

Rockstar Sealing Systems
3 Spray Avenue
Mordialloc VIC 3195

Attention: Mr. Blake Dowe

3 February 2021



Rockstar Sealer Evaluation

Client Reference: Request B. Dowe
Our Reference: RST0121-1 Interim Report
Investigating Officer(s): Kate Tonkin
Report Prepared By: Kate Tonkin

James P Mann
Laboratory Manager

	Draft	Reviewed	Released
Name	KT	GB	KT
Date	3/2/21	3/2/21	3/2/21

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1. INTRODUCTION

A request was received from the client to complete a sealer evaluation for two of their sealing systems on various stone types. The sealers tested were described as follows:

- Rockstar Green Star Sealer
- Rockstar Natural Finish Stone Sealer

The stone samples were selected by Stone Initiatives to include three stone types with a honed finish. The stone samples selected were described as follows:

- Ariston Marble – typical white marble – honed finish
- Jerusalem Limestone – typical cream coloured high density limestone – honed finish
- White Granite – typical white granite – honed finish

2. TEST PROGRAM

The stain resistance of each of the stone samples was determined in the unsealed condition and following the application of the two Rockstar sealers. Testing was also carried out for comparison after the application of Dry Treat Stain Proof.

The sealers were allowed to cure for a minimum of seventy two hours. Following the curing period the surface of the samples were subjected to 20 scrubbing cycles with a red nylon floor pad to simulate the initial cleaning process and removal of any excess sealer on the surface. The samples were allowed to air-dry before application of the following staining agents to the surface finish:

- Red Wine (acidic)
- Olive Oil (stain leaving a film)
- Black Coffee (stain leaving a trace & slightly acidic)
- Coca Cola (stain leaving a trace & slightly acidic)
- Soy Sauce (stain leaving a trace & slightly acidic)

Staining agents were allowed to dwell¹ on the surface for a period of one hour and twenty four hours before attempts were made to remove the stain.

Cleaning was attempted firstly by rinsing the surface with running hot water for a period of 5 minutes followed by wiping with a damp cloth. Any stains still visible were then cleaned vigorously with a red nylon pad and neutral detergent and rinsed under hot water. The surface was air-dried and evaluated with regards to the visibility of the staining agent and any damage to the surface.

3. RESULTS

Results of the stain resistance tests on the honed finish are presented below.

Stone Type	Unsealed	Rockstar Green Star	Rockstar Natural Finish Stone Sealer	Dry Treat Stain Proof
Ariston Marble				
• Stain Index	1.9	3.9	4.6	TBA
• Lowest Score	1.5 (oil, soy sauce)	2.0 (red wine)	2.5 (red wine)	-
Jerusalem Limestone				
• Stain Index	2.4	4.4	4.9	-
• Lowest Score	1.5 (soy sauce)	3.0 (red wine)	4.5 (red wine)	-
White Granite				
• Stain Index	3.4	4.3	5.0	-
• Lowest Score	2.0 (olive oil)	3.0 (olive oil)	5.0	-

¹ At nominal conditions of 50% R.H. & 20°C.

3.1. Ariston Marble

	Unsealed		Rockstar Green Star		Rockstar Natural Finish Stone Sealer	
	1 hour	24 hour	1 hour	24 hour	1 hour	24 hour
Red Wine	2.0	2.0	3.0	2.0	4.5	2.5
Olive Oil	2.0	1.5	5.0	5.0	5.0	5.0
Black Coffee	2.0	2.0	4.5	3.5	5.0	4.5
Coca Cola	2.0	2.0	4.0	3.0	5.0	4.5
Soy Sauce	2.0	1.5	5.0	4.0	5.0	5.0
Score Averages:	2.0	1.8	4.3	3.5	4.9	4.3
Lowest Score	1.5		2.0		2.5	
Stain Index	1.9		3.9		4.6	
Visibility of Etching	None Visible		None Visible		None Visible	

Legend:

- 5 - Stain removed after cleaning procedure (scrub with red nylon pad, detergent and hot water)
- 4 - Stain very slightly visible (not noticeable upon casual viewing)
- 3 - Stain slightly visible (noticeable at close range at casual viewing)
- 2 - Stain moderately visible (conspicuous)
- 1 - Stain highly visible / permanent damage to surface finish (e.g. etching)

3.1.1. Discussion – Ariston Marble

Without the application of a sealer, Ariston marble with a honed finish is significantly stained by all staining agents.

The application of Rockstar Green Star considerably improves the stones resistance to staining caused by olive oil and soy sauce. However, the Green Star sealer does not completely protect the honed marble surface from coffee, Coca Cola or red wine. While it does improve the stain resistance of the finish to these staining agents, they continue to leave slight to moderate stains on the sealed surface.

When treated with Rockstar Natural Finish Stone Sealer, the stain resistance of Ariston marble is significantly improved. Olive oil, and soy sauce show no trace while coffee and Coca Cola show no trace when cleaned promptly and only a very slight stain when left to dwell on the surface for an extended period. Red wine continues to stain the Rockstar Natural Finish sealed surface with only a very small improvement in stain resistance when left to dwell however if cleaned quickly, there is only a very slight trace visible.

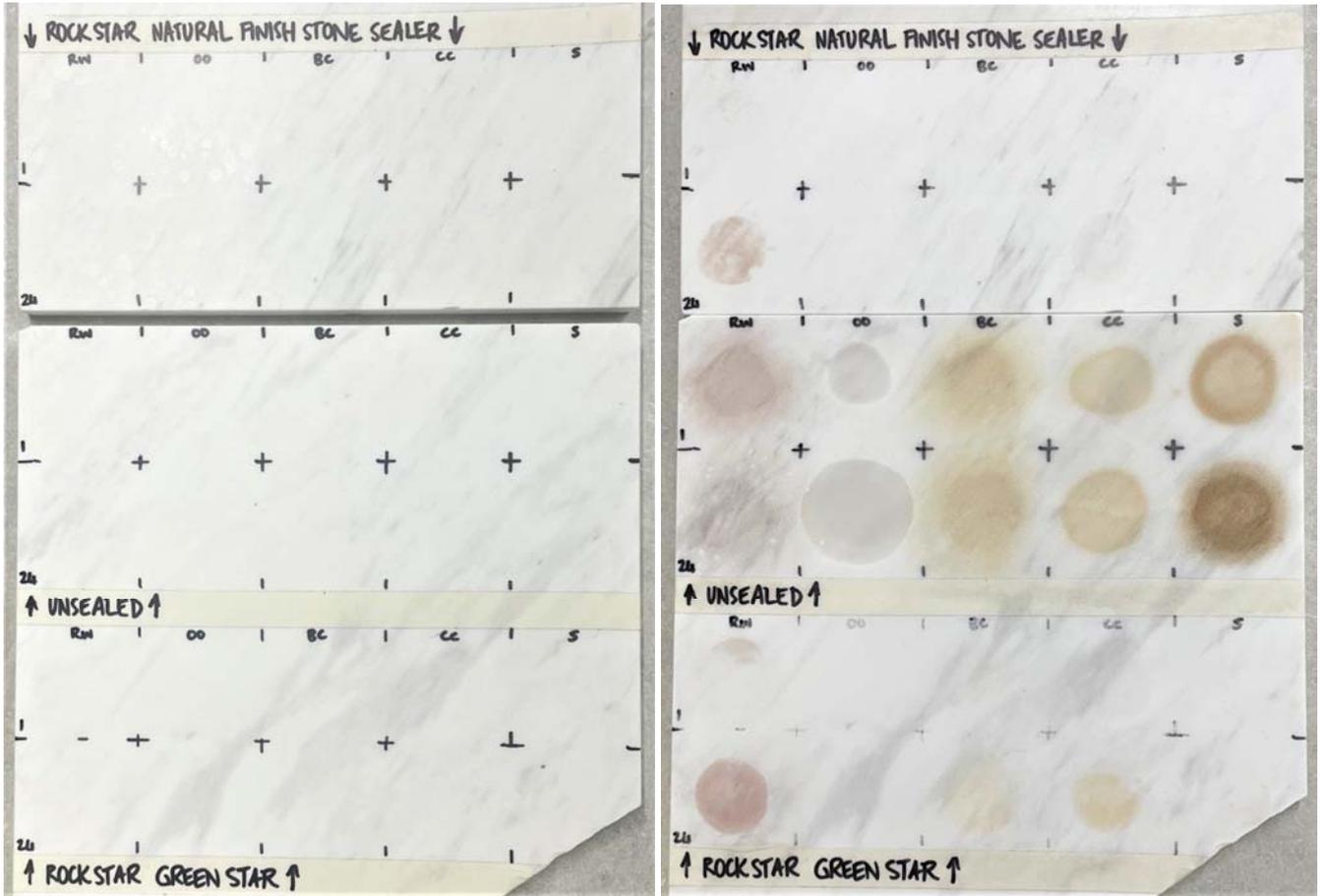


Plate 1: Appearance of samples of Ariston Marble before application of staining agents (left) and after removal of staining agents (right).

Top; Rockstar Natural Finish Stone Sealer, Middle; Unsealed, Bottom; Rockstar Green Star.

Staining Agent Applied (1 hour top half / 24 hour lower half)				
Red Wine (RW)	Olive Oil (OO)	Black Coffee (BC)	Coca Cola (CC)	Soy Sauce (S)

3.2. Jerusalem Limestone

	Unsealed		Rockstar Green Star		Rockstar Natural Finish Stone Sealer	
	1 hour	24 hour	1 hour	24 hour	1 hour	24 hour
Red Wine	2.0	2.5	3.0	3.0	4.5	4.5
Olive Oil	2.0	2.0	5.0	5.0	5.0	5.0
Black Coffee	2.5	3.0	5.0	4.5	5.0	5.0
Coca Cola	3.0	3.0	5.0	4.5	5.0	5.0
Soy Sauce	2.0	1.5	4.5	4.5	5.0	5.0
Score Averages:	2.3	2.4	4.5	4.3	4.9	4.9
Lowest Score	1.5		3.0		4.5	
Stain Index	2.4		4.4		4.9	
Visibility of Etching	None Visible		Very Slight		None Visible	

Legend:

- 5 - Stain removed after cleaning procedure (scrub with red nylon pad, detergent and hot water)
- 4 - Stain very slightly visible (not noticeable upon casual viewing)
- 3 - Stain slightly visible (noticeable at close range at casual viewing)
- 2 - Stain moderately visible (conspicuous)
- 1 - Stain highly visible / permanent damage to surface finish (e.g. etching)

3.2.1. Discussion – Jerusalem Limestone

Without the application of a sealer, the Jerusalem limestone is significantly stained by all staining agents.

When sealed with Rockstar Green Star sealer, the limestone is well protected from stains caused by olive oil after both a long and short dwell. It is well protected from black coffee and Coca Cola staining when cleaned promptly, and when left to dwell for a long period they only leave very slightly visible etching to the surface. Some of this etching may be due to a slight shiny ‘film’ this sealer left on the limestones honed surface. Staining caused by red wine was improved by the sealer, however, does continue to leave moderate staining on the limestone’s honed and Green Star sealed surface.

The Rockstar Natural Finish Stone sealer provides excellent protection from staining with only very slight staining visible caused by red wine. All other staining agents show no trace of staining on the honed and sealed surface.

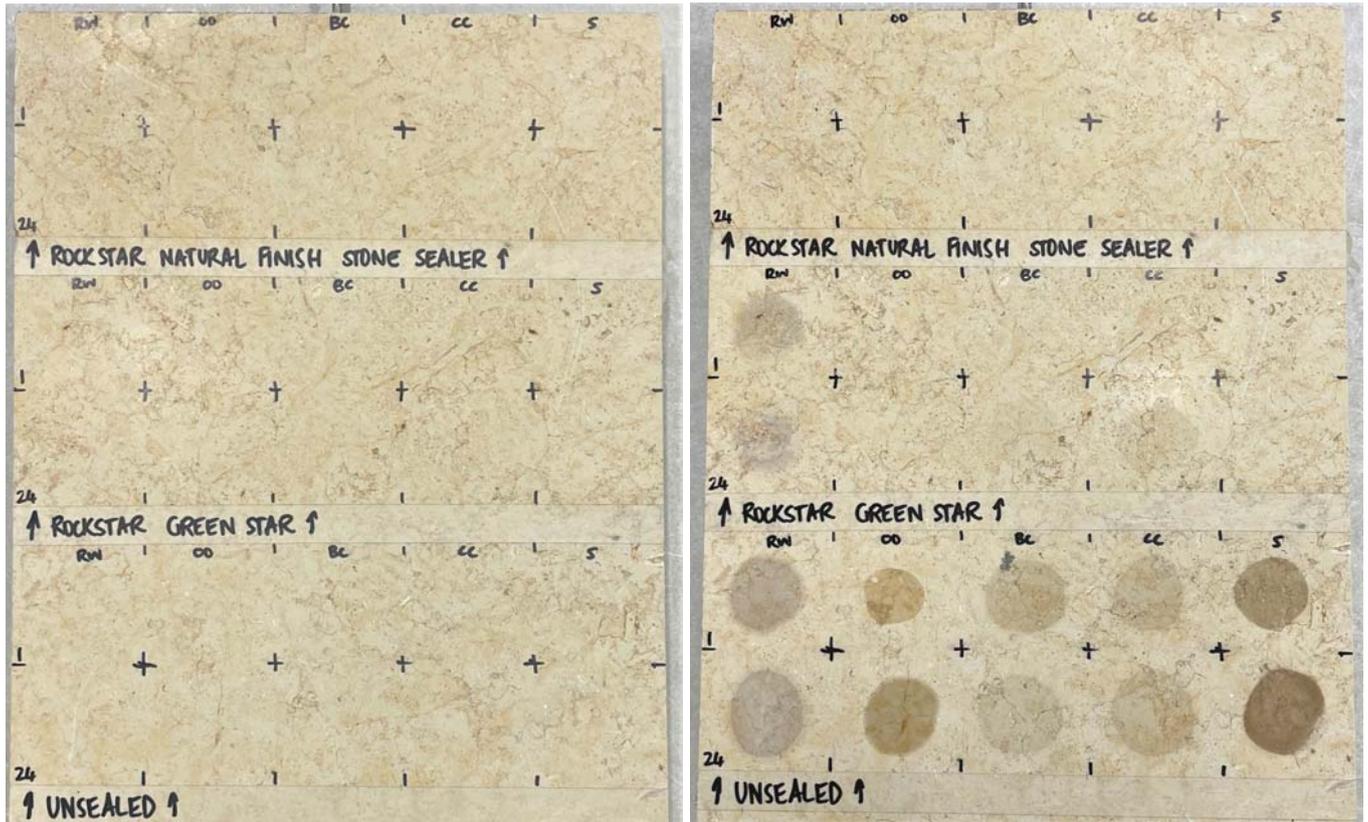


Plate 1: Appearance of samples of Jerusalem Limestone before application of staining agents (left) and after removal of staining agents (right).

Top; Rockstar Natural Finish Stone Sealer, Middle; Rockstar Green Star, Bottom; Unsealed.

Staining Agent Applied (1 hour top half / 24 hour lower half)				
Red Wine (RW)	Olive Oil (OO)	Black Coffee (BC)	Coca Cola (CC)	Soy Sauce (S)

3.3. White Granite

	Unsealed		Rockstar Green Star		Rockstar Natural Finish Stone Sealer	
	1 hour	24 hour	1 hour	24 hour	1 hour	24 hour
Red Wine	4.0	2.5	4.0	4.0	5.0	5.0
Olive Oil	3.0	2.0	4.5	3.0	5.0	5.0
Black Coffee	4.0	3.5	4.0	3.5	5.0	5.0
Coca Cola	4.0	3.5	5.0	4.5	5.0	5.0
Soy Sauce	3.5	4.0	5.0	5.0	5.0	5.0
Score Averages:	3.7	3.1	4.5	4.0	5.0	5.0
Lowest Score	2.0		3.0		5.0	
Stain Index	3.4		4.3		5.0	
Visibility of Etching	None Visible		None Visible		None Visible	

Legend:

- 5 - Stain removed after cleaning procedure (scrub with red nylon pad, detergent and hot water)
- 4 - Stain very slightly visible (not noticeable upon casual viewing)
- 3 - Stain slightly visible (noticeable at close range at casual viewing)
- 2 - Stain moderately visible (conspicuous)
- 1 - Stain highly visible / permanent damage to surface finish (e.g. etching)

3.3.1. Discussion – White Granite

When left unsealed the White Granite is visibly stained by all staining agents to varying degrees. The unsealed surface being most sensitive to red wine and olive oil.

The application of a Rockstar Green Star sealer improves the stones resistance to most staining agents, however when not cleaned promptly olive oil and black coffee continue to leave a moderate level of staining to the surface. Soy sauce is well protected against as is Coca Cola when cleaned quickly. Green Star sealer improves the stone’s resistance to red wine when it is left to dwell for a long period and improves resistance to oil and coffee when cleaned promptly with only slight stains visible.

Rockstar Natural Finish Stone Sealer provides excellent protection against staining for the White Granite. It appears to be completely protected, with no trace of any staining on the honed and sealed surface.

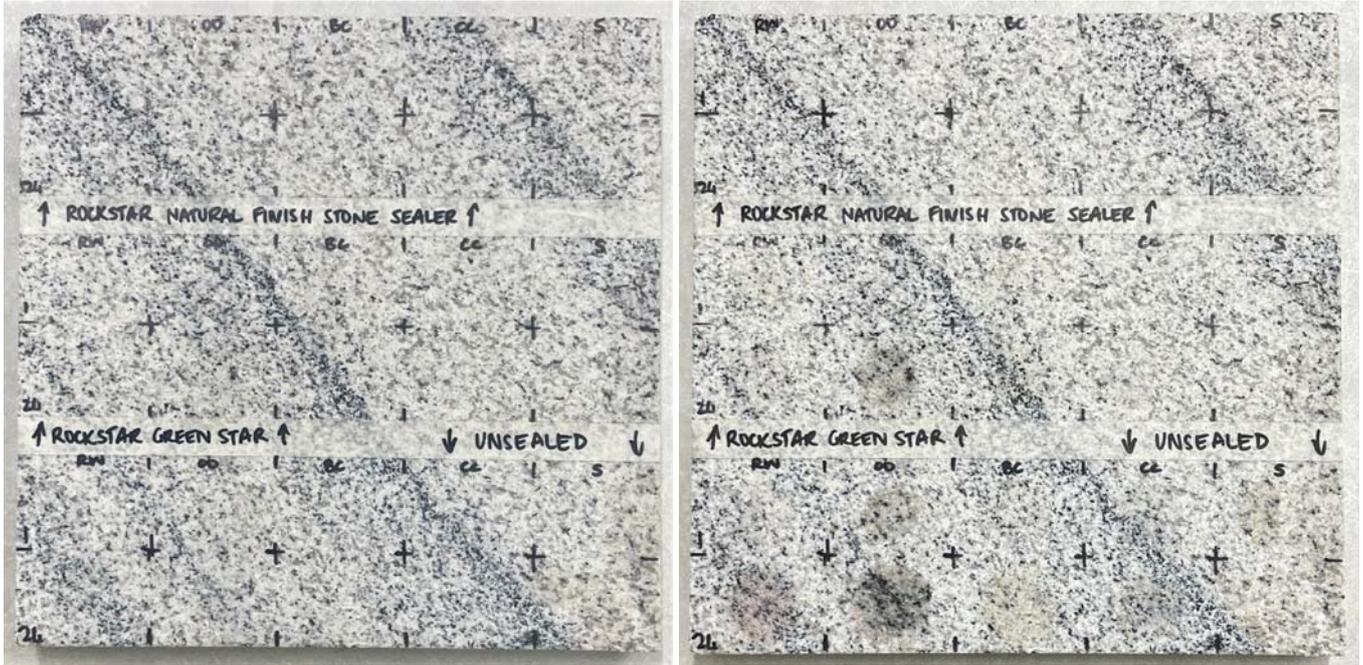


Plate 1: Appearance of samples of White Granite before application of staining agents (left) and after removal of staining agents (right).

Top; Rockstar Natural Finish Stone Sealer, Middle; Rockstar Green Star, Bottom; Unsealed.

Staining Agent Applied (1 hour top half / 24 hour lower half)				
Red Wine (RW)	Olive Oil (OO)	Black Coffee (BC)	Coca Cola (CC)	Soy Sauce (S)

Appendix A

Test Certificates



Determination of Stain Resistance

TEST SPECIFICATION: SI-STAIN-17
TEST DATE: 2/2/21 - 3/2/21
CLIENT: Rockstar Sealing Systems
OUR REF : RST0121-1

SUBSTRATE: Ariston Marble
SURFACE TREATMENT:
 M1086/1 Unsealed
 M1086/2 Rockstar Green Star
 M1086/3 Rockstar Natural Finish Stone Sealer

CONDITION: 20°C 50% RH

	Unsealed		Rockstar Green Star		Rockstar Natural Finish Stone Sealer	
	1 hour	24 hour	1 hour	24 hour	1 hour	24 hour
Red Wine	2.0	2.0	3.0	2.0	4.5	2.5
Olive Oil	2.0	1.5	5.0	5.0	5.0	5.0
Black Coffee	2.0	2.0	4.5	3.5	5.0	4.5
Coca Cola	2.0	2.0	4.0	3.0	5.0	4.5
Soy Sauce	2.0	1.5	5.0	4.0	5.0	5.0
Score Averages:	2.0	1.8	4.3	3.5	4.9	4.3
Lowest Score	1.5		2.0		2.5	
Stain Index	1.9		3.9		4.6	
Visibility of Etching	None Visible		None Visible		None Visible	

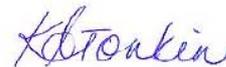
Scoring Legend:

- 5 - Stain not visible - removed after cleaning procedure (scrub with red nylon pad, detergent and hot water)
- 4 - Stain very slightly visible (not noticeable upon casual viewing)
- 3 - Stain slightly visible (noticeable at close range at casual viewing)
- 2 - Stain moderately visible (conspicuous)
- 1 - Stain highly visible / permanent damage to surface (e.g. etching)

Note: Measurement of uncertainty of Stain Index: ± 0.5

Tested by: K. Tonkin

Approved Signatory:



Date: 3-Feb-21

Name: K. Tonkin

Stone Initiatives Materials Testing Group Pty Ltd
 Phone: +61 8 83916844
 Email: info@stonemtg.com.au
 Web: www.stonemtg.com.au



Determination of Stain Resistance

TEST SPECIFICATION: SI-STAIN-17
TEST DATE: 2/2/21 - 3/2/21
CLIENT: Rockstar Sealing Systems
OUR REF : RST0121-1

SUBSTRATE: Jerusalem Limestone
SURFACE TREATMENT:
 L747/1 Unsealed
 L747/2 Rockstar Green Star
 L747/3 Rockstar Natural Finish Stone Sealer

CONDITION: 20°C 50% RH

	Unsealed		Rockstar Green Star		Rockstar Natural Finish Stone Sealer	
	1 hour	24 hour	1 hour	24 hour	1 hour	24 hour
Red Wine	2.0	2.5	3.0	3.0	4.5	4.5
Olive Oil	2.0	2.0	5.0	5.0	5.0	5.0
Black Coffee	2.5	3.0	5.0	4.5	5.0	5.0
Coca Cola	3.0	3.0	5.0	4.5	5.0	5.0
Soy Sauce	2.0	1.5	4.5	4.5	5.0	5.0
Score Averages:	2.3	2.4	4.5	4.3	4.9	4.9
Lowest Score	1.5		3.0		4.5	
Stain Index	2.4		4.4		4.9	
Visibility of Etching	None Visible		Very Slight		None Visible	

Scoring Legend:

- 5 - Stain not visible - removed after cleaning procedure (scrub with red nylon pad, detergent and hot water)
- 4 - Stain very slightly visible (not noticeable upon casual viewing)
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Determination of Stain Resistance

TEST SPECIFICATION: SI-STAIN-17
TEST DATE: 2/2/21 - 3/2/21
CLIENT: Rockstar Sealing Systems
OUR REF : RST0121-1

SUBSTRATE: White Granite
SURFACE TREATMENT:
 G1290/1 Unsealed
 G1290/2 Rockstar Green Star
 G1290/3 Rockstar Natural Finish Stone Sealer

CONDITION: 20°C 50% RH

	Unsealed		Rockstar Green Star		Rockstar Natural Finish Stone Sealer	
	1 hour	24 hour	1 hour	24 hour	1 hour	24 hour
Red Wine	4.0	2.5	4.0	4.0	5.0	5.0
Olive Oil	3.0	2.0	4.5	3.0	5.0	5.0
Black Coffee	4.0	3.5	4.0	3.5	5.0	5.0
Coca Cola	4.0	3.5	5.0	4.5	5.0	5.0
Soy Sauce	3.5	4.0	5.0	5.0	5.0	5.0
Score Averages:	3.7	3.1	4.5	4.0	5.0	5.0
Lowest Score	2.0		3.0		5.0	
Stain Index	3.4		4.3		5.0	
Visibility of Etching	None Visible		None Visible		None Visible	

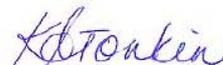
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