



IPS TESTING

Test Report
January 9, 2019
Page 1 of 5
SGS-IPS 00051-19

Report to: Chris Reitmeyer
Integrated Paper Services Inc.
3211 E. Capitol Drive
Appleton, WI 54911

Sample Identification: **One Paper Sample**

Date Received: January 7, 2019

Test(s) Requested: Recycle Content

PO Number: 93857203

Report of Fiber Analysis

Enclosed are the results of the analysis performed on the sample we received.

The species percentages are for the respective components only, not for the entire sample.

If you have any questions concerning this work, please do not hesitate to contact us.

Authorized by _____

Jeffrey J. Bushner
Lab Manager

Signed _____

Thomas M Mattingly
Scientist
IT Support
920-749-3040 x 29213

Table 1. Fiber Analysis, Including Species Percentages, of Sample Name

Fiber Type	<u>Softwood</u>	Raw Count	<u>93</u>
Bleaching	<u>Bleached</u>	Weight Factor	<u>0.92</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>86</u>
		% by Weight	<u>11.2%</u>

<u>Species</u>	<u>Total Fibers Identified</u>	<u>Calculated Percent By Weight</u>
Hard Pine (Except Red & Scotch)	33	46.2%
[White and/or Red Pine]	29	30.4%
[Spruce and/or Hemlock]	17	17.8%
Douglas-fir	3	3.5%
Fir	2	2.1%

Fiber Type	<u>Hardwood</u>	Raw Count	<u>1361</u>
Bleaching	<u>Bleached</u>	Weight Factor	<u>0.41</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>559</u>
		% by Weight	<u>73.0%</u>

<u>Species</u>	<u>Total Vessels Counted</u>	<u>Calculated Percent By Weight</u>
Mixed Tropical Hardwoods*	26	43.5%
Acacia	17	27.7%
Eucalyptus	11	19.4%
Oak	2	2.6%
<u>Populus spp.</u>	9	2.0%
Birch	3	1.9%
Redgum	5	1.3%
Beech	3	0.7%
Maple	1	0.4%
Yellow-poplar	1	0.3%
Elm/Hackberry	1	0.3%

Comments: *At least 10 different types were detected.

Table 1. Fiber Analysis, Including Species Percentages, of Sample Name (contd.)

Fiber Type	<u>Softwood</u>	Raw Count	<u>3</u>
Bleaching	<u>Unbleached</u>	Weight Factor	<u>1.20</u>
Pulp Process	<u>Kraft</u>	Final Count	<u>4</u>
		% by Weight	<u>0.5%</u>

Species:
 Principal - Hard Pine (Except Red & Scotch)

Fiber Type	<u>Softwood</u>	Raw Count	<u>54</u>
Bleaching	<u></u>	Weight Factor	<u>1.50</u>
Pulp Process	<u>Mechanical</u>	Final Count	<u>81</u>
		% by Weight	<u>10.6%</u>

Species:
 Principal - Hard Pine (Except Red & Scotch), [Spruce and/or Hemlock]

Fiber Type	<u>Hardwood</u>	Raw Count	<u>47</u>
Bleaching	<u></u>	Weight Factor	<u>0.62</u>
Pulp Process	<u>Chemimechanical</u>	Final Count	<u>29</u>
		% by Weight	<u>3.8%</u>

Species:
 Principal - Populus spp., Acacia

Table 1. Fiber Analysis, Including Species Percentages, of Sample Name (contd.)

Fiber Type	<u>Grass Fiber</u>	Raw Count	<u>15</u>
Bleaching	<u>Bleached</u>	Weight Factor	<u>0.50</u>
Pulp Process	<u>Chemical</u>	Final Count	<u>8</u>
		% by Weight	<u>1.0%</u>

Species:

Principal - Unidentified

Overall Comments: A trace of Hardwood Bleached Sulfite pulp was detected. At least 19% appears to be typical secondary fiber.

Method(s) and Notes:

TAPPI T 401 om-15 Fiber Analysis of Paper and Paperboard

The Species Percentage determination is an internal method of SGS-IPS.

Analyzed by WRA, KG

Quality Review by EW

Date(s) of testing January 8-9, 2019

Note: These results relate only to the item(s) tested. This test report shall not be reproduced, except in full, without written consent of SGS-IPS. See the method(s) cited above for available estimates of measurement uncertainty. Unless otherwise noted, sampling was performed by customer.

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