ANALYSIS REPORT

General information

Date: April 28, 2014.

Analysis number: P-140314F32
Client: Ecoventur
Analysis period: 14-03-2014/24-04-2014
Test Description: Accelerated Thermal Degradation

I.- Sample Description:

M1. Bag yellow-blue, 0.005 inches.

II.- Objective:

Accelerated Degradation based on temperature of the structure and determination of its shelf life time. According to; "Tensile Test" ASTM D3826-98, "Thermal Test" ASTMD5510-94.

III.- Laboratory equipment:

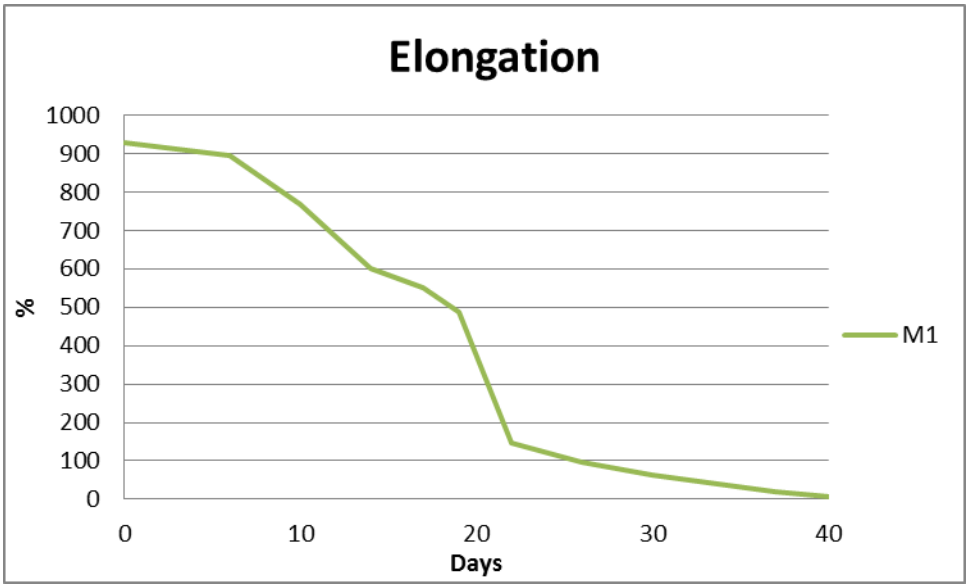
1. Universal Testing Machine. LLOYD, LS1 Model

2. Oven with air recirculation (forced convection) at 80 ° C. Terlab, TE-H350M.

IV.- Results:

MECHANICAL PROPERTY

Days in the oven	Elongation (%) M1
0	928.10
6	894.63
10	768.78
14	600.37
17	552.25
19	**486.94**
22	147.28
26	95.53
30	61.74
37	20.63
41	4.15



V.- Conclusions:

M1. Bag yellow-blue

After exposing Sample M1 to the accelerated aging process, the change in mechanical and physical properties were also clearly observed.

It is considered that the period of useful life ends by losing more than 50% of the initial elongation. Therefore, we determined a **shelf life time of 3 years and 11 months.**

Based on ASTM D5510-94 is considered that the sample has reached its accelerated degradation, when it support less than 5% of elongation that happened after 41 days of study therefore we concluded that this sample has a **degradation time of 6 years with 8 months.**

Ing. Martha Castillo Cruz

ANNEX IMAGE

Illustration 1. Sample before the study began --- degraded sample.

Illustration 2. Sample in the universal machine “elongation test”.