The effect of processing direction on friction properties of polyethyleneterephthalate (PET) and polyethylene (PE) polymer film

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Abstrak

The effect of molecular orientation on coefficient of friction for polymer has been observed by some of the previous studies, although the molecular orientation effect on the coefficient of friction for different polymer is not fully understood. In order to understand these effect in Polyethylene terephtalate (PET) and Polyethylene (PE) polymer film the observation in molecular orientation was performed by doing bulk and surface properties characterization. The coefficient of friction test along different directions and optical analysis of the polymer film were conducted to confirm the effect of molecular orientation on coefficient of friction for Polyethylene terephtalate (PET) and Polyethylene (PE) polymer film.
This study suggests that there is no dependence of processing direction to the coefficient of friction for Polyethylene (PE) film altough there is apparent directional effect on their surface and bulk properties. By contrast there is slight dependency of processing direction to the coefficient of friction for Polyethylene terephtalate (PET), while there is not apparent directional effect on its surface and bulk properties.