



Solid State Physics  
Research Institute  
P.O. Box 358

# VIRGINIA STATE UNIVERSITY

PETERSBURG, VIRGINIA 23803

June 29, 1987

87 JUL 2 12:45

(804) 520-6153  
TWX 710 9572334

Mr. John Potter  
United States Nuclear Regulatory Commission  
Region II  
101 Marietta Street, N.W.  
Atlanta, GA 30323

30-08460

Dear Mr. Potter:

We wish to request that the materials license of Virginia State University (45-09790-02) be amended so that the university may purchase two kits for radioimmunoassay of protein hormones. Each kit contains approximately 10 microcuries of  $^{125}\text{I}$ . They will be used by Dr. Michael O. Ezekwe, who is principal investigator in the swine laboratory of our agricultural research area.

The enclosed memorandum from Dr. Ezekwe describes in detail his planned use of these materials. I have discussed the use of such materials with Dr. Ezekwe and have inspected his laboratory. All appears in order and I expect that all regulations regarding use of these materials will be followed carefully.

Please let me know if you should need any additional information. Also please note that I will be at the Los Alamos Meson Physics Facility (505-667-5975) between July 11 and August 1, 1987.

Sincerely yours,

*Carey E. Stronach*

Carey E. Stronach, Ph.D.  
Professor of Physics  
Campus Radiation Safety Officer

87 JUL -9 18:29  
RECEIVED  
U.S. NUC. REG. COM.  
FEE EXEMPT

8801050461 870721  
REG2 LIC30  
45-09790-03 PDR

Enclosure

RECEIVED BY LFMS	
Date	7/9/87
Log	Jul-3-II
By	Messner
Date	7/9/87

FEE EXEMPT

170.116(9) State

5/16/87

OFFICIAL

## Use of $^{125}\text{I}$ Assay Kits for Radioimmunoassay of Protein Hormones

The kits for use in assay of various protein hormones contain  $^{125}\text{I}$  and are used for in vitro diagnostic testing only. Radioimmunoassay is based on the ability of a limited quantity of antibody to bind a fixed amount of radiolabeled antigen, and the inhibition of this reaction by an unlabeled antigen. The percentage of bound radioactivity from  $^{125}\text{I}$  decreases as a function of the increasing concentration of unlabeled antigen in the test sample (blood serum). Separation of the bound and free radiolabeled antigen is accomplished by the addition of a second antibody directed toward the immunoglobulin present in the original antiserum. The quantity of unlabeled antigen in an unknown sample is determined by comparing the radioactivity of the precipitate, after centrifugation, with the values established using known standards in the same assay system.

Radioactivity is measured in a Gamma Counter located in our laboratory. Strict rules regarding use of radioactive material will be adhered to during the assay.

Principal Investigator  
Michael O. Ezekwe  
(804) 520-5160



SWINE RESEARCH

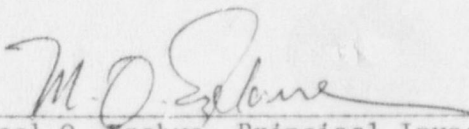
# VIRGINIA STATE UNIVERSITY

PETERSBURG, VIRGINIA 23803

## MEMORANDUM

DATE: June 12, 1987

TO: Dr. Carey E. Stronach, Professor  
Physics Department

FROM:   
Michael O. Ezekwe, Principal Investigator  
Swine Research

SUBJECT: Purchase of Radioactive Material

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Please find an enclosed requisition for radioimmunoassay kit for two hormones which contain Iodine 125 for your information and action. Total 125 I in  $\mu$ Curies is estimated to be less than 10 for each kit.

Would you return the requisition to me after you have given your approval for normal processing? Let me know if you need more information. Thank you.

MOE/mpc

Enclosure



## REQUISITION FOR PURCHASES

VIRGINIA STATE UNIVERSITY  
PETERSBURG, VIRGINIA

Dept. Requisition No. \_\_\_\_\_

Date June 9, 1987

Please order the items specified below for use of Growth and Development of Pigs (Ezekwe) Department of Animal Science  
 delivery to room 1st Floor Building 20712, 4th Ave. by 6/30/87 Suggested Source of Supply or Payment Cambridge Medical Technology, 575 Middlesex Turnpike, Billerica, MA 01865  
 (Date Needed)

(Give name and full address; if more than one source attach list)

Attach estimates, if any, to this revision or give catalog number. Give specific date for delivery. Thirty days or more should be allowed to explore source supply, receive and analyze bids, make awards and effect delivery.

Va. Commodity Classification No.	DESCRIPTION (Double Space Between Items)	Quantity & Unit	Unit Price	Total Price
	#732 - 125I Insulin Assay Kit	1 ea.	70.00	70 0
	#807 - 125I Cortisol Assay Kit	1 ea.	75.00	75
	Contact: Michael D. Drabik Date: June 9, 1987			
	APPROVED: _____ FINANCIAL ANALYST, GRANTS & CONTRACTS			

ACCOUNTING CODE 521271 - 37130 (\$145.00)

IF REPLACEMENT OR REORDER, INDICATE PREVIOUS  
PURCHASE ORDER NO. \_\_\_\_\_ AND DATE \_\_\_\_\_

Date \_\_\_\_\_ Approved \_\_\_\_\_  
Budget Officer

I certify that the items called for in this requisition are for official use of  
University

## PURCHASING OFFICE MEMORANDA:

Requested by Michael O. Ezekwe *M. O. Ezekwe*  
Head of Department or In Charge

Request Quotation [www.enr.construction.com/resources/special/](http://www.enr.construction.com/resources/special/)

Department Telephone No. 5160

Agency Purchase Order \_\_\_\_\_

Requisition Department of P &amp; S \_\_\_\_\_

APPROVED: \_\_\_\_\_

Other Remarks: \_\_\_\_\_

Date \_\_\_\_\_ Approved \_\_\_\_\_

Director

Appropriation: ORDER NO.