

Tritium Laboratory
27 July 2011

SWAB REPORT # 586

SWAB DATE: 13 July 2011

R/V Hugh R. Sharp and Vans

James D. Happell

Distribution:
SWAB Committee
Tim Deering

REPORT FOR SWAB # 586

LOCATION: Cambridge, MD; Lewes, DL
VESSEL/LAB: *R/V Hugh R. Sharp* and Vans

DATE: 13 July 2011
TECHNICIAN: Charlene Grall

Sample #	Sample Identification	³ H dpm/m ²		¹⁴ C dpm/m ²	
		activity	error	activity	error
<u>Main Lab (See Figure 1)</u>					
2	Initial bucket blank C.O. # 1	0	± 22	0	± 11
3	Inside Whirlpool freezer top	47	± 119	0	± 0
4	Inside Whirlpool refrigerator bottom	15	± 221	17	± 207
5	Deck in front of Holiday freezer	20	± 260	0	± 0
6	Benchtop across from Thermo -80 freezer	49	± 111	0	± 0
7	Benchtop across from sink	37	± 180	0	± 0
8	Stbd. bench aft section	30	± 136	18	± 182
9	Stbd. bench middle section	46	± 116	0	± 0
10	Deck at aft entrance	45	± 132	0	± 0
11	Deck at stbd entrance	49	± 99	7	± 380
<u>Wet Lab (See Figure 1)</u>					
12	Inside Roper freezer	30	± 186	0	± 0
13	Inside Roper refrigerator, bottom	37	± 106	27	± 127
14	Fwd. benchtop	0	± 0	22	± 191
15	Benchtop aft of stbd. sink	53	± 86	21	± 152
16	Aft sink area	298	± 23	24	± 93
17	Inside Frigidaire freezer	37	± 131	9	± 337
18	Inside Frigidaire refrigerator	10	± 196	33	± 111
19	Vestibule deck outside Wet Lab entrance	38	± 114	20	± 164
<u>General Purpose Van (See Figure 2)</u>					
20	Stbd. benchtop across from sink	0	± 0	11	± 334
21	Stbd benchtop aft	73	± 81	0	± 0
22	Sink area	42	± 106	17	± 185
23	Benchtop adjacent to sink	37	± 124	10	± 309
24	Benchtop adjacent to fume hood	36	± 176	0	± 0
25	Inside fume hood	96	± 56	17	± 167
26	Inside refrigerator	48	± 113	0	± 0
27	Deck below fume hood	147	± 41	12	± 180

	^3H dpm/m ²		^{14}C dpm/m ²	
	activity	error	activity	error
28 Deck inside single door entrance	52	± 77	37	± 96
<u>Radioisotope Van (See Figure 3)</u>				
29 Benchtop opposite sink	243	± 27	0	± 0
30 Inside fume hood	***405134	± 0	*4048	± 1
31 Lid of LSC	*2261	± 6	39	± 26
32 Benchtop adjacent to sink	247	± 17	*439	± 11
33 Sink area	300	± 14	*666	± 8
34 Inside refrigerator	*5500	± 4	29	± 15
35 Inside freezer	192	± 29	*62	± 53
36 Deck below fume hood aft entrance	*2222	± 6	*170	± 16
37 Deck below growth chamber	*788	± 11	*195	± 19
38 Deck at fwd entrance	465	± 14	*263	± 16
39 Deck of vestibule outside entrance	131	± 46	0	± 0
40 Final bucket blank C.O. # 1	90	± 61	3	± 478
<u>Shared Use Van (See Figure 4)</u>				
41 Initial bucket blank C.O. # 2	2	± 278	33	± 110
42 Sink area	288	± 24	0	± 399
43 Benchtop adjacent to sink	122	± 48	6	± 300
44 Benchtop across from LSC	114	± 49	4	± 357
45 Inside fume hood	82	± 75	0	± 0
46 Benchtop across from sink	16	± 230	13	± 257
47 Benchtop adjacent to LSC	43	± 109	11	± 263
48 Inside refrigerator	*1672	± 7	*98	± 23
49 Inside freezer	*558	± 14	28	± 65
50 Deck below fume hood at d-door entrance	*3461	± 5	29	± 20
51 Deck at single door entrance	*871	± 11	0	± 83
52 Final bucket blank C.O. # 2	7	± 734	0	± 5922

Comments

Please note that the error reported for each isotope is the two-standard deviation counting error. All areas tested on the *R/V Hugh R. Sharp* were free of radioisotope contamination.

However, there was serious ^3H contamination inside the Rad Van fume hood as well as minor ^3H and ^{14}C contamination in several areas in the Rad Van. We suggest cleaning the fume hood and all contaminated areas. The Shared Use Van also had ^3H contamination in several areas and ^{14}C contamination inside the refrigerator. This van should be cleaned before any use.

