

ATTACHMENT TO AUTHORIZATION APPLICATION

RADIATION PROTECTION

WEAK BETA EMITTERS (^3H , ^{14}C , ^{33}P , ^{35}S , ^{45}Ca)

All experiments will be carried out on a designated lab bench covered with absorptive plastic backed paper. The paper will be changed monthly at which time a series of G.M. surveys and wipe tests will be conducted. Results of such tests will include a description of the area wiped, the model and serial number of the instruments used, and the results in mR/hr and DPM/100 cm². All individuals using radioactive material will be properly trained by the University Radiation Safety Office. All individuals using radioactive material will wear protective gloves, and lab coats. All radioactive material will be procured, stored and used in accordance with the University of Louisville *Radioactive Material User Guide*. All waste will be disposed in accordance with the *Radioactive Material User Guide* and the U of L *Disposal Guide*.

I, _____, agree to follow the above radiation
(Printed Name)
safety protocol and insure all individuals working under my
authorization follow the protocol.

(Signature of Applicant)

Date

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RADIATION PROTECTION

HIGH ENERGY BETA EMITTERS (^{32}P , ^{86}Rb ,)

All experiments will be carried out on a designated lab bench covered with absorptive plastic backed paper. The paper will be changed monthly at which time a series of G.M. surveys and wipe tests will be conducted. Results of such tests will include a description of the area wiped, the model and serial number of the instruments used, and the results in mR/hr and DPM/100 cm². All experiments will be properly shielded. All individuals will be monitored with film badges. Stock solutions and individual uses greater than 1 millicurie (mCi) will be shielded with at least 3/8" Plexiglas. All individuals using radioactive material will be properly trained by the University Radiation Safety Office. All individuals using radioactive material will wear protective gloves, and lab coats. All radioactive material will be procured, stored and used in accordance with the University of Louisville *Radioactive Material User Guide*. All waste will be disposed in accordance with the *Radioactive Material User Guide* and the *U of L Disposal Guide*.

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RADIATION PROTECTION

RIA KITS (^{125}I ,)

All experiments will be carried out on a designated lab bench covered with absorptive plastic backed paper. The paper will be changed monthly at which time a series of G.M. surveys and wipe tests will be conducted. Results of such tests will include a description of the area wiped, the model and serial number of the instruments used, and the results in mR/hr and DPM/100 cm². All individuals will be monitored with film badges. All individuals using radioactive material will be properly trained by the University Radiation Safety Office. All individuals using radioactive material will wear protective gloves, and lab coats. All radioactive material will be procured, stored and used in accordance with the University of Louisville *Radioactive Material User Guide*. All waste will be disposed in accordance with the *Radioactive Material User Guide* and the U of L *Disposal Guide*.

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ADDENDUM TO AUTHORIZATION APPLICATION

RADIOACTIVE MATERIAL USE PROTOCOL

Specific Radionuclide and Use

Gamma Emitting Radionuclides (^{125}I , ^{131}I , ^{22}Na , ^{51}Cr , etc.)

Use: Labeling proteins and cells

Radiation Protection Protocol:

All stock solutions and waste will be adequately shielded with lead to keep radiation levels at contact less than 2 mR/hr and **As Low As Reasonable Achievable** (ALARA). All experiments involving volatile radionuclides will be carried out on a designated exhaust fume hood covered with an absorbent plastic backed paper. At the end of the experiment, this paper will be removed, placed in a properly labeled plastic bag, and disposed as per the University of Louisville Radioactive Material User Guide and the University of Louisville Disposal Guide. A series of G.M. surveys and wipes will be performed monthly when small quantities are used and weekly for larger quantities (>1mCi). For volatile radionuclides (^{125}I and ^{131}I , Sodium Iodine), URSO will be contacted within 24 hours of the iodination if single use quantities exceed the limits specified in Appendix I of the *Radioactive Material User Guide*. Lab personnel will present themselves to URSO as scheduled in order that bioassay can be performed in a timely fashion.

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(Signature of Applicant)

(Date)

