-Gharbi was represented the mixing area of sediments of all the floods coming from the borderline and the sediments of the Tigris River. The roundness degree for the particles of potassium feldspar minerals was concentrated between the sub-angular (SA) and well- roundness (WR), as a well- roundness category was in Ali Al-Gharbi pedon and percentage reached 14. Particles of Plagioclase feldspar minerals showed the same pattern in the distribution of roundness categories. The sphericity degree for particles of Potassium Feldspar and Plagioclase minerals were compatible with the distribution of the roundness degree for those particles. The sphericity degree concentrated between the medium sphericity and the high sphericity.

**Keywords:** Sedimentary source, Sphericity, Roundness, Feldspar minerals

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