

## **GENESIS OF WHITE FRAGIPANS OF VOLCANIC ORIGINS.**

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The indurated horizons from the State of México, México, derived from pyroclastic material, may adopt different shapes and characteristic that depend of the volcanic component nature and of the pedogenetic factors, that at the last instance, will orient the fragipans evolutions direction. The objective of this study was: a) to determine the main physical, chemical, petrographical and mineralogical properties of the volcanic origin white fragipans, b) to establish hypothesis about its genesis. The obtained results are a) the bulk density was of 1.1 Mg/m<sup>3</sup> due to the material being a rhyolitic pumicite, b) the studied fragipans show a moderated evolution due to the climatic conditions of the area and felsic nature of the parental material, c) the resistance to single compression suggest that the studied fragipans show diagnostical characteristics that do not correspond to other authors reports. d) the gains and losses the total oxide, correspond to the zone climatic conditions, and e) the micromorphology indicates that water infiltration and the eluviation - iluviation processes are active during the fragipans evolution. The most important conclusions is that the morphological, physical, chemical characteristics, the consolidation, compactation and/or cementation degree, are given because of the volcanic ash nature and the pedological factors.