

Tritium Laboratory
29 March 2011

SWAB REPORT # 577

SWAB DATE: 21 March 2011

R/V Melville and Vans

James D. Happell

Distribution:
SWAB Committee
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REPORT FOR SWAB # 577

LOCATION: Valparaiso, Chile
VESSEL: R/V Melville

DATE: 21 March 2011
TECHNICIAN: Cecilia Roig

Sample #	Sample Identification	³ H dpm/m ²		¹⁴ C dpm/m ²	
		activity	error	activity	error
1	1st Vial Bkgnd	0	± 0	0	± 0
2	Initial bucket blank C.O. #1	30	± 116	0	± 0
<u>Winch Room (Figure 1)</u>					
3	Inside Revco refrigerator	0	± 0	12	± 37
4	Inside Kenmore refrigerator	0	± 0	13	± 40
5	Inside Frigidaire refrigerator	27	± 41	17	± 33
6	Deck in front of Revco	0	± 0	22	± 37
7	Deck between Kenmore and Frigidaire	0	± 0	0	± 0
<u>Main Lab (Figure 2)</u>					
8	Benchtop aft of sink	0	± 0	21	± 37
9	Sink area	18	± 37	18	± 34
10	Deck between benchtops	17	± 38	14	± 34
11	Inside Kenmore freezer	68	± 54	3	± 16
12	Benchtop fwd of sink	46	± 51	9	± 28
13	Benchtop across from sink	0	± 0	0	± 0
14	Inside Sanyo freezer	0	± 0	19	± 36
15	Deck in front of freezer	21	± 59	0	± 0
16	Inside Thermo	41	± 51	7	± 27
17	Middle benchtop	44	± 47	19	± 32
18	Deck at entrance to stairs	0	± 0	17	± 39
19	Inside Kelvinator	0	± 0	25	± 37
20	Deck in front of Kelvinator	0	± 0	29	± 39
21	Benchtop across from Kelvinator	11	± 20	41	± 36
22	Stbd benchtop	0	± 0	14	± 39
23	Intermediate bucket blank	28	± 44	12	± 31
<u>Analytical Lab (Figure 2)</u>					
24	Inside fume hood	0	± 0	11	± 37
25	Benchtop fwd of hood	21	± 37	21	± 34
26	Sink area	0	± 0	27	± 37
27	Fwd port benchtop	87	± 67	6	± 21
28	Deck center of lab	0	± 0	8	± 37
29	Stbd benchtop	6	± 29	11	± 35

Sample #	Sample Identification	³ H dpm/m ²		¹⁴ C dpm/m ²	
		activity	error	activity	error
30	Deck inside stbd door	0	± 0	24	± 38
31	Deck inside door to Main Lab	20	± 42	11	± 33
32	Final bucket blank	0	± 0	18	± 39
33	Initial bucket blank	2	± 0	0	± 0
<u>01 Deck (Figure 2)</u>					
34	Deck at entrance to Library	0	± 0	0	± 0
35	Outside deck	0	± 0	18	± 37
36	Deck at top of stairs	21	± 39	17	± 34
37	Deck at end of game table	0	± 0	0	± 0
<u>Radioisotope Van # 12 (Figure 3)</u>					
38	Rad Van2 - Inside fume hood	147	± 55	49	± 32
39	Benchtop across from hood	32	± 62	0	± 0
40	Benchtop left of sink	124	± 55	25	± 29
41	Sink area	0	± 0	4	± 35
42	Benchtop across from sink	49	± 59	0	± 0
43	Deck inside aft door	101	± 57	5	± 17
44	Inside freezer	144	± 61	0	± 0
45	Inside refrigerator	7	± 22	19	± 35
46	Deck in center of van	156	± 55	*53	± 32
47	Deck inside fwd door	119	± 53	36	± 31
48	Intermediate bucket blank	0	± 0	10	± 43
<u>Dark Room (Figure 2)</u>					
49	Sink area	0	± 0	18	± 36
50	Deck inside aft door	0	± 0	1	± 0
51	Deck in center of lab	0	± 0	23	± 37
52	Deck inside port door	21	± 42	12	± 33
<u>Miscellaneous Areas (Figure 2)</u>					
53	Deck outside aft entrance to galley	10	± 25	23	± 35
54	Deck outside fwd entrance to galley	0	± 0	18	± 38
55	Deck outside entrance to hospital	0	± 0	11	± 38
<u>Aft hangar (Figure 2)</u>					
56	Sink area	0	± 0	8	± 48
57	Deck at entrance to Main Lab	0	± 0	17	± 37

Sample #	Sample Identification	³ H dpm/m ²		¹⁴ C dpm/m ²	
		activity	error	activity	error
	<u>UCS Van # 9 (Figure 4)</u>				
58	Inside hood	72	± 45	44	± 34
59	Sink area	0	± 0	12	± 38
60	Deck at aft entrance	0	± 0	10	± 41
61	Deck center of van	17	± 56	0	± 0
62	Deck at fwd. entrance	0	± 0	*55	± 39
63	Final bucket blank C.O. #2	0	± 0	45	± 38

Comments

Please note that the error reported for each isotope is the two-standard deviation counting error. All areas tested on the ship were free of contamination. One sample in Van # 9 tested positive for minor ¹⁴C contamination, this area needs to be cleaned before any natural tracer work. One sample in radioisotope van # 12 also tested positive for ¹⁴C, no action required.