

Tritium Laboratory
2 April 2009

SWAB REPORT #516

SWAB DATE: 25 March 2009

R/V Atlantis and Radioisotope Van

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Distribution:
SWAB Committee
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REPORT FOR SWAB # 516

LOCATION: San Diego, CA
 TECHNICIAN: Cecilia Roig
 VESSEL/LAB: R/V *Atlantis*

DATE: 25 March 2009
 STATUS: See **Comments**

SAMPLE #	SAMPLE IDENTIFICATION	NET ACTIVITY EXTRACTED	
		3H dpm/m2	14C dpm/m2
1	Machine Blank	-	-
2	Initial bucket blank C.O. #1	10	0
<u>Hydro Lab (See Figure 1)</u>			
3	Inside freezer top	0	0
4	Inside freezer bottom	0	0
5	Inside fume hood	31	0
6	Stbd. sink area	0	0
7	Deck at stbd. door	67	0
8	Deck at aft entrance	0	0
9	Port sink area	0	0
<u>Wet Lab (See Figure 1)</u>			
10	Inside fume hood	0	0
11	Fwd. sink area	0	0
12	Deck in center of lab	0	0
13	Deck inside aft double doors	0	0
<u>Main Lab (See Figure 2)</u>			
14	Inside fwd. Revco (water)	0	0
15	Inside middle Revco (water)	16	145*
16	Inside aft Revco	0	0
17	Deck inside port aft entrance	0	0
18	Deck inside fwd entrance	0	0
19	Deck in front of port sink	0	0
20	Inside stbd. freezer top	22	0
21	Inside stbd. refrigerator bottom	0	0
22	Deck in front of ice machine	0	8
23	Inside fume hood	0	0
24	Deck in front of fume hood	35	0
<u>Bio/Analytical Lab (See Figure 3)</u>			
25	Inside top freezer (water)	25	0
26	Inside bottom freezer	0	0
27	Deck inside stbd. entrance	0	0
28	Deck in front of freezer	0	0
29	Inside fume hood	0	0
30	Fwd. benchtop & sink area	27	0
31	Aft benchtop & sink area	0	0
32	Deck in front of fume hood	0	0
33	Deck inside aft entrance	0	0
<u>Misc. Areas (See Figure 3)</u>			
34	Deck inside fwd. walk-in freezer	0	0
35	Fwd. benchtop of aft walk-in freezer	0	0
36	Deck at entrance of aft walk-in freezer	10	0

SAMPLE #	SAMPLE IDENTIFICATION	NET ACTIVITY EXTRACTED	
		3H dpm/m2	14C dpm/m2
37	Aft benchtop of aft walk-in freezer	0	0
38	Deck outside walk-in freezers	0	0
<u>Electronics/Computer Lab (See Figure 3)</u>			
39	Deck at fwd. entrance	0	0
40	Deck at stbd. entrance	0	0
41	Final bucket blank C.O. #1	0	0
<u>Radioisotope Van (See Figure 4)</u>			
42	Initial bucket blank C.O. #2	0	0
43	Sink area	34	357*
44	Benchtop adjacent to sink	81	1,353*
45	Inside Flow Sciences	415	4,390*
46	Benchtop across Flow Sciences	19	1,273*
47	Benchtop above freezer	84	628*
48	Benchtop across sink	65	331*
49	Inside freezer	669*	589*
50	Inside refrigerator	151	263*
51	Deck left of Flow Sciences	1,297*	25,041**
52	Deck center of van	1,374*	20,751**
53	Deck at entrance to van	475	10,475**
54	Final bucket blank C.O. #2	0	0

Comments

All areas tested on the ship were free of tritium contamination. Only one sample, the water taken from the middle Revco freezer in the Main Lab showed minor C14 activity, this freezer should be cleaned before any natural tracer work. There was some tritium and C14 contamination found in the radioisotope van. The deck areas of the van need to be cleaned because of the higher levels detected and to prevent tracking into the ship.