PROPOSED EURAMET PROJECT

1. Ref. No.: (*please leave blank*)	2. Subject Field: Ionising Radiation
3. Type of collaboration: comparison of measurement standards	
4A. Partners: LNE-LNHB,	4B. CEC funded? No
5. Participating countries: France,	
6. Title: **Standardization, decay data measurements and evaluation of ^{67}Cu**	

7. Description:

Copper 67 ($T_{1/2}$ = 2.66 d) is a radionuclide decaying through β- emission, to zinc 67. This radionuclide is to be used as a radiopharmaceutical for radio-immunotherapy.
One of its interests lies on its possible association with copper 64, an isotope of copper decaying through β^+ which can be used for PET imaging. These two isotopes can then be linked to the same bio-marker, ensuring a perfect superposition of the PET image with the distribution of the drug with copper 67 in the patient body and in the tumor to be treated.

At present, there is no international traceability established for that nuclide through key comparisons.
The decay scheme is only very roughly known. Some decay data like the β- branch to the ground level of zinc 67 are only approximately determined, and the relative intensities of photons have been measured 30 years ago, in 1978.
The aim of that project is then
- to create copper 67 national activity standards able to be transferred to practitioners of the medical field through secondary standards,
- to establish their international traceability and to bring significant input in the BIPM KCDB,
-- to determine with high accuracy decay data such as branching ratios, photon emission intensities and half-life,
- to issue an updated evaluated decay scheme, based on former published results and on those coming from that project.

8. Additional remarks:

Due to the relatively short half life of that radionuclide, the comparison of activity standards should be made with different solutions through participations to the SIR in coordination with the BIPM.

9. Proposer´s name:
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10. Proposer´s signature:	11. Date: September 2008	12. Proposed starting date: Mid 2009

Notes for completion of the form overleaf

NOTES FOR THE COMPLETION OF THE FORM

(numbers refer to boxes)

IMPORTANT: The form must be typed or completed in black ink to facilitate photocopying

2) Subject Field Projects should be placed in one of the following fields:

- Mass and related quantities (including force, pressure, air density, torque, viscosity and hardness)
- Electricity and magnetism (including RF & microwave)
- Length (including dimensional metrology, saccharimetry, polarimetry, refractive index of air and angle measurements)
- Time and frequency
- Thermometry (including thermophysical properties and humidity);
- Ionising radiation (including radioactivity and dosimetry)
- Photometry and radiometry (including fibre optics)
- Flow (including fluid properties)
- Acoustics, ultrasound and vibration (including accelerometry)
- Amount of substance
- Interdisciplinary metrology
- Projects for which it is impossible to assign to one of the above specified fields should have the appropriate field entered in box 2 in no more than two or three words.

3) Type of collaboration The type of collaboration being proposed should be defined as one of the following:

- Cooperation in research
- Comparison of measurement standards
- Traceability
- Consultation on facilities

Collaboration, which cannot be assigned to one of the above, should have the type of collaboration clearly defined in the space available in box 3.

4A) Partners Any institutes, which have already indicated a desire to participate in the proposed collaboration, should be indicated in alphabetical order using their standard acronyms.

4B) CEC Funding Place "X" only if funding is ensured.

5) Participating countries The participating countries should be indicated in alphabetical order by the letters signifying their State. See country codes in the last section of the directory. Every effort should be made to establish potential partners prior to completing a Proposal Form.

6) Title The title of the proposed collaboration should be specified in not more than 60 characters (including spaces).

7) Description Within the space provided a brief description of the proposed collaboration should be given. Sufficient detail should be provided so researchers in other institutes can assess whether it is appropriate for them to seek to join the collaboration.

8) Additional remarks This box provides the opportunity for adding any additional remarks relevant to the proposed collaborative project (e.g. previous collaborations, external funding etc).

9) Proposer The name, full postal address, telephone and fax numbers, e-mail address (where available) of the person proposing the collaboration should be given.

10) Signature Only the original signed copy should be forwarded to the EUROMET Secretary.

11) Date This form should be dated the day of the signature.

12) Proposed starting date If the collaboration is still at the preliminary stage a proposed starting date should be given.