

**Mallinckrodt**

BOX 6172 LAMBERT FIELD • ST. LOUIS, MISSOURI 63145 • 314 AX 1-0540

**NUCLEAR**

FORMERLY NUCLEAR CONSULTANTS

**RADIOPHARMACEUTICALS**

September 26, 1967

Director  
Isotopes Branch  
Division of Materials Licensing  
U.S. Atomic Energy Commission  
1717 "H" Street  
Washington 25, D.C.

Gentlemen:

We have made qualitative measurements of skin or hair contamination of the head and neck areas of laboratory personnel whose thyroid glands show an "apparent" high thyroid burden of Iodine-131. In such cases where external contamination was detected on areas which could be "seen" by the thyroid gamma probe, notations to this effect were made on the thyroid measurement records.

Such a notation was made in the records for this individual on August 23, 1967. The 1.43 value measured that day was the total contribution from the external contamination and the actual thyroid burden. Although no quantitative measurement of the external contamination could be made at that time, it was estimated that sufficient activity was distributed on the surface of the skin to account for the 43% apparent overexposure. The average of this value and others taken before and after August 23rd, resulted in value of 1.17 for the week ending August 26th.

We were advised by your inspector on September 14th that we should report this as a possible overexposure since we had recorded the total contribution in our records.

We are in the process of calibrating our external monitoring probe to provide quantitative measurements of external versus internal (thyroid) activity.

The products this individual processed on August 21st and August 22nd were T-3/T-4 and Rose Bengal-Iodine-131.

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PDR FOIA  
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Information in this record was deleted  
in accordance with the Freedom of Information  
Act, exemptions 6

FOIA- 96-343  
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DUPLICATED  
FOR DIV. OF COMPLIANCE

In that proper equipment and protective clothing have been provided, we advised this individual that more care must be taken by him to prevent personal contamination. In addition, arrangements have been made for more intensive observation and supervision of this individual's work by both his immediate supervisor and the health physics department.

Sincerely yours,

Mallinckrodt/Nuclear

*Donald W. Soldan*

Donald W. Soldan, Manager  
Health Physics Department

Enclosure

Copy to Manager, Region III  
Division of Compliance, USAEC



September 26, 1967

MALLINCKRODT/NUCLEAR

The individual referred to in this report as chemist No. 1 is




Ex 6



## MALLINCKRODT/NUCLEAR

1967 FRACTIONAL PERMISSIBLE IODINE-131 THYROID BURDEN\*

<u>NAME</u>		<u>SOCIAL SECURITY NUMBER</u>		<u>IDENTIFICATION NUMBER</u>	
Chemist No. 1					
<u>Period of Exposure</u>	<u>1/2/67-4/3/67</u>	<u>4/3/67-7/3/67</u>	<u>7/3/67-10/2/67</u>	<u>10/2/67-1/1/68</u>	
<u>Week Starting</u>	<u>1 st. quarter</u>	<u>W. S. 2nd quarter</u>	<u>W. S. 3rd quarter</u>	<u>W. S. 4th quarter</u>	
1/2	.27	4/3 .04	7/3 .31	10/2	
1/9	.31	4/10 .05	7/10 Vacation	10/9	
1/16	.18	4/17 .13	7/17 .09	10/16	
1/23	.28	4/24 .40	7/24 .25	10/23	
1/30	.61	5/1 0	7/31 Vacation	10/30	
2/6	--	5/8 .12	8/7 .76	11/6	
2/13	.15	5/15 .33	8/14 .90	11/13	
2/20	.17	5/22 .12	8/21 1.17	11/20	
2/27	.10	5/29 --	8/28 .96	11/27	
3/6	.14	6/5 .07	9/4 .48	12/4	
3/13	.04	6/12 .11	9/11 .20	12/11	
3/20	.14	6/19 .07	9/18 .91	12/18	
3/27	--	6/26 --	9/25	12/25	
Quarterly Average	.22	.13			

\* Fractional Permissible Thyroid Burden based on a permissible quarterly average thyroid burden of 0.14 microcuries of Iodine-131.



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