

## ASSAY REPORT

Determination of Biodegradability in a Closed System - Sample No. 14693-1/2023.0 ID:174458

Commercial Proposal: PC3812/2022

Publication date: 03/31/2023

ACCOUNT IDENTIFICATION	
<b>Client:</b> MEGH INDÚSTRIA E COMÉRCIO LTDA	<b>CNPJ/CPF:</b> 57.109.241/0001-90
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SAMPLE No.: 14693-1/2023.0 – MEGHWAX MPW 930 M		
<b>Type of Sample:</b> Raw Material		
<b>Receipt Date:</b> 02/22/2023		
<b>Chemical Composition:</b> Polyolefin wax - 100%		
<b>Batch:</b> 18227	<b>Manufacturing Date:</b> 02/02/2023	<b>Expiration Date:</b> 02/02/2025
<b>Analysis Start:</b> 03/10/2023		<b>Analysis End:</b> 03/30/2023
<b>Sample Quantity:</b> 305G		<b>Quantity of Packages Received:</b> 1
<b>Sample Responsibility:</b> Contractor		

ANALYTICAL RESULTS
The sample presented 100% biodegradability, reaching 60% of CO <sub>2</sub> evolution, from the moment in which 10% of CO <sub>2</sub> evolution was observed, and did not exceed the maximum period of 20 days.

METHODOLOGY
The Ready Biodegradability test 301 B (OECD, 1997) is a respirometric evaluation method, utilized for non-volatile substances, and evaluates CO <sub>2</sub> evolution. The test has a maximum duration of 28 days and may have its termination earlier if the sample has a 100% Biodegradability level. Three treatments are employed: white, sample and inhibition. The limit of 60% of CO <sub>2</sub> evolution is necessary for easily biodegradable classification if achieved in 10 days, counted from the day in which 10% of CO <sub>2</sub> is obtained. This test was conducted to determine the sample degradation, in a nutrient solution, by a mixed culture of microorganisms derived from the environment. The test is conducted at a controlled temperature of 20 – 25°C. The treatments consisted of white (inoculum only), sample and inhibition. The sample biodegradation was verified through the analysis of CO <sub>2</sub> release among the utilized treatments by Ba (OH) <sub>2</sub> capture and determined by titration with HCl. The test is based on the study of the metabolization of one sample by a mixed culture of microorganisms from the environment. The percentage of released carbon dioxide (CO <sub>2</sub> ), in relation to the expected theoretical CO <sub>2</sub> total, informs if the sample is biodegradable over a period of time.

SPECIFICATIONS
The minimum limit of 60% of CO <sub>2</sub> evolution is necessary for Biodegradable classification if achieved in 10 days, counted from the day in which 10% of CO <sub>2</sub> is obtained, during 28 incubation days.
If 100% Biodegradation is achieved before the 28-day period, the test may be terminated.

INTERPRETATIONS
OECD – Guideline for testing of Chemicals – 301B CO <sub>2</sub> Evolution Test - Ready Biodegradability - 1992.