

## Weight Loss Degradation of Hybrid Blends LLDPE/Starch/PVA Upon Exposure to UV Light and Soil Burial

**Authors :** Rahmah M., Noor Zuhaira Abd Aziz, Farhan M., Mohd Muizz Fahimi M.

**Abstract :** Polybag and mulch film for agricultural field pose environmental wastage upon disposal. Thus a degradable polybag was designed with hybrid sago starch (SS) and polyvinyl alcohol (PVA). Two Different blended composition of SS and PVA Hybrid have been compounded. Then, the hybrids blended are mixed with linear line density polyethylene (LLDPE) resin to fabricate polybag film through conventional film blowing process. Hybrid blends was compounded at different ratios. Samples of LLDPE, SS and PVA hybrid film were exposed to UV light and soil burial. The weight loss were determined during degradation process. Hybrid film by degradation of starch was found to decrease on esterification. However the hybrid film showed greater degradation in soil and uv radiation up to 60% of SS. Weight loss were also determined in control humidity oven with 70% humidity and temperature set up at 30 °C and left in humidity chamber for a month.

**Keywords :** LLDPE, PVA, sago starch, degradation, soil burial, uv radiation

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