# Processing or shipping samples back home - how it's done at NCNR

Keith A Consani - NIST Health Physics, NIST, Gaithersburg, MD 20899

## Two general needs

**Shipping sample back home (from NCNR)**
- Form: Material Transfer Request (Rm A134, A132, or B100)
- Forms: Proposel to acquire a Radiation Source
- Proposed change in Utilization of Radiation Source

**Acquire or dispose of source @ NIST**
- Form: Proposel to acquire a Radiation Source
- Proposed change in Utilization of Radiation Source

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## Health Physics Assessment

**General issues of note**

Organic syntheses can have catalytic impurities that activate. Inorganic chemicals can have impurities that activate.

Stainless steel sample holders or screws will sometimes activate. Inorganic chemicals can have impurities that activate.

- **Sensitivity** is in low nCi range,
- **Shielding** w/2 inches Pb
- **6 plastic scintillation detectors 4π**
- **40keV to > 2MeV Gammas**
- **16in X 16in X 18in (cavity size 4608 in**

**License Transfer**

- Many beam samples have short-lived isotopes
- License Transfer
- Material Transfer Request (Rm A134, A132, or B100)
- Material Transfer Request

**Proposed change in Utilization of Radiation Source**

- Tool Monitor – clean
- Gamma Spectroscopy – Co-60 (120 Bq and 59 Bq), K-40 (5.1 Bq)
- Activation calculation – Co-60 (1.1 Bq) & K-40 (0.0 Bq)
- GM Survey – clean
- Sip & Swill Sample
- GM Survey clean
- Sip & Swill Sample

**Processing or shipping samples back home - how its done at NCNR**

- **Two general needs**
- **Health Physics Assessment**
- **Carbon nanotubes, two vials (HFBS)**
- **Shipping**
- **Silicon window, 10mm X 30cm (NG-7 SANS)**