



# UL VERIFICATION SERVICES INC.

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## Evaluation of Test Results

Lab Report No: ARHL0909411

Issue Date: March 04, 2022



Item Description: 1) Oxygen Absorber (SJN type), 2) Fresh Up Ethylene Gas Absorber

Rating: **Pass**

CLIENT: JS Chem International Co

COUNTRY OF ORIGIN: Not Provided

SOURCING OFFICE: Not Applicable

SUPPLIER NAME:

STYLE NUMBER: Not Applicable

REASON FOR TESTING: Evaluation of the sample per client requirements.

\*\*\* Please see the following pages for additional item information \*\*\*

FACTORY NAME:

### ADDITIONAL INFORMATION

1. The samples comply with the US FDA regulations defined under 21 CFR 177.1630. Please refer to the attached Analytical Chemistry Report for specific details.

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**ADDITIONAL SAMPLE INFORMATION**

<b>SIZE(S)</b>	<b>COLOR(S)</b>
Not Applicable	Oxygen Absorber, Fresh Up Ethylene Gas Absorber
<b>PO NUMBER(S)</b>	
Not Applicable	
<b>UPC CODE(S)</b>	
Not Applicable	
<b>ITEM NUMBER(S)</b>	
Not Applicable	
<b>QUOTE ID(S)</b>	
Q017151	

**Identifier Association Grid**

DESCRIPTION	STYLE	TESTED
Oxygen Absorber		Yes
Fresh Up Ethylene Gas Absorber		Yes

UL VERIFICATION SERVICES INC.



Dannon Rose  
LABORATORY MANAGER

UL VERIFICATION SERVICES INC.



Chris Dahl  
SENIOR LABORATORY MANAGER

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# Analytical Chemistry Report

## ARHL0909411

### Test Summary

Specification / Test Type	Result
1) Food Contact Material Testing - 21 CFR Part 175 - 181	Pass

### Component List

Component	Description
1	Oxygen Absorber (SJN type)
2	Fresh Up Ethylene Gas Absorber

Note: Multiple component numbers on a single test line represent a composite test or combined components

### Test Data

#### 1) Food Contact Material Testing - 21 CFR Part 175 - 181

Test Method: Food Contact Materials were tested according to our 9-54 SOP with reference to Title 21 of the US Code of Federal Regulations, Parts 175 - 181.

Component: 1  
 21 CFR Part: 177.1630  
 Food Types: Packaging, transporting, or holding food, excluding alcoholic beverages, at temperatures that do not exceed 250°F  
 Temperature Condition: N/A  
 Material: Poly(ethylene terephthalate) (PET)

Test Performed	Limit(s)	Measured Value	Test Temperature	Test Duration	Rating
Extraction in 50% Ethanol - Rep. 1	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	49°C/120°F	24 hrs	Pass
Extraction in 50% Ethanol - Rep. 2	0.5 (mg/in <sup>2</sup> )	0.03 (mg/in <sup>2</sup> )	49°C/120°F	24 hrs	Pass
Extraction in 50% Ethanol - Rep. 3	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	49°C/120°F	24 hrs	Pass
Extraction in 50% Ethanol - Rep. 4	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	49°C/120°F	24 hrs	Pass
Extraction in n-heptane (CHCl <sub>3</sub> ) - Rep. 1	0.5 (mg/in <sup>2</sup> )	0.10 (mg/in <sup>2</sup> )	66°C/150°F	2 hrs	Pass
Extraction in n-heptane (CHCl <sub>3</sub> ) - Rep. 2	0.5 (mg/in <sup>2</sup> )	0.08 (mg/in <sup>2</sup> )	66°C/150°F	2 hrs	Pass
Extraction in n-heptane (CHCl <sub>3</sub> ) - Rep. 3	0.5 (mg/in <sup>2</sup> )	0.19 (mg/in <sup>2</sup> )	66°C/150°F	2 hrs	Pass
Extraction in n-heptane (CHCl <sub>3</sub> ) - Rep. 4	0.5 (mg/in <sup>2</sup> )	0.12 (mg/in <sup>2</sup> )	66°C/150°F	2 hrs	Pass
Extraction in Water - Rep. 1	0.5 (mg/in <sup>2</sup> )	0.03 (mg/in <sup>2</sup> )	121°C/250°F	2 hrs	Pass
Extraction in Water - Rep. 2	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	121°C/250°F	2 hrs	Pass
Extraction in Water - Rep. 3	0.5 (mg/in <sup>2</sup> )	0.04 (mg/in <sup>2</sup> )	121°C/250°F	2 hrs	Pass
Extraction in Water - Rep. 4	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	121°C/250°F	2 hrs	Pass

Note: CHCl<sub>3</sub> denotes chloroform soluble portion of extractive was determined

† - Result above the applicable limit. Additional testing was required to determine rating  
 < = less than

ND = Not Detected, LOD = Limit of Detection

Results expressed in mg/kg unless otherwise noted

# Analytical Chemistry Report

## ARHL0909411

### 1) Food Contact Material Testing - 21 CFR Part 175 - 181 - Continued

**Component:** 2  
**21 CFR Part:** 177.1630  
**Food Types:** Packaging, transporting, or holding food, excluding alcoholic beverages, at temperatures that do not exceed 250°F  
**Temperature Condition:** N/A  
**Material:** Poly(ethylene terephthalate) (PET)

Test Performed	Limit(s)	Measured Value	Test Temperature	Test Duration	Rating
Extraction in 50% Ethanol - Rep. 1	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	49°C/120°F	24 hrs	Pass
Extraction in 50% Ethanol - Rep. 2	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	49°C/120°F	24 hrs	Pass
Extraction in 50% Ethanol - Rep. 3	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	49°C/120°F	24 hrs	Pass
Extraction in 50% Ethanol - Rep. 4	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	49°C/120°F	24 hrs	Pass
Extraction in n-heptane (CHCl <sub>3</sub> ) - Rep. 1	0.5 (mg/in <sup>2</sup> )	0.20 (mg/in <sup>2</sup> )	66°C/150°F	2 hrs	Pass
Extraction in n-heptane (CHCl <sub>3</sub> ) - Rep. 2	0.5 (mg/in <sup>2</sup> )	0.21 (mg/in <sup>2</sup> )	66°C/150°F	2 hrs	Pass
Extraction in n-heptane (CHCl <sub>3</sub> ) - Rep. 3	0.5 (mg/in <sup>2</sup> )	0.22 (mg/in <sup>2</sup> )	66°C/150°F	2 hrs	Pass
Extraction in n-heptane (CHCl <sub>3</sub> ) - Rep. 4	0.5 (mg/in <sup>2</sup> )	0.16 (mg/in <sup>2</sup> )	66°C/150°F	2 hrs	Pass
Extraction in Water - Rep. 1	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	121°C/250°F	2 hrs	Pass
Extraction in Water - Rep. 2	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	121°C/250°F	2 hrs	Pass
Extraction in Water - Rep. 3	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	121°C/250°F	2 hrs	Pass
Extraction in Water - Rep. 4	0.5 (mg/in <sup>2</sup> )	< 0.03 (mg/in <sup>2</sup> )	121°C/250°F	2 hrs	Pass

Note: CHCl<sub>3</sub> denotes chloroform soluble portion of extractive was determined

† - Result above the applicable limit. Additional testing was required to determine rating  
 < = less than

ND = Not Detected, LOD = Limit of Detection

Results expressed in mg/kg unless otherwise noted