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**STRUCTURAL AND THERMAL CHARACTERIZATION OF NANOCOMPOSITES HDPE/CLAY NATIONAL**

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The work is to obtain nanocomposites HDPE/national bentonite clay. Reinforced polymers with inorganic materials are of great interest due to their applications in the automotive industries, and electrical and electronics industry. The nanocomposites were synthesized by the melt intercalation of clay with varying percentages and compared with the pure HDPE. The clay used was characterized by X-ray diffraction (XRD) and X-ray fluorescence (XRF). The polymeric materials were characterized by several techniques, including: infrared spectroscopy (FTIR), thermogravimetric analysis (TG) and X-ray diffraction. It was found that the results of XRF showed the clay characteristics of bentonite compositions this value is consistent with the XRD results showed that basal spacings of 36.78 Å and 18.78 Å. As for the nanocomposites, XRD are observed increases in the interlayer spacing d001 indicating the formation of intercalated structures. For TG, in general, found that the nanocomposites had higher thermal stability than the pure HDPE and FTIR has characteristics typical bands of polyethylene observed by infrared.