



Test Report T18210-01-1 Issue 1
ISO 12312-2:2015(E)
Grafix Plastics
SAFESHOT™ PLATE KIT (SSK01)
28 August 2023



Approved by:

A handwritten signature in blue ink, appearing to read "Keith E. Whitten".

Keith E. Whitten
Laboratory Manager

Prepared by:

A handwritten signature in blue ink, appearing to read "Cathy Woloszyn".

Cathy Woloszyn
Lab Administrator

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Issued to: Grafix Plastics
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Objective:

Contract testing to ISO 12312-2:2015(E) "Eye and face protection — Sunglasses and related eyewear — Part 2: Filters for direct observation of the sun".

Samples:

SAFESHOT™ PLATE KIT

Part Number	Quantity	Sample ID
SSK01	3	0A

Date(s) submitted: 04 August 2023

Procedures:

Testing protocols in accord with good laboratory practice were employed for all tests.

All tests were conducted in a standard laboratory atmosphere unless otherwise specified.

Samples were randomly selected from the quantity provided and tested in the as-received condition unless otherwise stated.

Safeshot Plate and Eye-Safe Window were fully assessed.

Smartphone Window tested to 4.1.1 Transmittance-General for informational purposes only.

Assessment Summary:

Date(s) tested: 22 through 24 August 2023

ISO 12312-2:2015(E) Requirements	Compliant	Non-Compliant
4 Requirements and associated test methods		
4.1 Transmittance		
4.1.1 General		
<i>Eye-Safe Window</i>	X ¹	
<i>Smartphone Window</i>	For reference only	
4.1.2 Uniformity of luminous transmittance	X	
4.2 Material and surface quality	X	
4.3 Mounting		
4.3.1 General	X	
4.3.2 Dimensions	X	
4.3.3 Material quality	X	
5 Labelling	X	

¹Due to equivalency data for the Eye-Safe Window from T17882-01.

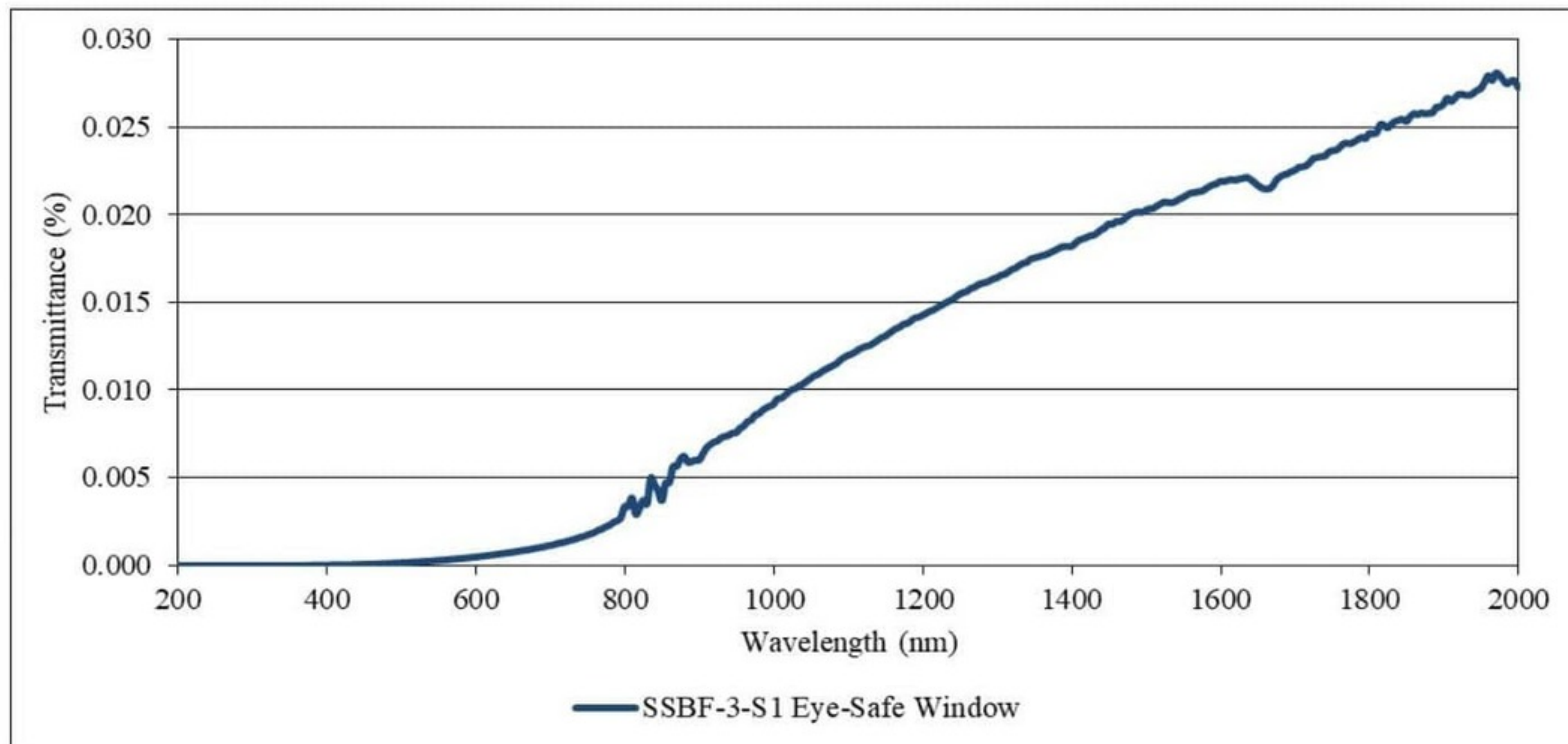
Samples as assessed meet the requirements of ISO 12312-2:2015(E).

Results:

4.1.1 Transmittance-General – Eye-Safe Window

Sample ID:	SSBF-3-S1	Requirement	Pass	Fail
Luminous-D65 (τ_v) (%)	0.000349	0.000061 to 0.0032	X	
Max. solar UVB-280 to 315nm (τ_{SUVB}) (%)	<0.00001	$\leq \tau_v$	X	
Max. solar UVA-315 to 380nm (τ_{SUA}) (%)	0.00001	$\leq \tau_v$	X	
Max. solar infrared-780 to 2000nm (τ_{SIR}) (%)	0.011	≤ 3	X	

¹Due to equivalency data from T17882-01.



4.1.2 Transmittance-Uniformity of luminous transmittance – Eye-Safe Window

Sample ID:	0A-1	Requirement
Luminous-D65 (τ_v) (%)		
Maximum:	0.000670	
Center:	0.000656	
Minimum:	0.000630	
Relative Difference (%):	5.97	$\leq 10\%$
Pass/Fail:	Pass	

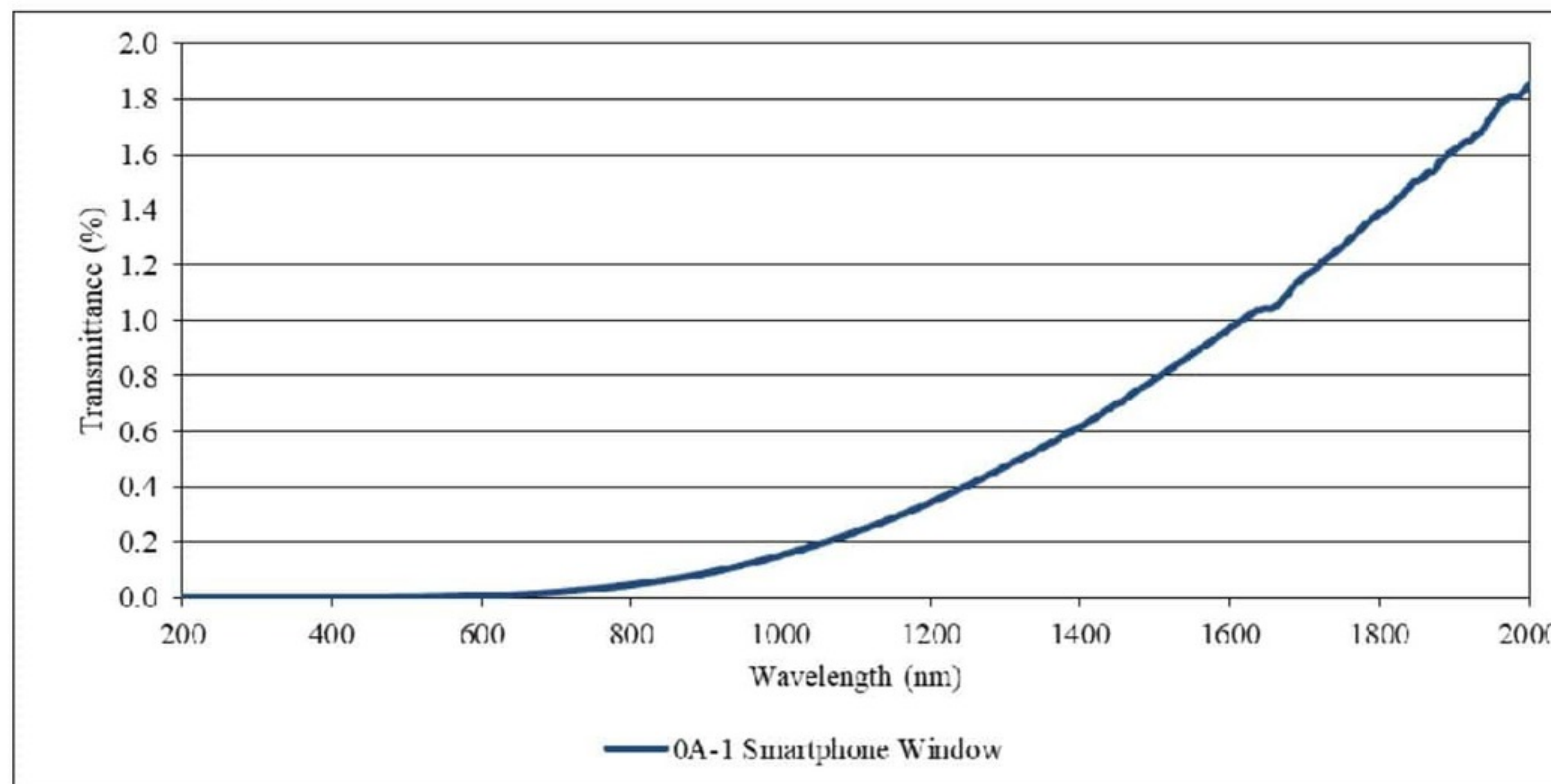
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4.1.1 Transmittance-General – Smartphone Window

Sample ID:	0A-1	Requirement	Pass	Fail
Luminous-D65 (τ_V) (%)	0.005028	0.000061 to 0.0032	For reference only	
Solar UVB-280 to 315nm (τ_{SUVB}) (%)	<0.00001	$\leq \tau_V$		
Solar UVA-315 to 380nm (τ_{SUVA}) (%)	0.000071	$\leq \tau_V$		
Solar Infrared-780 to 2000nm (τ_{SIR}) (%)	0.311	≤ 3		

¹Due to equivalency data from T17882-01.



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Sample Photograph(s):



Estimates of Uncertainties:

ISO 12311:2013(E) Test Method	Estimated Uncertainty
7.1.1 Measurement of spectral transmittance	10% Relative

Estimated uncertainties have been calculated in accordance with the principles of ISO/IEC Guide 98-3:2008, Uncertainty of measurement-Part 3: Guide to the expression of uncertainty in measurement (GUM:1995).

Estimated uncertainties have a 95% confidence level.

A coverage factor (k) of 2.0 was used.

Estimated Uncertainties were not taken into consideration for determination of pass/fail.

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9. Client is responsible for procuring, at its cost, insurance protecting the value of its property, extending to provided samples.
10. For the safety of our personnel, Client must advise if samples are known or suspected to contain hazardous substances. Safety Data Sheets must be provided upon request.
11. ICS represents that Services shall be performed according to terms and specification agreed to by Client, and in a manner consistent with good laboratory practice. No other Representations to client, express or implied, and no warranty or guarantee is included or intended in this agreement, or in any other report or document related to the services. ICS does not guarantee product performance or compliance.
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13. Certain work may be subcontracted to ICS-approved laboratories as required or applicable. Client will be notified of this in advance.
14. Client agrees to pay any and all additional costs associated with unexpected or above-standard communications and/or consultations with Client or third parties as designated by Client.
15. Client agrees to pay any and all additional costs for work additional to the original scope of work as agreed to by Client.
16. Client understands and agrees that ICS, in entering into this Contract and by performing services hereunder, does not assume, abridge, abrogate or undertake to discharge any duty or responsibility of Client to any other party or parties. No one other than Client shall have any right to rely on any Report or other representation or conduct of ICS and ICS disclaims any obligations of any nature whatsoever with respect to such third parties.
17. For statements of conformity (pass/fail/"meets") regarding qualitative test results, ICS utilizes simple acceptance as its basis. For most statements of conformity relating to quantitative test results, the decision rule and associated uncertainty is inherent in the standard method. As such, simple acceptance is typically applied. Results on or near pass/fail thresholds or otherwise upon Client request or appeal will be evaluated with reference to the measurement uncertainty of relevant testing practices, equipment and other inputs/variables.
18. Client agrees, in consideration of ICS undertaking to perform the test(s) hereunder, to protect, defend and indemnify ICS from any and all claims, damages, expenses either direct or consequential for injuries to persons or property arising out of or in consequence of the performance of the testing, inspection and reporting hereunder and/or the performance of the products tested or inspected hereunder, unless caused by the negligence of ICS.
19. It is agreed that if ICS should be found liable for any losses or damages attributable to the services hereunder in any respect, its liability shall not exceed the amount of the fee paid by Client for services rendered and Client's sole remedy at law or in equity shall be the right to recover that sum.
20. Quotations are valid for 30 days from date of issue. Standard Terms: 30% Laboratory/Testing fees invoiced and payable upon acceptance of quotation. 15 days net. Any change to these terms requires written approval by the President, Executive Vice President or Accounting Manager. ICS retains the right to require prepayment in full at any time. Cancelled jobs will be invoiced for work performed and/or set-up costs incurred. All jobs will be assessed a \$25 sample disposition fee. Shipping costs over \$25 incurred by ICS for sample returns will be invoiced at cost +10%.
21. ICS hereby objects to any conflicting terms contained in any order, acceptance or other subsequent correspondence submitted by Client.
22. In the event that payment is not received within 15 days of invoice date, Client agrees to pay a late payment charge on the unpaid balance equal to 1-1/2% per month or the maximum charge allowed by law, whichever is less, and all costs and expenses, including attorney's fees where recovery of the same is not prohibited by law, incurred by ICS in collecting such invoices.
23. All costs associated with compliance with any subpoena (s) for documents, testimony in a court of law, or for any other purpose relating to work performed by ICS in connection with work performed for that Client, shall be paid by Client. Client shall also pay costs related to deposition and trial testimony.
24. Cancelled/discontinued orders: Client responsible for all administrative and testing charges up to point of cancellation.