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WASANA CHAIYARUNGROTE : USE OF DIBENZALACETONE AS PHOTSENSITIZER IN THE
DEGRADATION OF POLYETHYLENE FILMS. THESIS ADVISOR : ASSOC. PROF. SAOWAROJ
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Degradation of polyethylene films with dibenzalacetone as photosensitizer was investigated. The amount of dibenzalacetone used was varied from 0.05 to 0.5 %. Two methods were carried out simultaneously for comparison between outdoor exposure and simulated condition in Xenotest Beta Lamp machine. The amount of carbonyl group formation (carbonyl index) , was studied by monitoring signals in FTIR and it was used as an indicator to represent the chemical structure break-down. The relationships of carbonyl index and mechanical properties with exposed time were studied in both conditions.

It was found that dibenzalacetone can be used as photosensitizer in polyethylene films in both conditions and degradation of the film increased with increasing amount of dibenzalacetone.

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