

U. S. ATOMIC ENERGY COMMISSION  
BYPRODUCT MATERIAL LICENSE

Pursuant to the Atomic Energy Act of 1954 and Title 10, Code of Federal Regulations, Chapter 1, Part 20, Licensing of Byproduct Material, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, own, possess, transfer and import byproduct material listed below; and to use such byproduct material for the purpose(s) and at the place(s) designated below. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954 and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission now or hereafter in effect and to any conditions specified below.

Licensee			
1. Name	<b>Monsanto Chemical Company Inorganic Research</b>	3. License number	<b>24-1113-7 (F63)</b>
2. Address	<b>800 W. Lindbergh Boulevard St. Louis 66, Missouri</b>	4. Expiration date	<b>June 30, 1963</b>
		5. Reference No.	
6. Byproduct material (element and mass number)	7. Chemical and/or physical form	8. Maximum amount of radioactivity which licensee may possess at any one time	
A. Calcium-45 Phosphorus-32	A. Any	A. 16 millicuries	
B. Bismuth-210	B. Standard Source	B. 15.2 microcuries	
9. Authorized use			
A. To be used to study the abrasiveness of polishing agents.			
B. To be used for instrument calibration.			

CONDITIONS

10. Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.
11. The licensee shall comply with the provisions of Title 10, Part 20, Code of Federal Regulations, Chapter 1, "Standards For Protection Against Radiation".
12. Byproduct material shall be used by, or under the direct supervision of, Thomas Schiff, EMD, or Howard L. Vandercall.
13. Except as specifically provided otherwise by this license, the licensee shall possess and use byproduct material described in Items 6, 7 and 8 of this license in accordance with statements, representations, and procedures contained in his application dated June 7, 1961, as amended by letter from Charles J. Eby dated June 21, 1961.

A157



DUPLICATED  
FOR DIV. OF COMPLIANCE

Date **June 27, 1961**

For the U. S. Atomic Energy Commission  
Original Signed By  
James R. Mason  
**Chief, Isotopes Branch**  
by \_\_\_\_\_  
Division of Licensing and Regulation  
Washington 25, D. C.

REB 6/27/61

Date Received JUN 8 1961	Expiration Date JUN 30 1963	Issue Date	Tech. Reviewer [Signature]
Control No.	Reference No.	License No. 21-1113-7 63	Amendment No.
Isotope	Form	Possession Limit	
A. $Ca^{45}$ - 48-32	A. <i>any</i>	A. 16 cur	
B. $U^{234}$	B. Standard source	B. 206 micrograms	
C. $P^{32}$	C.	C. 16 cur	
D.	D.	D.	
E.	E.	E.	
F.	F.	F.	
G.	G.	G.	
H.	H.	H.	

Authorized Use

- A. To be used to study the abrasiveness of polishing agents.
- B. To be used for instrument calibration.

REMARKS, Letters, Phone calls, Visits, Exemptions, Etc. ( Use reverse side if necessary )  
 Call to John Lane re U-234. Says include on byproduct line and get his concurrence. (2/22/61)

*Called Rhyon re source.  
He will call Bob Rindge*

*See 4 of 3B  
include "direct"  
over*

Conditions			
1. A B C	6.	11.	(26) 313 dat
2. A B C	7.	12.	6-761
3. A B C D	8. A B C	13.	17.
4. A B	9. A B C	14. A B C	18.
5.	10.	15.	19.
			20.
			21.

Mail to: <i>Vandarsall</i>	Date Mailed JUN 27 1961	<input checked="" type="checkbox"/> Approve <input type="checkbox"/> Void
		Tech. Reviewer <i>[Signature]</i> Date 6-16-61 Chief <i>RKR</i> Date 6-17-61