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Clayey soils, additives for traditional pot making and artefact motives as cultural indicators in Limpopo and Free State, South Africa.

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Different raw materials are used in traditional pottery making across South Africa. While clayey soils are the main ingredient used in pot making, non-plastic additives sometimes form part of the mixture. The clay pot making using clayey soil would require the filling of potential voids inherent to the clay structure. This paper discusses the different additives and/or mixtures used according to the Sotho, Tsonga and Venda cultures in South Africa. It was observed that two types of clayey soils were used in pottery making in the Venda and Tsonga culture, Limpopo. Collected from valleys and excavation sites, the dark black clayey soils was mixed with the reddish clayey soil to form an adequate feed to the low product volume and manual mold. The clayey soil materials used in Qwaqwa, collected from local river beds, was used in combination with coal. The particle size distribution (PSD) analysis, figure 1, showed that black clayey soil was finer than the reddish material. The Qwaqwa clayey soil employed in the traditional clay pot making was much coarser than the reddish or the black material from Venda but the mixture of the above produced a clayey soil material with similar grain size distribution to the Qwaqwa material. During the traditional clay pot making in the Sotho tradition, charcoal is added to the clayey soil to possibly fill the voids and facilitated the heat transfer through the expected combustion. The plasticity of the above comparable clayey materials showed a higher plastic index (65) for the much more homogeneous Qwaqwa clayey soil than for each of the red (16) and black Venda soils (14) or both equally combined (18). A physical mixture, as it is the case of the mixture of red and black from Venda, cannot assure the intrinsic cohesion of particles.

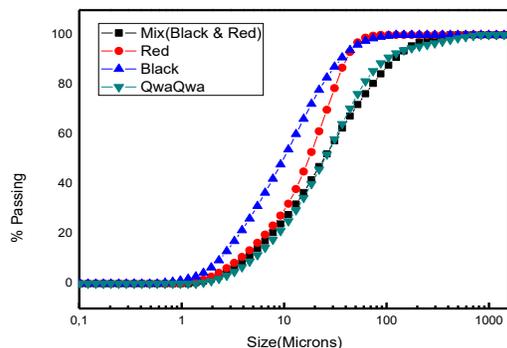


Figure 1: Particle size distribution of Venda red, black, (red+black) clayey soils and Qwaqwa natural material.

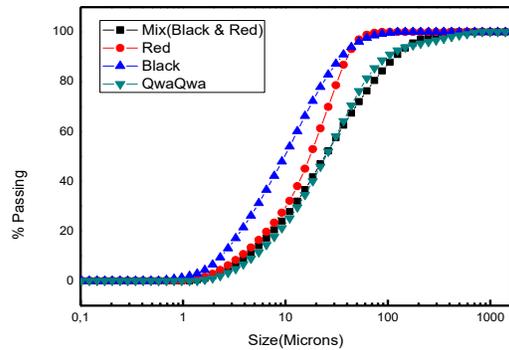


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It was noticed that in all the above cultures studied, clayey soils were selected by the potter, processed through grinding, soaking and firing, with a final product molded using the potters dexterity. The produced artifact is further decorated with different motives and colors representative of that specific culture. This paper sheds some light on possible cultural influence on the motives observed. Semi-quantitative mineral identification revealed the presence of quartz, kaolinite, illite and montmorillonite.

It was additionally noted that pottery making is very deep family rooted and globally practiced in traditional communities although it runs the risk of loss of indigenous knowledge and skills transfer to the younger generations.

