

NORTHWEST LABORATORIES *of Seattle, Incorporated*

ESTABLISHED 1896

Technical Services for: Industry, Commerce, Legal Profession & Insurance Industry

241 South Holden Street Seattle, WA 98108-4359 Phone: (206) 763-6252 Fax: (206) 763-3949 www.nwlabs1896.com

May 20, 2011

Rainier Richlite Co.
624 E. 15th Street
Tacoma, WA 98421

Attn: Shawn O'Day

Re: Countertop Chemical Resistance
24 Hour exposure test
P.O. #NWL 03152011
N.W. Labs Report #**E84916-1**

Dear Mr. O'Day:

Per your request, the submitted countertop material (unsealed surface) was tested for chemical resistance per the submitted instructions.

Analysis

The countertop was divided into three inch squares. This was documented prior to beginning the exposure, see Fig. 1-5.

Chemical Resistance (24 Hour Exposure)

Test procedure

The test was conducted by applying 5 drops of each reagent on the surface (except those marked**). Chemicals marked** were tested with a saturated cotton ball covered by a watch glass. All chemicals were tested at room temperature for a period of 24 hours, rinsed off with water and evaluated.

Test Results

No effect: No detectable stain, loss of gloss or change in work surface material.

Excellent: Slight stain or loss of gloss, but no change to the function, smoothness or life of the work surface material

Good: A clearly discernible stain or loss of gloss, but no change to the function, smoothness or life of the work surface material.

Fair: Unacceptable staining or discernible deterioration or etching of the work surface material.

Failure: Severe stain or moderate deterioration, pitting cratering, or etching of work surface material.

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			No effect	Excellent	Good	Fair	Failure
Acids							
1	Acetic Acid	99%	X				
2	Acid Dichromate	5%			X		
3	Chromic Acid	60%				X	
4	Formic Acid	90%		X			
5	Hydrochloric Acid	10%	X				
6	Hydrochloric Acid	37%	X				
7	Hydrofluoric Acid	48%	X				
8	Nitric Acid	20%		X			
9	Nitric Acid	30%		X			
10	Nitric Acid	65%			X		
11	Nitric Acid	70%				X	
12	Nitric Acid 65% : Hydrochloric Acid 37%	(1:3)			X		
13	Perchloric Acid	60%					X
14	Phosphoric Acid	60%		X			
15	Sulphuric Acid	25%	X				
16	Sulphuric Acid	33%		X			
17	Sulphuric Acid	77%					X
18	Sulphuric Acid	85%				X	
19	Sulphuric Acid	98%					X
20	Sulfuric Acid 77% : Nitric Acid 70%	(1:1)					X
21	Sulfuric Acid 85% : Nitric Acid 70%	(1:1)					X
Bases							
22	Ammonium Hydroxide	28%		X			
23	Sodium Hydroxide	10%				X	
24	Sodium Hydroxide	20%				X	
25	Sodium Hydroxide	40%					X
26	Sodium Hydroxide pellet				X		
Salts							
27	Copper Sulphate	10%	X				
28	Ferric (III) chloride	10%	X				
29	Potassium Iodite	10%	X				
30	Potassium Permanganate	10%		X			
31	Saturated Zinc Chloride		X				
32	Silver Nitrate	1%		X			
33	Sodium Chloride	10%	X				
34	Sodium Hypochlorite	13%					X
Halogens							
35	Iodine (Crystals)		X				

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		No	Excellent	Good	Fair	Failure
36	Iodine Solution (0.1 N)	X				
37	Tincture of Iodine - material unavailable					
	Organic Chemicals					
38	Cresol		X			
39	Dimethylformamide	X				
40	Formaldehyde 37%	X				
41	Furfural			X		
42	Gasoline	X				
43	Hydrogen Peroxide 3%	X				
44	Phenol 90%	X				
45	Sodium Sulfide Saturated		X			
	Solvents**					
46	Acetic Anhydride	X				
47	Acetone	X				
48	Acetonitrile		X			
49	Amyl Acetate		X			
50	Benzene		X			
51	Butyl Alcohol		X			
52	Carbon Tetrachloride		X			
53	Chloroform		X			
54	Dichlor Acetic Acid			X		
55	Dichloromethane		X			
56	Dioxane			X		
57	Diethyl Ether		X			
58	Ethylacetate		X			
59	Ethylacohol		X			
60	Ethylene Glycol	X				
61	Methylalcohol		X			
62	Methylene Chloride		X			
63	Methylethylketone		X			
64	Methylisobutylketone		X			
65	Mono Chlorobenzene	X				
66	Napthelene	X				
67	n-Butyl Acetate		X			
68	Tetrahydrofurane		X			
69	n-Hexane	X				
70	Toluene	X				
71	Trichloroethylene		X			

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			No effect	Excellent	Good	Fair	Failure
72	Xylene			X			
	Biological Stains						
73	Acridine Orange	1%	X				
74	Alizarin Complexone Dihydrate	1%	X				
75	Aniline Blue, water soluble	1%	X				
76	Basic Fuchsin	1%		X			
77	Carbol Fuchsin	1%			X		
78	Carmine	1%	X				
79	Congo Red	1%	X				
80	Gentian Violet (dye)	1%		X			
81	Eosin B	1%	X				
82	Giemsa Stain - material unavailable	1%					
83	Malachite Green Oxalate	1%		X			
84	Methyl Violet 2B	1%			X		
85	Methylene Blue	1%	X				
86	Safranin O	1%	X				
87	Sudan III	1%		X			
88	Wright Stain	1%	X				

The chemicals in the above table include the 49 chemicals/concentrations set forth by SEFA 8 (Laboratory Casework) specifications as well as the main reagents from independent testing via Professional Service Industries/Pittsburgh Laboratory Division.

All information is based on our current state of knowledge. It is intended as information concerning our products and their application possibilities, and is therefore not intended as any form of guarantee with regard to any specific product characteristic.

Although the tests have been conducted according to the standard, it is recommended that users conduct their own tests.

The countertop was also documented after exposure to show the various results, see Fig. 6-10.

Sincerely,

NORTHWEST LABORATORIES, INC.



Omar Simon, Chemist

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FIGURE CAPTIONS – E84916-1



Fig. 1: Overall view of the countertop, divided into 3-inch squares, prior to exposure.

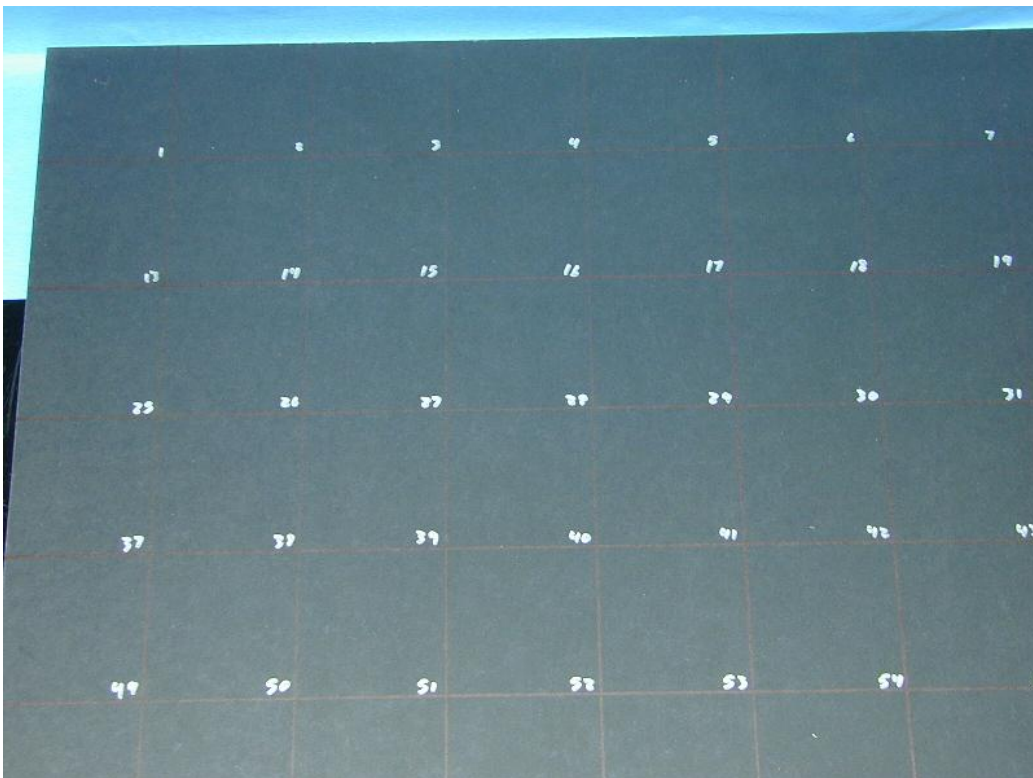


Fig. 2: Overall view of the top left quadrant.

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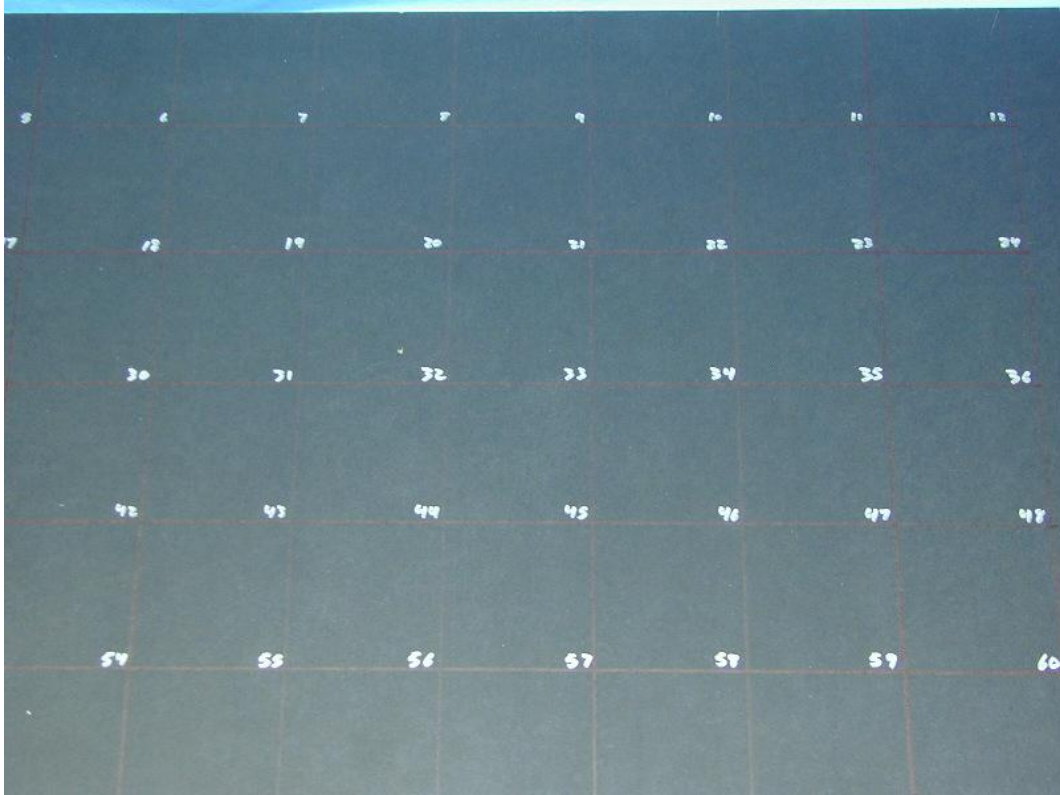


Fig. 3: Overall view of the top right quadrant.

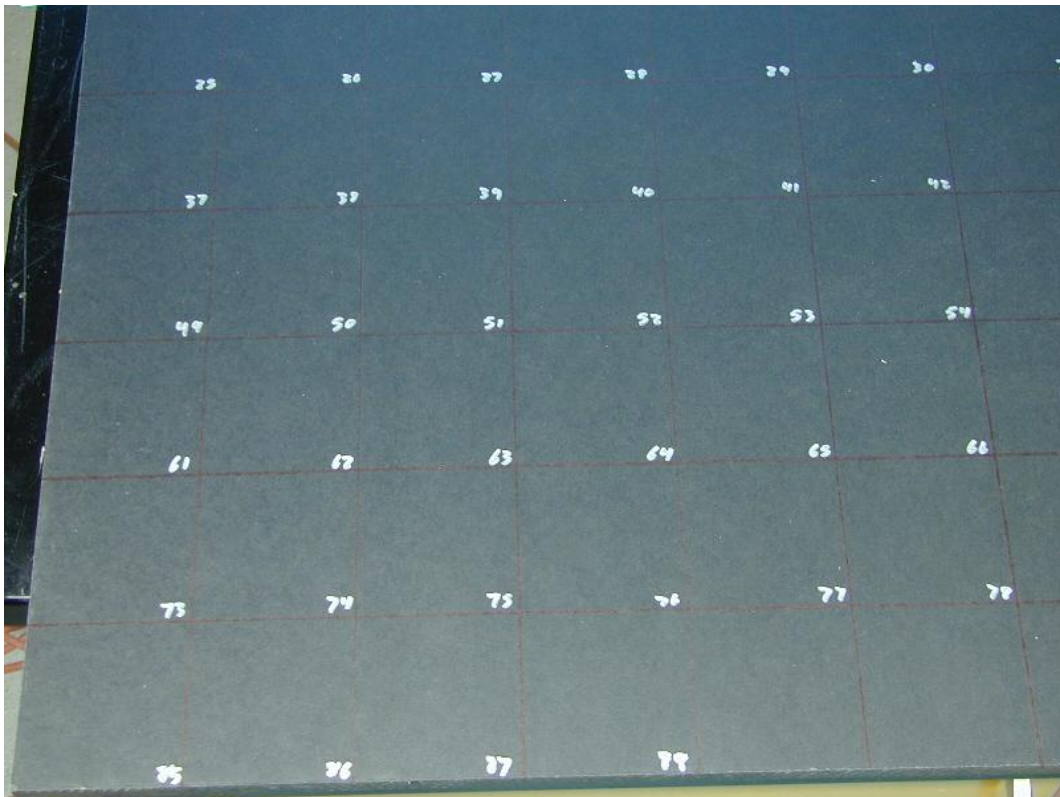


Fig. 4: Overall view of the bottom left quadrant.

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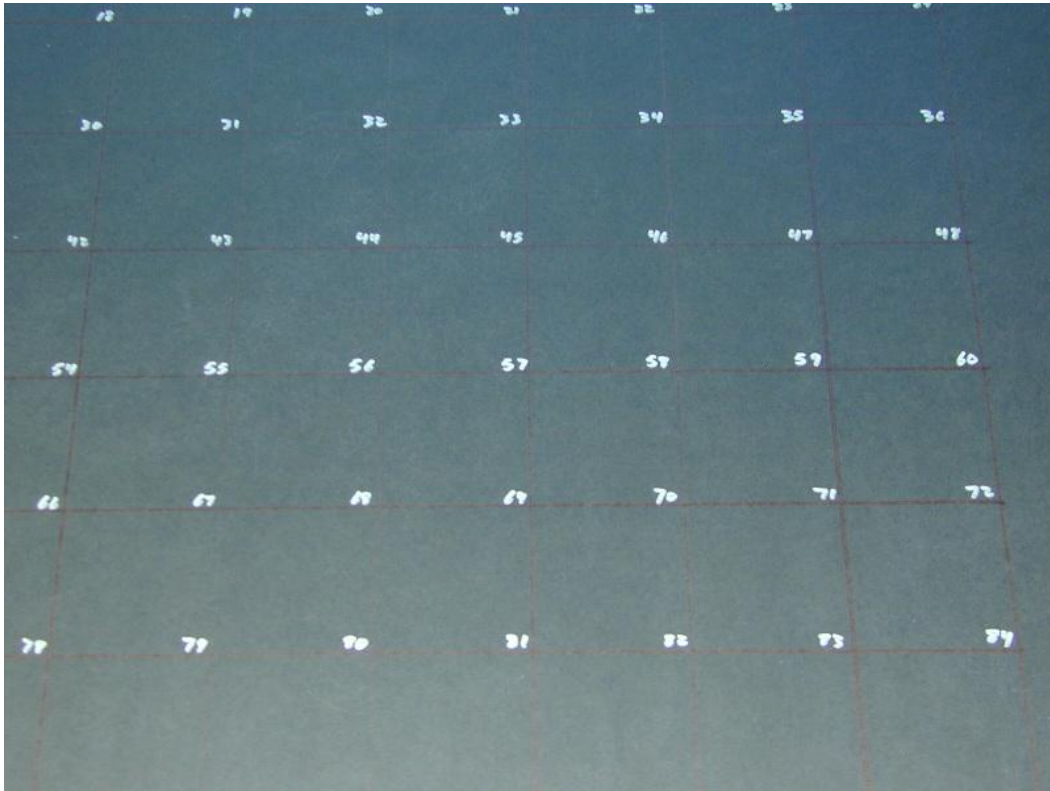


Fig. 5: Overall view of the bottom right quadrant.

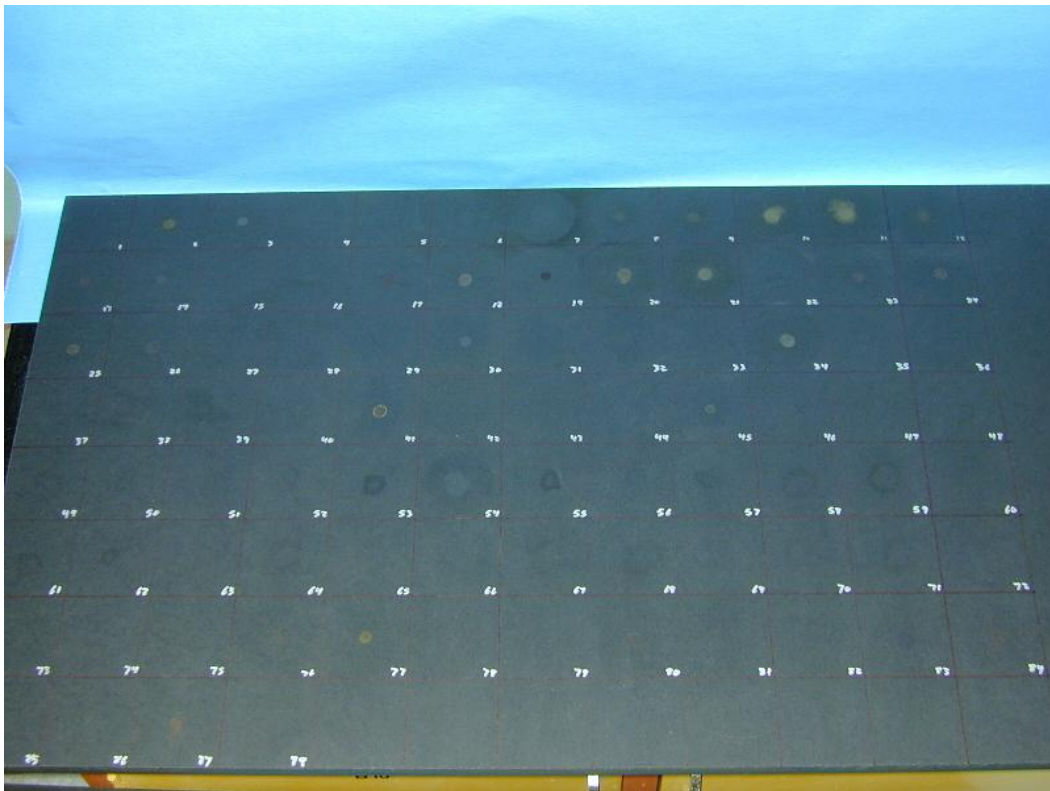


Fig. 6: Overall view of the countertop, after exposure.

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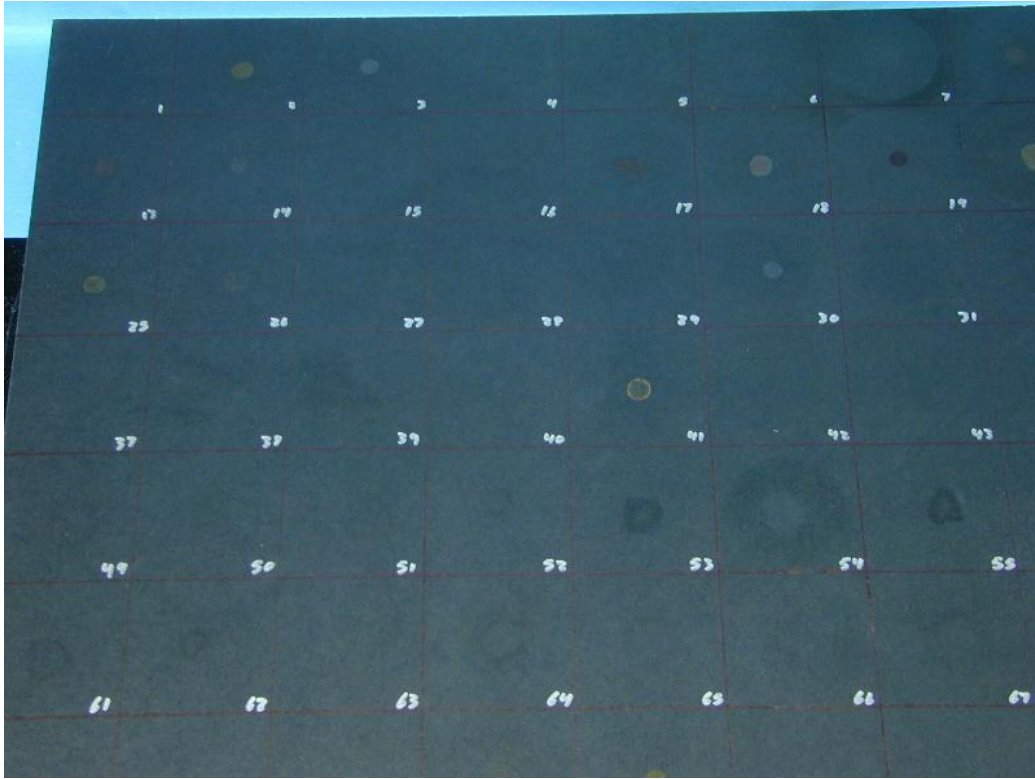


Fig. 7: Overall view of the top left quadrant, after exposure.

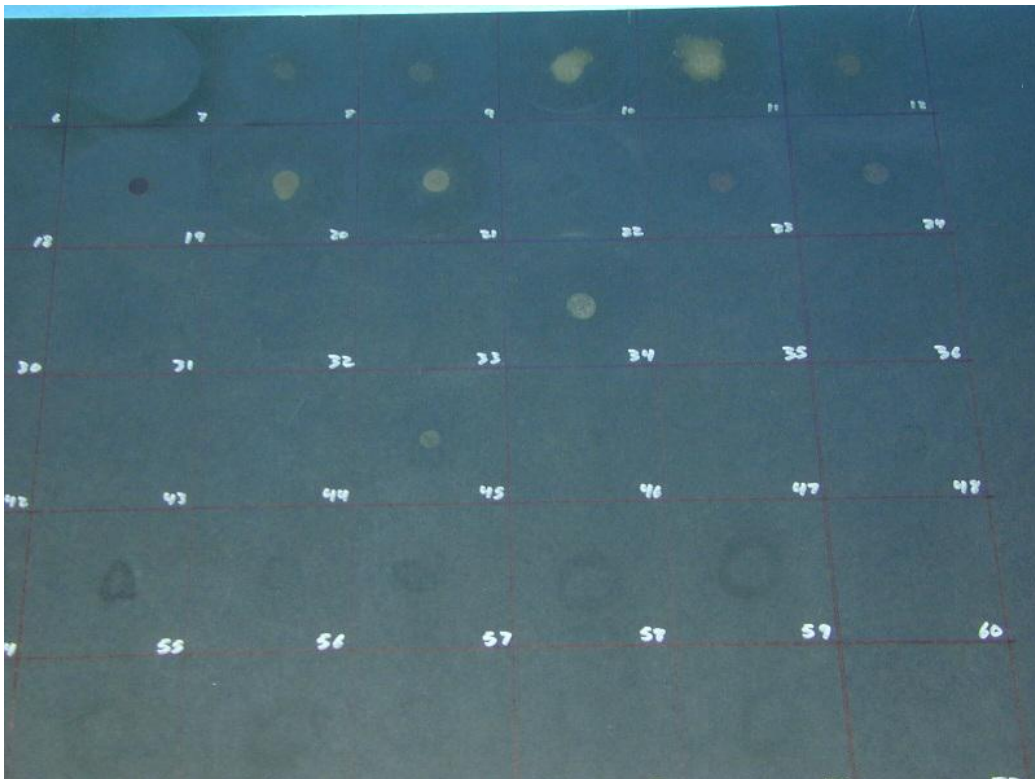


Fig. 8: Overall view of the top right quadrant, after exposure.

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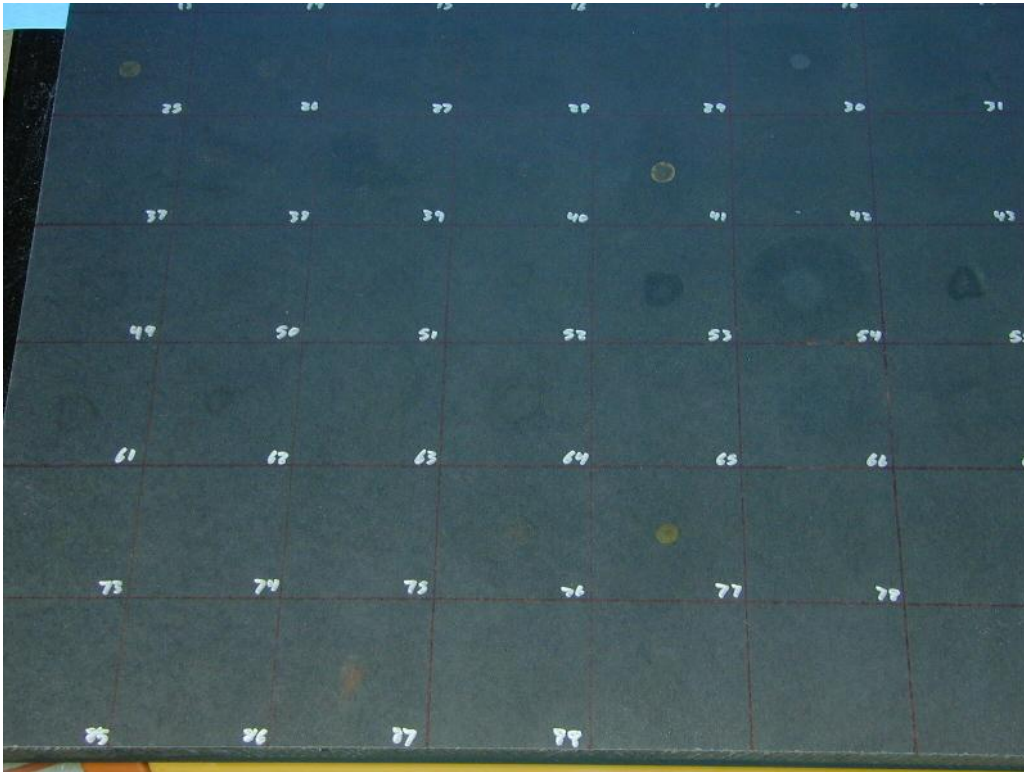


Fig. 9: Overall view of the bottom left quadrant, after exposure.

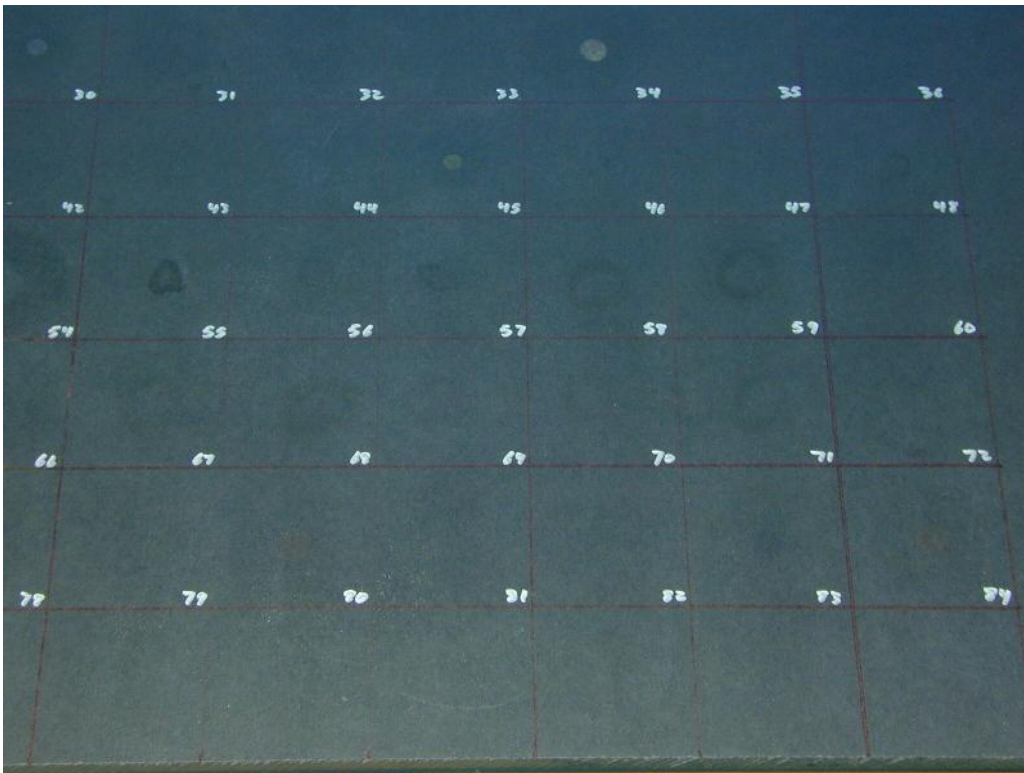


Fig. 10: Overall view of the bottom right quadrant, after exposure.