

Tritium Laboratory
30 August 2010

SWAB REPORT # 557

SWAB DATE: 24 August 2010

R/V *Knorr* & Radioisotope Van

Dr. James D. Happell
Associate Research Professor

Distribution:
SWAB Committee
David Fisichella

REPORT FOR SWAB # 557

LOCATION: Woods Hole, MA
 TECHNICIAN: Cecilia Roig
 VESSEL/LAB: *R/V Knorr*

DATE: 24 August 2010
 STATUS: See Comments

SAMPLE #	SAMPLE IDENTIFICATION	NET ACTIVITY EXTRACTED	
		³ H dpm/m ²	¹⁴ C dpm/m ²
1	1st Machine blank	0	0
2	Initial bucket blank	0	0
<u>Main Lab (See Figure 1)</u>			
3	Ice inside So-Low freezer	0	0
4	Inside Kenmore chest freezer	0	0
5	Inside Kenmore small refrigerator	176	0
6	Deck inside door to aft stairwell	24	14
7	Inside port aft Kenmore black fridge	2	9
8	Inside port fwd. Kenmore black fridge	0	34
9	Bench top above refrigerators	43	9
10	Deck in front of fwd. sink	0	14
11	Center fwd. bench top	8	30
12	Deck in front of door to fwd. stairwell	0	14
<u>Lower Lab (See Figure 3)</u>			
13	Revco stbd. fwd. freezer	0	0
14	Revco stbd. middle freezer	123	0
15	Cospolich stbd. middle freezer	97	60 *
16	Cospolich stbd. aft freezer	0	17
<u>Analytical Lab (See Figure 2)</u>			
17	Sink area	0	24
18	Deck inside door to Main Lab	0	4
19	Deck inside door to passage	0	11
<u>Main Deck (See Figure 2)</u>			
20	Deck in passage by aft Mess door	0	26
21	Deck in passage next to water fountain	0	7
<u>Wet Lab (See Figure 2)</u>			
22	Sink area	0	33
23	Deck center of lab	0	10

SAMPLE #	SAMPLE IDENTIFICATION	NET ACTIVITY EXTRACTED	
		³ H dpm/m ²	¹⁴ C dpm/m ²
	<u>Upper Lab (See Figure 3)</u>		
24	Fume hood	24	20
25	Inside Cospolich refrigerator	0	0
26	Deck in front of refrigerator	0	0
27	Deck in front of sink	17	2
28	Bench top aft of sink	0	20
29	Deck between stairway & passage	0	8
	<u>Radioisotope Van (See Figure 4)</u>		
30	Sink area	490	5
31	Bench top above refrigerator	445	74 *
32	Inside hood	284	12
33	Bench top across hood	1787 *	76 *
34	Bench top above freezer	1004 *	85 *
35	Bench top across sink	595 *	112 *
36	Deck under escape hatch	1961 *	81 *
37	Inside freezer	940 *	263 *
38	Inside refrigerator	2760 *	494 *
39	Deck center of van	5209 *	174 *
40	Deck next to sink	1150 *	38
41	Final bucket blank	0	10

Comments

Areas tested on the ship were clean of any radioisotope spill except for one sample. The middle Cospolich in the ship's Lower Lab has mild ¹⁴C contamination and needs to be cleaned before any natural tracer work. Minor ³H and ¹⁴C contamination was also detected in several areas of the van. Since the van's deck is being replaced, no action is required at this time.

Comments

All areas on board the R/V New Horizon tested free of radioisotope contamination.
Minor ¹⁴C contamination was found in all three vans, but no action is needed.