

Tritium Laboratory  
15 December 2009

SWAB REPORT #536

SWAB DATE: 8 December 2009

*R/V Atlantis  
and Radioisotope Van*

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Distribution:  
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REPORT FOR SWAB # 536

LOCATION: Guaymas, Mexico  
 TECHNICIAN: Cecilia Roig  
 VESSEL/LAB: R/V Atlantis

DATE: 8 December 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	0	0
<u>Main Lab (See Figure 1)</u>			
3	Inside aft Revco	0	26
4	Inside middle Revco	21	0
5	Inside fwd. Revco	0	1
6	Deck inside fwd. entrance	0	0
7	Port sink area	61	5
8	Deck in front of port sink	0	12
9	Deck in front of port aft entrance	1	0
10	Deck in front of ice machine	0	0
11	Inside fume hood	13	0
12	Deck in front of fume hood	0	0
13	Stbd. sink area	0	0
14	Inside freezer top SSSG	0	0
15	Inside refrigerator bottom SSSG	0	0
<u>Hydro Lab (See Figure 2)</u>			
16	Inside freezer top	60	49
17	Inside freezer bottom	0	0
18	Inside fume hood	0	0
19	Stbd. sink area	0	0
20	Deck at stbd. door	0	0
21	Deck at aft door	0	0
22	Port sink area & bench top	0	0
<u>Wet Lab (See Figure 2)</u>			
23	Inside fume hood	0	0
24	Fwd. sink area	0	0
25	Stbd. bench top	0	0
26	Deck inside aft double door	0	29
27	Port bench top	0	18
28	Deck center of lab	0	0
<u>Bio/Analytical Lab (See Figure 1)</u>			
29	Inside freezer top (water)	0	0
30	Inside freezer bottom	0	0
31	Deck inside stbd. entrance	0	0
32	Deck in front of freezer	17	0
33	Inside fume hood	0	138*
34	Fwd. sink area & bench top	0	0
35	Aft bench top & sink area	0	23
36	Deck in front of fume hood	0	0

SAMPLE #	SAMPLE IDENTIFICATION	NET ACTIVITY EXTRACTED	
		3H dpm/m2	14C dpm/m2
37	Deck inside aft entrance	0	21
<u>Miscellaneous Areas (See Figure 3)</u>			
38	Deck inside fwd. walk-in freezer	12	0
39	Fwd. bench top of aft walk-in freezer	0	2
40	Aft bench top of aft walk-in freezer	0	0
41	Deck inside aft walk-in freezer	0	0
42	Deck outside walk-in freezers	0	9
<u>Electronic/Computer Lab (See Figure 3)</u>			
43	Deck inside stbd. entrance	0	0
44	Deck inside fwd. entrance	59	0
45	Final bucket blank C.O. #1	0	0
<u>Radioisotope Van (See Figure 4)</u>			
46	Initial bucket blank C.O. #2	7	0
47	Sink area	0	2,247*
48	Bench top above fridge	0	1,034*
49	Inside hood	0	4,254*
50	Bench top across hood	0	563*
51	Bench top above freezer	0	1,218*
52	Bench top across sink	0	489
53	Inside fridge	119	958*
54	Inside freezer	0	662*
55	Deck under escape hatch	0	8,373*
56	Deck center of van	0	9,721*
57	Deck inside entrance	0	9,874*
58	Final bucket blank C.O. #2	0	13

### Comments

SWAB #504, done December 2008, revealed isotope contamination in many ship areas. Great care was taken in cleaning the ship and when sampling in this cruise. The result is that all areas tested on the ship were free of isotope contamination, except for very mild contamination found in one sample inside the fume hood in the Bio/Analytical Lab. The hood should be cleaned before any natural tracer work.

The Radioisotope Van was free of any tritium contamination, but mild C14 contamination was found in several areas, decks of the van should be cleaned to prevent tracking into ship areas. Our LSC counts 35S as 14C, it is possible that the contamination found is 35S. Contaminated samples will be rerun in 90 days. If the contamination is 35S the activity will decrease 50%, since the half-life of 35S is 87.4 days.