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CHARACTERIZATION OF RUBBER TIRES SUBMITTED TO RADIATION PROCESSING IN ITS RECYCLING

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The area of radiation processing of polymers has been a subject of intense research in the last years. The important chemical changes that are induced due to irradiation are formation of intermolecular and intra-molecular bonds (crosslinking) and scission of bonds in the main polymeric chain (degradation). The aim of this study is characterization of rubber tires submitted at radiation processing. The samples were irradiated by electron beam at different doses at room temperature. The mechanical and thermal properties were evaluated. The results showed that mechanical and thermal properties decreased with increasing irradiation dose due to rubber chains scission facilitating the recycling of tires.