

December 1, 2022

▪TEST REPORT▪

PN 167052
21780-02

PLASTICS TESTING DEPARTMENT

Prepared For:

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Tri-Ven
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Prepared By:



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Approved By:



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DCN 1176



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Certificate Numbers 255-01, 255-02, 255-03 and 255-04
ISO 9001-2015 Registered

ISO 9001:2015
Registered

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SUBJECT: UL 94 HB Flammability and GC/MS Analysis on ABS and LLDPE.

RECEIVED: Two sets of Test Specimens identified as: ABS and LLDPE.

Decision Rule 1 Applied
Test Location: Gilchrist

FLAMMABILITY RESISTANCE, UL-94 HB

Flame Height: 1.5 in
Flame Application: 30 seconds
Specimen Size: 5.04 in x 0.541 in x 230 in

<u>Specimen</u> LLDPE	<u>RESULTS</u> Burn Rate, mm/min.	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
1	10.0	75 max	Pass
2	10.8		Pass
3	10.1		Pass
4	9.76		Pass
5	9.52		Pass
Avg.	10.0		Pass

Flame passed the 25mm and continued thru the 100mm mark.

<u>Specimen</u> ABS	<u>RESULTS</u> Burn Rate, mm/min.	<u>REQUIREMENTS</u>	<u>PASS/FAIL</u>
1	14.9	75 max	Pass
2	13.8		Pass
3	14.3		Pass
4	26.1		Pass
5	14.5		Pass
Avg.	16.7		Pass

Flame passed the 25 mm and continued through the 100 mm mark.

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GAS CHROMATOGRAPHY/ MASS SPECTROMETRY (GC/MS); ARDL 3160

Instrument: Agilent 8890 GC/ 5977B MSD
Method: ARDL1AUTO.M
Column: Bonded; poly (5% diphenyl/95% dimethylsiloxane)

The samples were extracted in acetone, dried, reconstituted in acetone, filtered and then analyzed by GC/MS.

Sample	Chromatogram I.D.	Chemicals Detected
LLDPE	TIC: A167052B.D	No BPA detected
ABS	TIC: A167052C.D	No BPA detected

The chromatograms (TIC: A167052B-C.D) are labeled and enclosed.

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Decision Rules

Rule 1. This is the way test results have traditionally been reported by ARDL. If ARDL runs a test for you that has pass/fail requirements, ARDL will report the values observed and then state "Pass" or "Fail", based on those values only. By default, ARDL will apply this rule to all Category I tests and those tests which are not on ARDL's Scope of Accreditation.

Rule 2. This rule takes into account the calculated measurement uncertainty of test results generated. Every test and piece of test equipment has an inherent amount of measurement uncertainty associated with it. Rule 2 establishes "Guard Bands" where the measurement uncertainty value is added to the Minimum Passing requirement and is subtracted from the Maximum Passing requirement. The Pass/Fail requirements thus become tighter and customers may be more "Certain" of their Pass/Fail result.

Rule 3. This rule also takes into account measurement uncertainty but does not set up guard bands. Rule 3 may be used when values are reported, but there is no Pass/Fail requirement called out in the test specification. Rule 3 simply states that the measurement uncertainty is reported to the customer, along with the testing result generated, and the customer decides if the results are suitable for their purposes.

Report Revision Log

12-1-22 New

Prepared By:



Devin McElrath
Project Technician

Approved By:

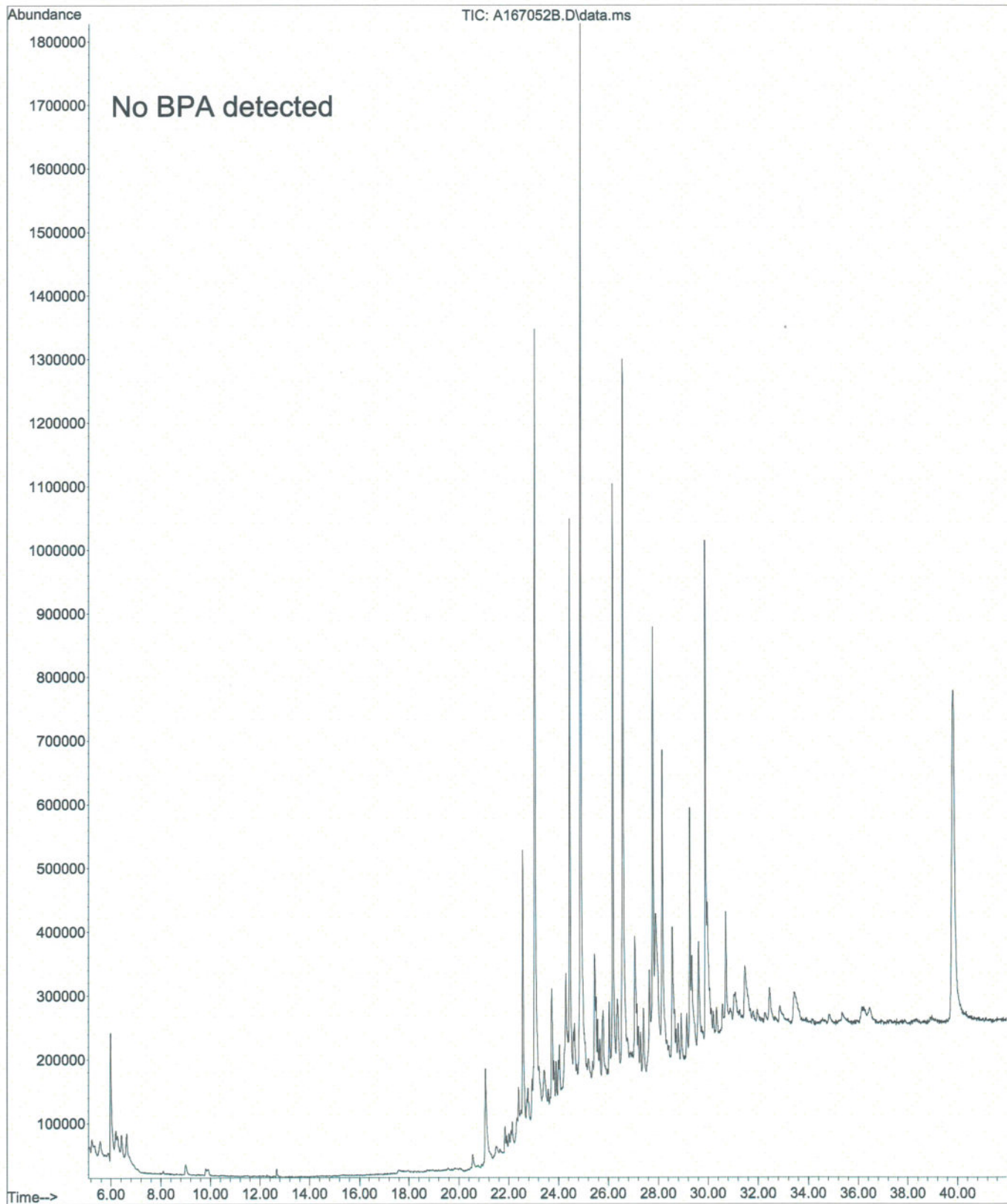


Scott Yates
Manager, Plastics Testing

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File :Z:\A167052B.D
Operator : SM
Acquired : 26 Oct 2022 17:16 using AcqMethod ARDL1AUTO.M
Instrument : GCMS88905977
Sample Name: LLDPE Acetone Extract
Misc Info : Tri-Ven
Vial Number: 5



File :Z:\A167052C.D
Operator : SM
Acquired : 02 Nov 2022 11:12 using AcqMethod ARDL1AUTO.M
Instrument : GCMS88905977
Sample Name: ABS Acetone Extract
Misc Info : Tri-Ven
Vial Number: 4

