

2014 Scientific Advisory Committee Meeting
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2014 Radiochemistry Progress Report



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**“Learning from Plutonium and
Uranium Workers”**

Outline

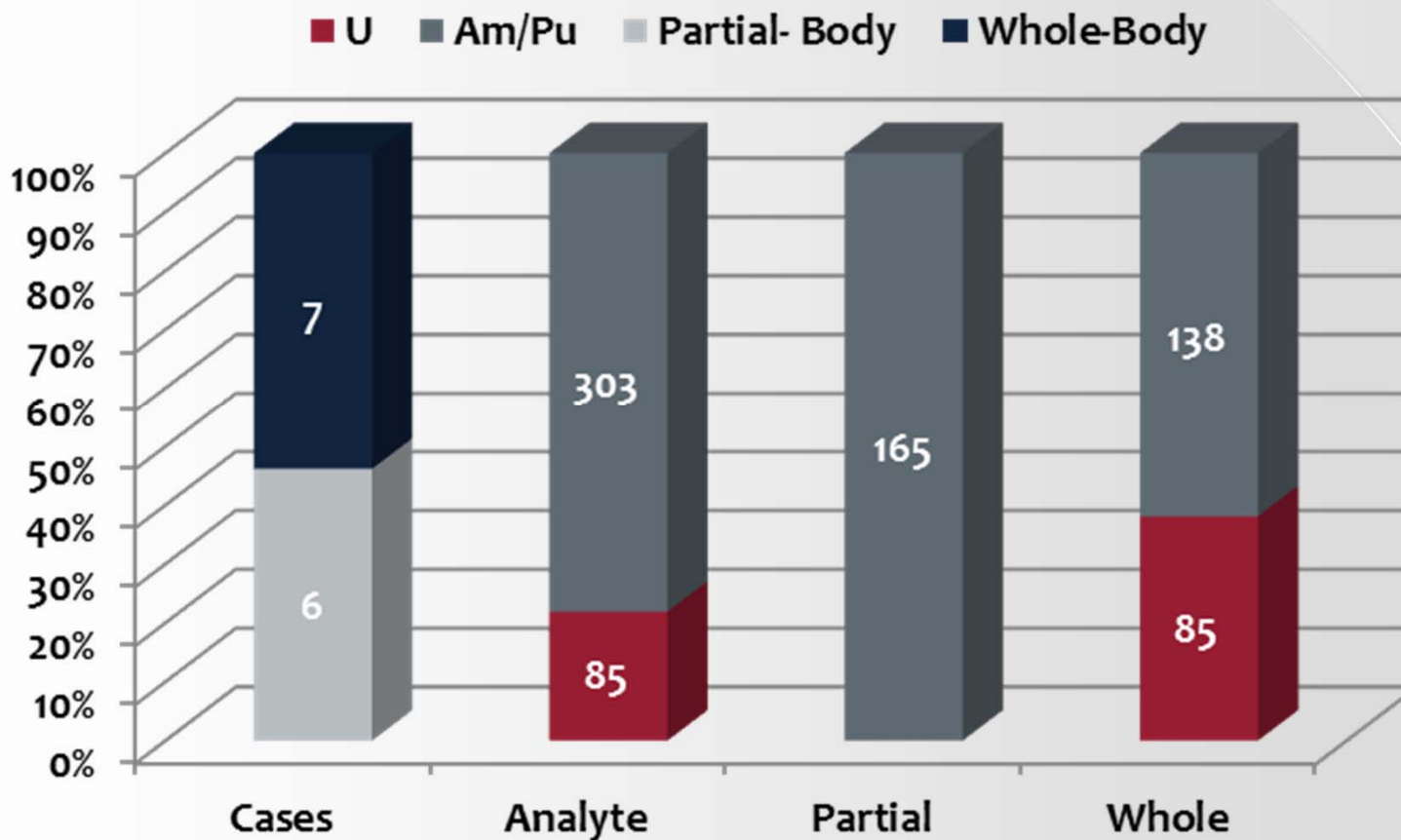
- Tissue Analysis Progress
(9/1/2013 – 9/1/2014)
- Equipment Upgrade
- Facility Maintenance



Tissue Analysis



Tissue Analysis 2014

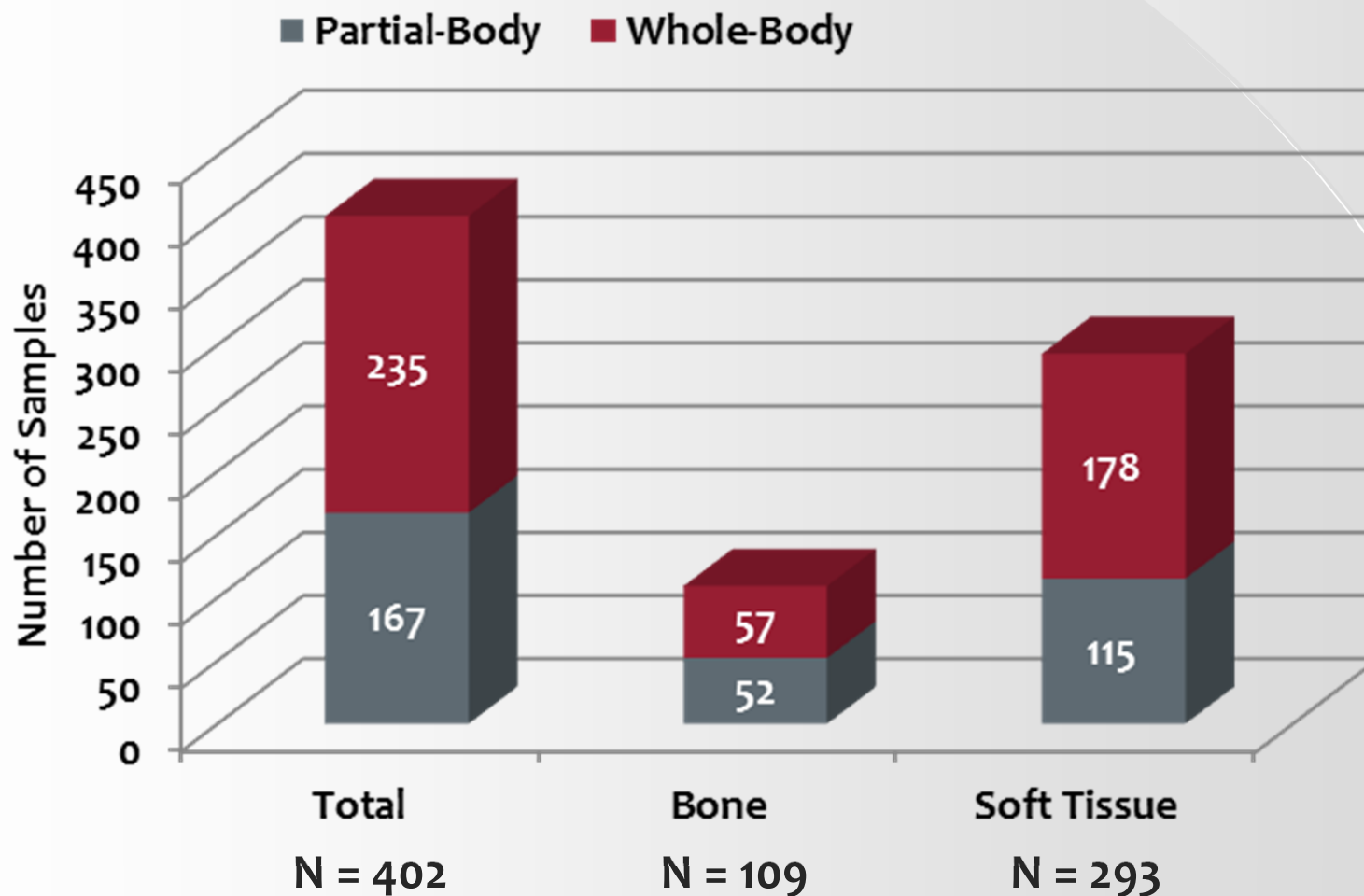


Miscellaneous Samples

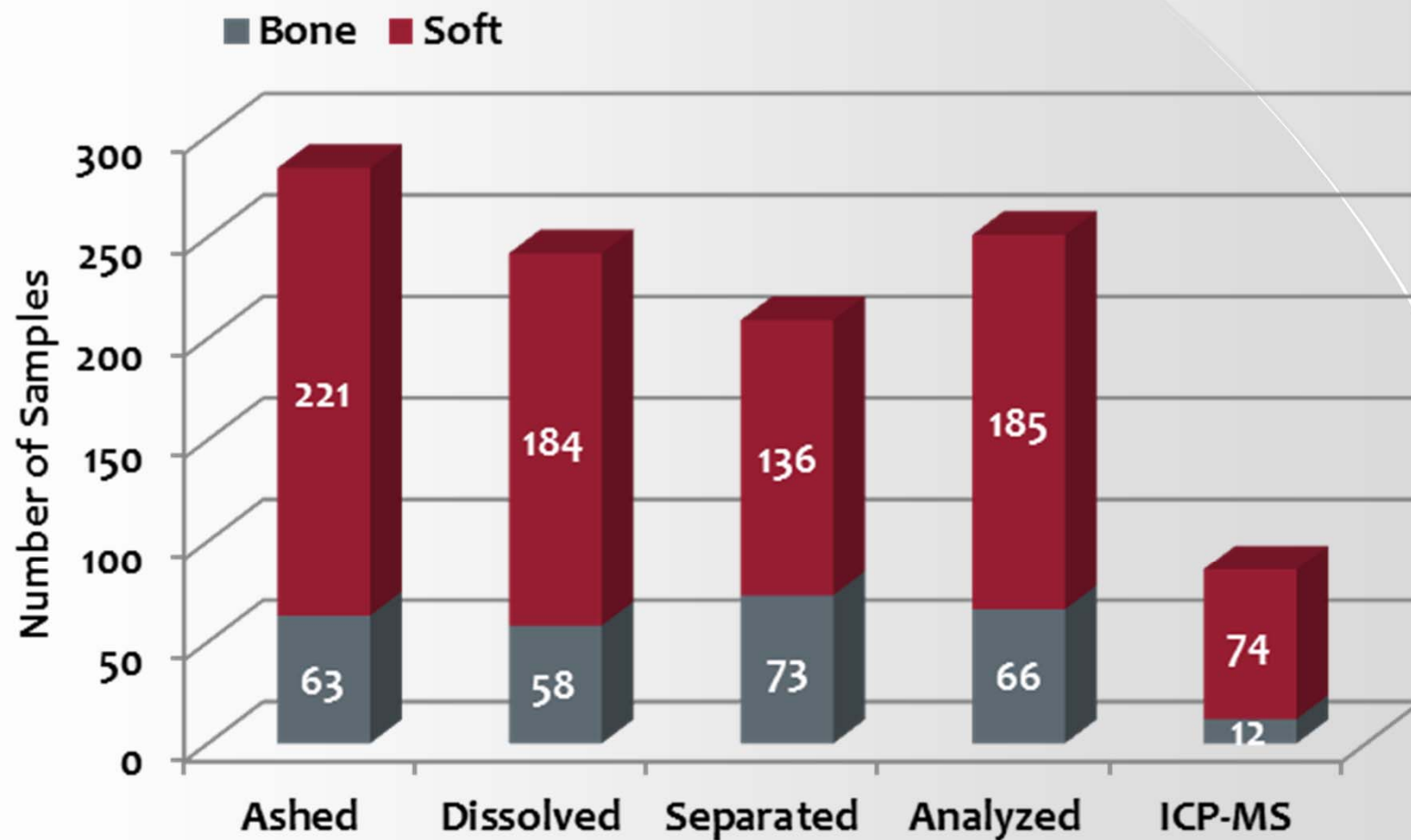
- Number of Samples: 14
 - ✓ 11 bones 3 soft tissues
- From 8 cases
 - ✓ Whole-body: 0262 (1990), 0635(2000), 0679(1997), 0680(1998), 0769 (1990), 1031 (2010)
 - ✓ Partial-Body: 0511 (1993), 0709 (2000)



Analysis by Tissue Type



Sample Preparation/Analysis Progress



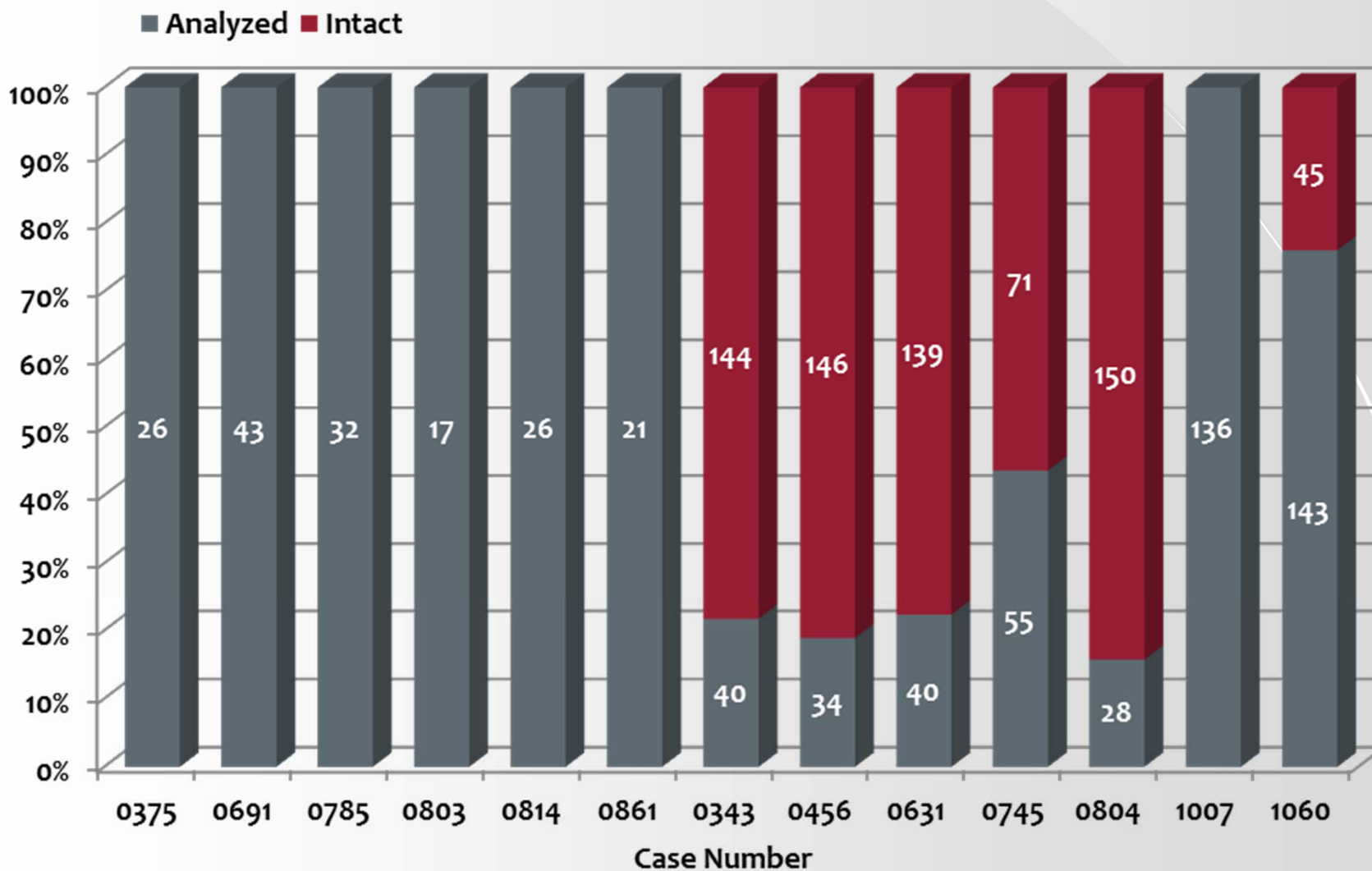
2014 Tissue Analysis

- Drying/Ashing
- Acid Digestion
- Radiochemical Separation
- Actinide Measurements

- Analysis Completed 337
- Sample Processed 402
- Completed/Processed 0.84



Radiochemical Analysis Progress

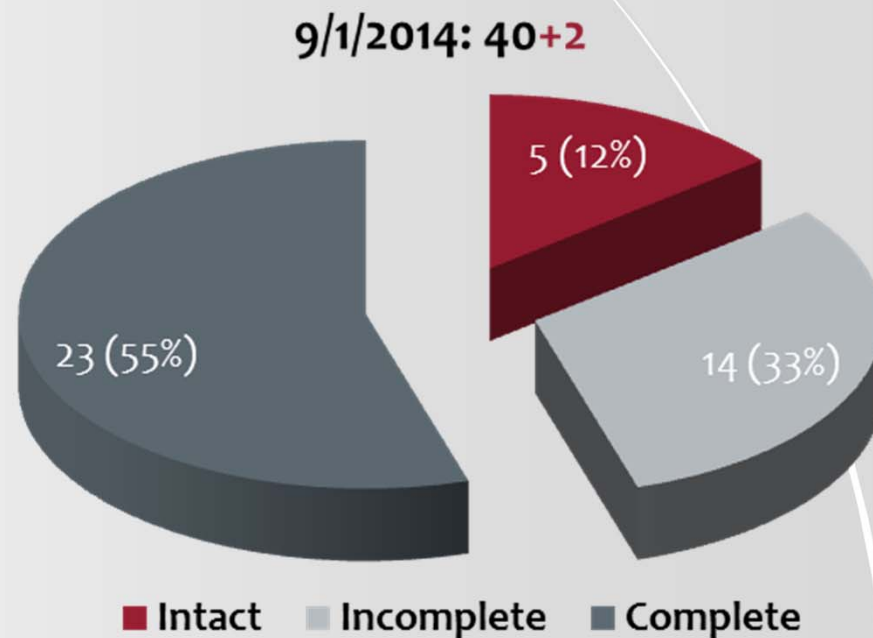
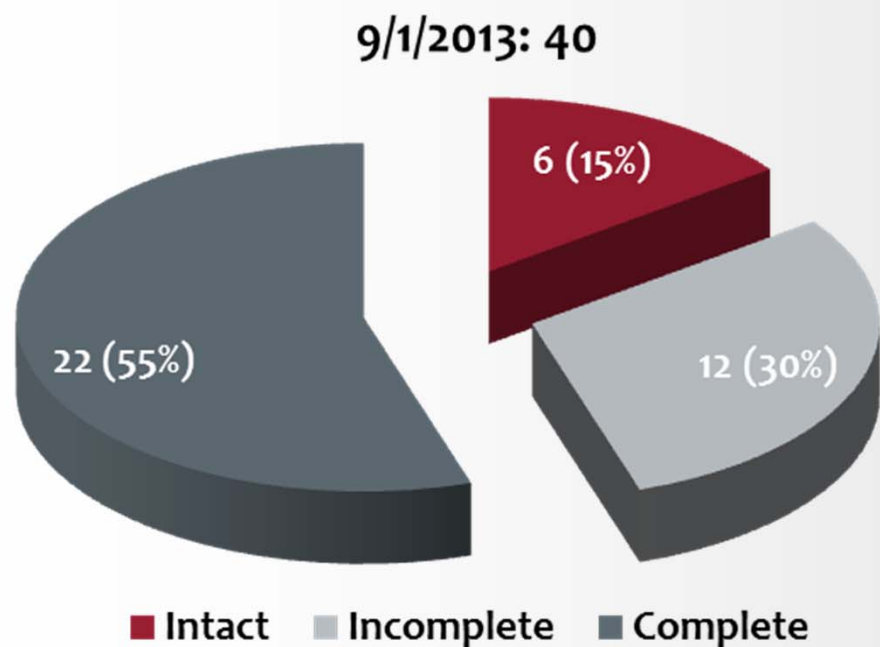


Analysis Status Change: Whole-Body

- Case 0343 (2014): **intact** → *survey analysis* → incomplete
- Case 0804 (2013): **intact** → *survey analysis* → incomplete
- Case 0631 (2011): **intact** → *survey analysis* → incomplete
- Case 1060 (2008): **incomplete** → complete



Analysis Status: Whole-Body



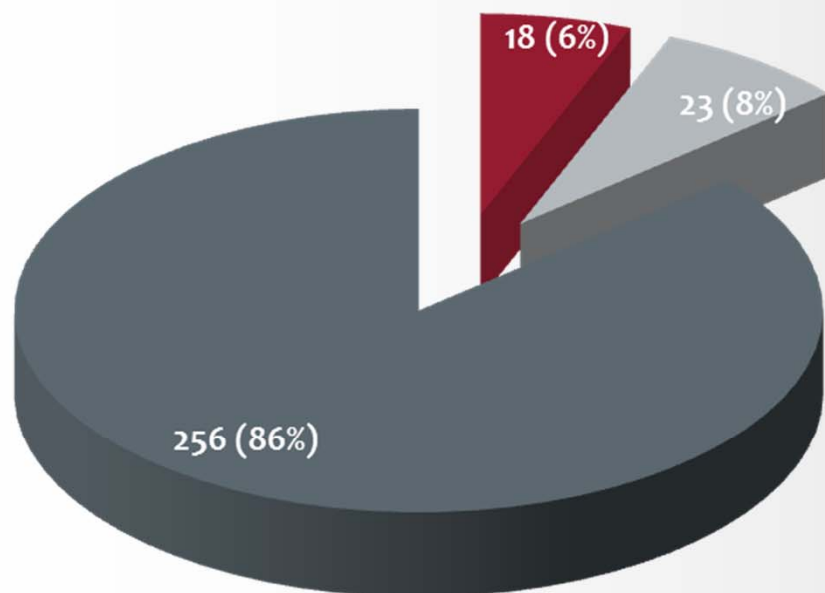
Analysis Status Change: Partial-Body

- Case 0861 (2013): **intact** → complete
- Case 0814 (2013): **intact** → incomplete
- Case 0803 (2013): **incomplete** → complete
- Case 0691 (2013): **intact** → complete
- Case 0785 (2008): **incomplete** → complete
- Case 0375 (2002): **intact** → complete



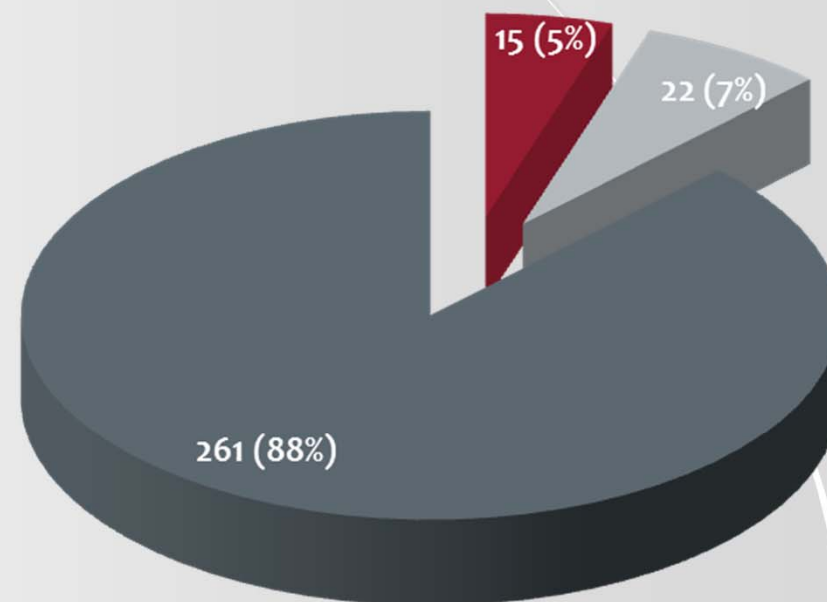
Analysis Status: Partial-Body

9/1/2013: 297



■ Intact ■ Incomplete ■ Complete

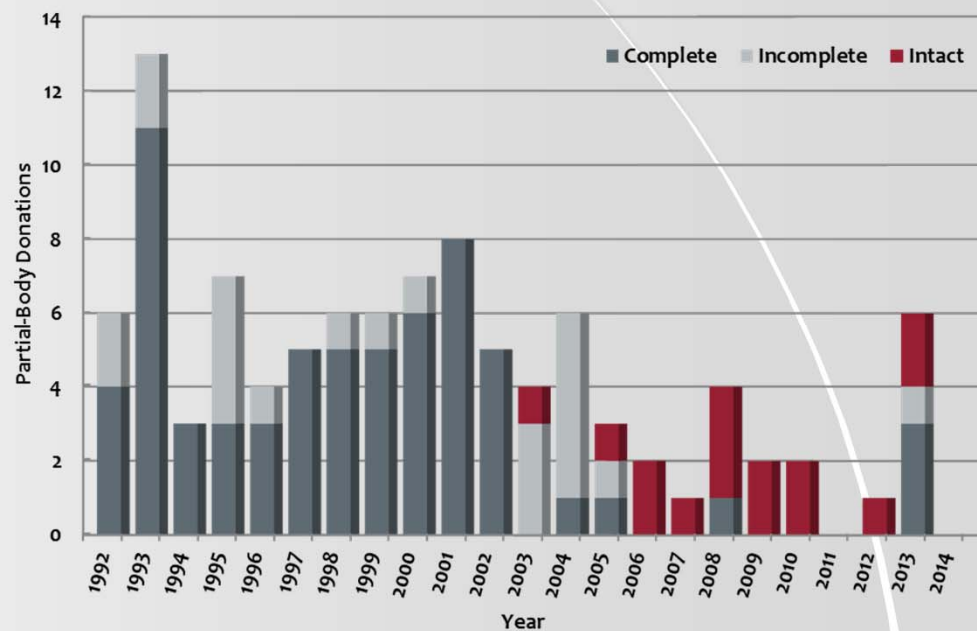
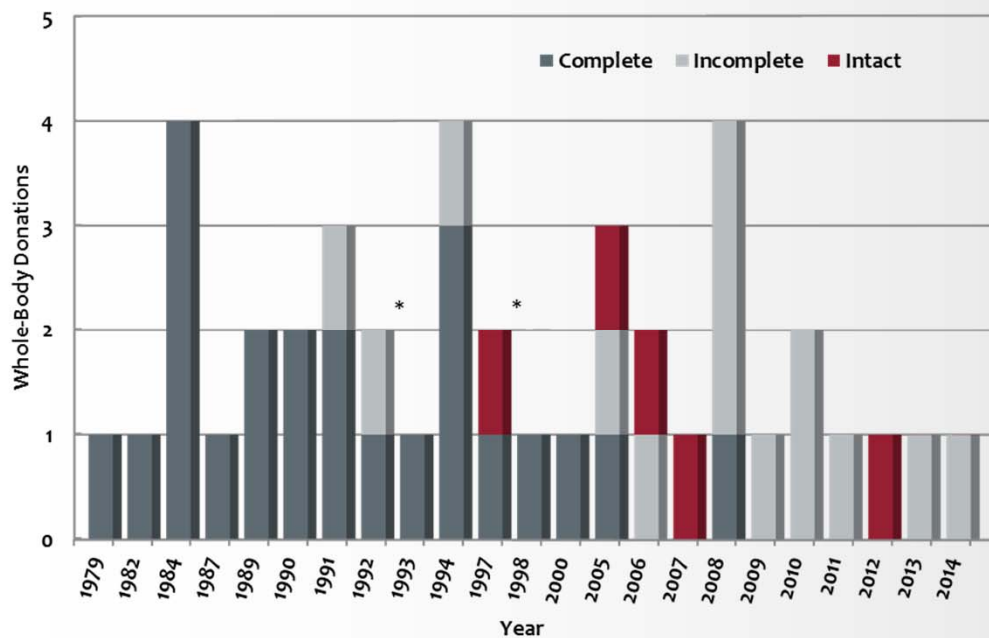
9/1/2014: 297+1



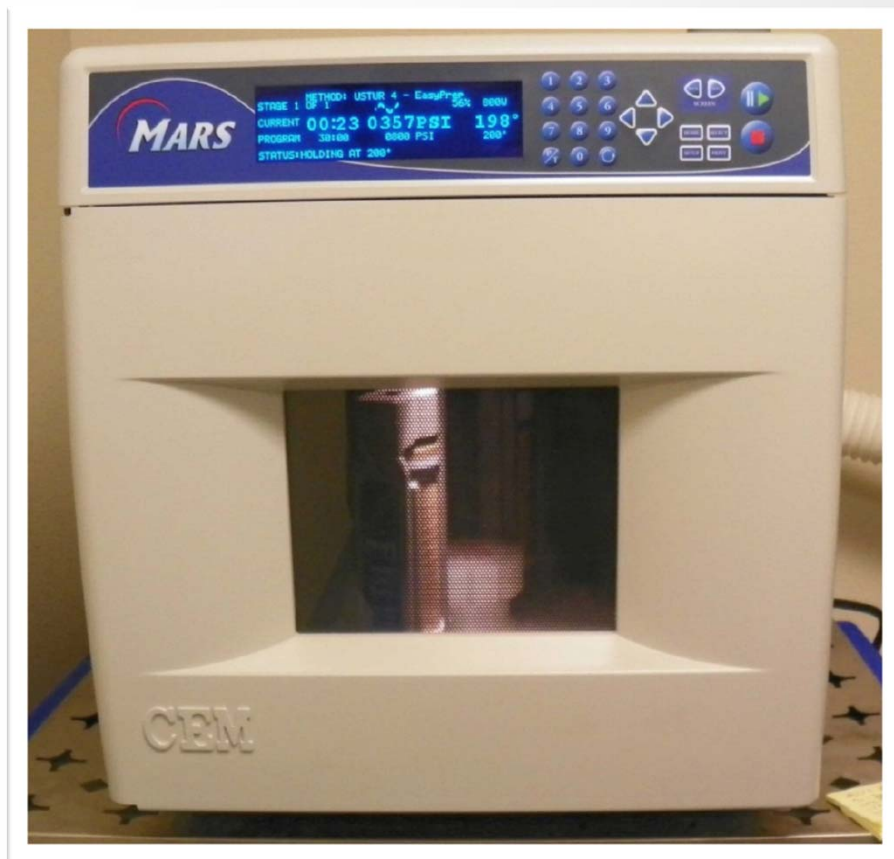
■ Intact ■ Incomplete ■ Complete



Analysis Status 2014



Installation of IR System



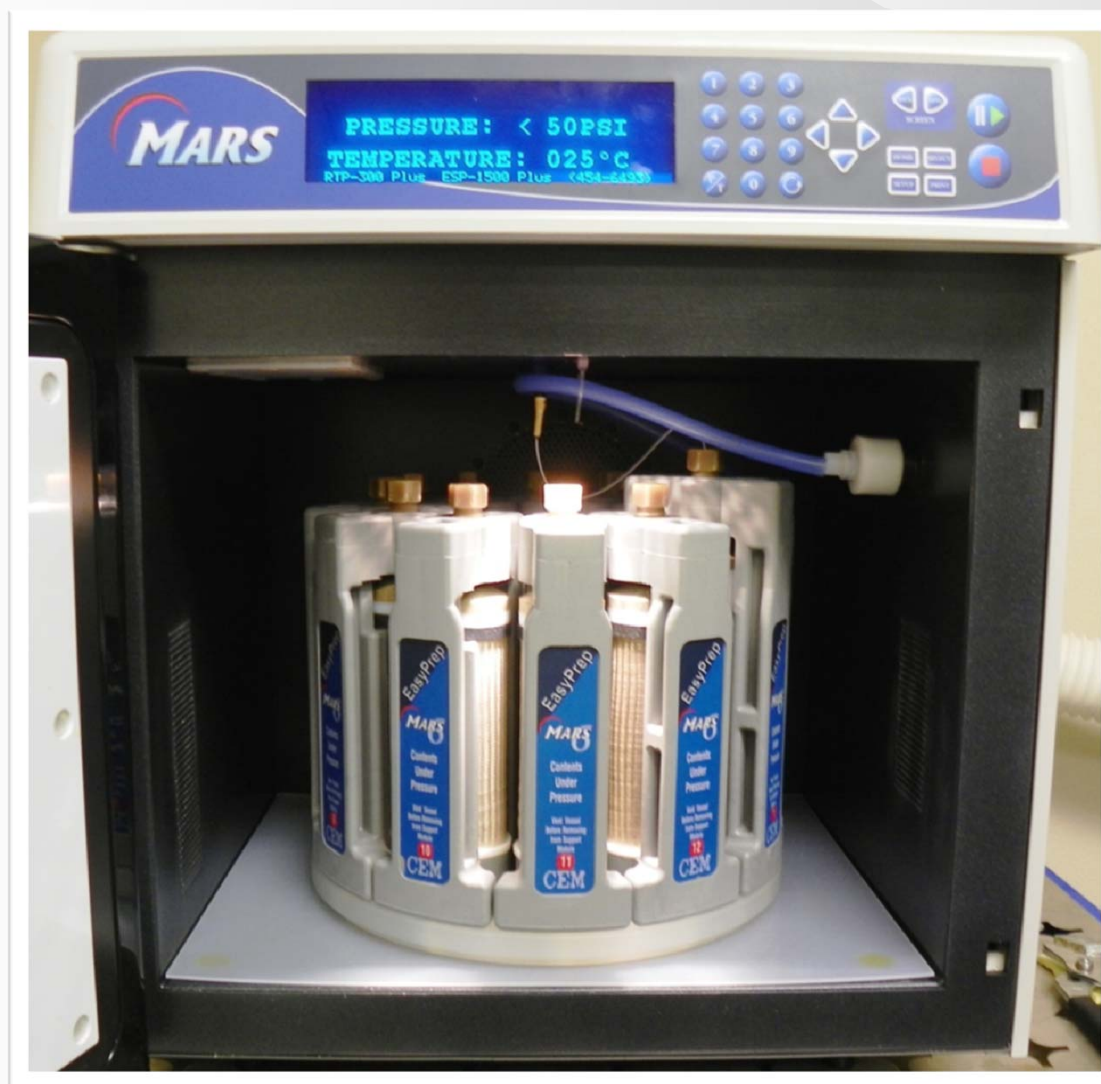
MARS-5 Microwave



IR Sensor + Floor Cover



Installation of Rotors



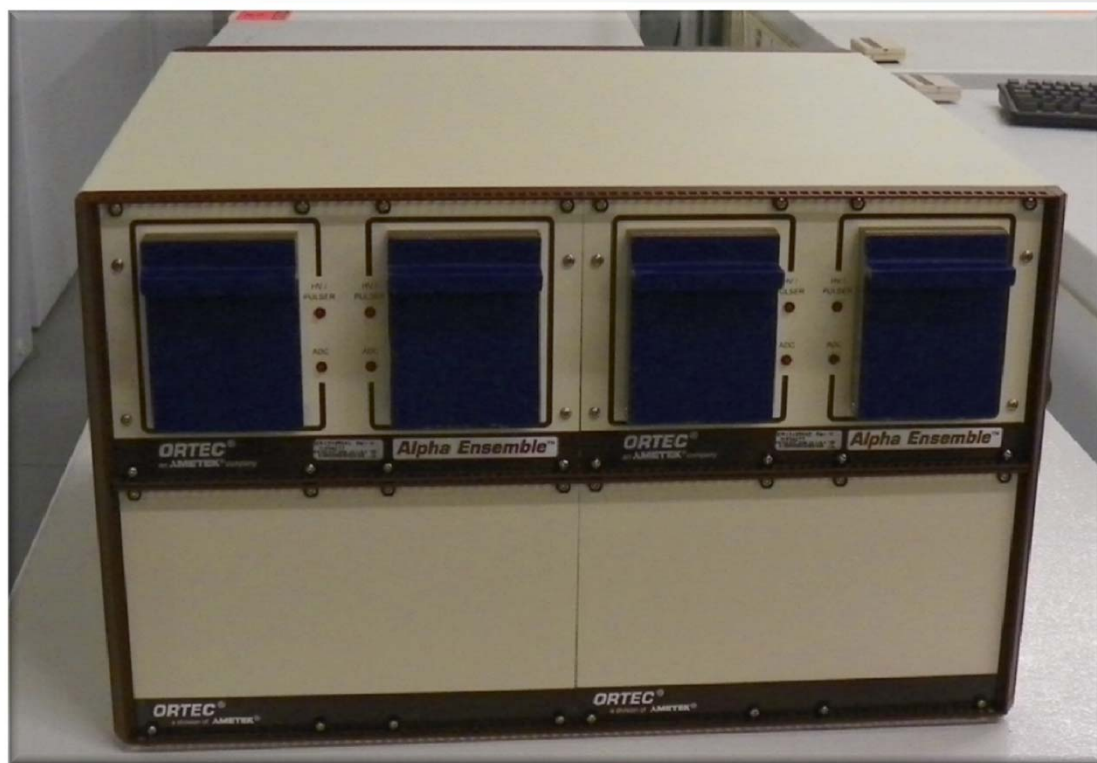
MARS-5 Microwave

2014 SAC Meeting: Radiochemistry



Repair: Alpha Spectrometers

- Vacuum leak fixed



ORTEC Alpha Ensemble®



ORTEC Ensemble® &
Octet PC®



Alpha Vision v.6

- ORTEC Alpha Vision v.6 replaced v.5
- USTUR beta tested the software before official release
- 17 comments submitted back to ORTEC
- 15 comments are acknowledged in the new version

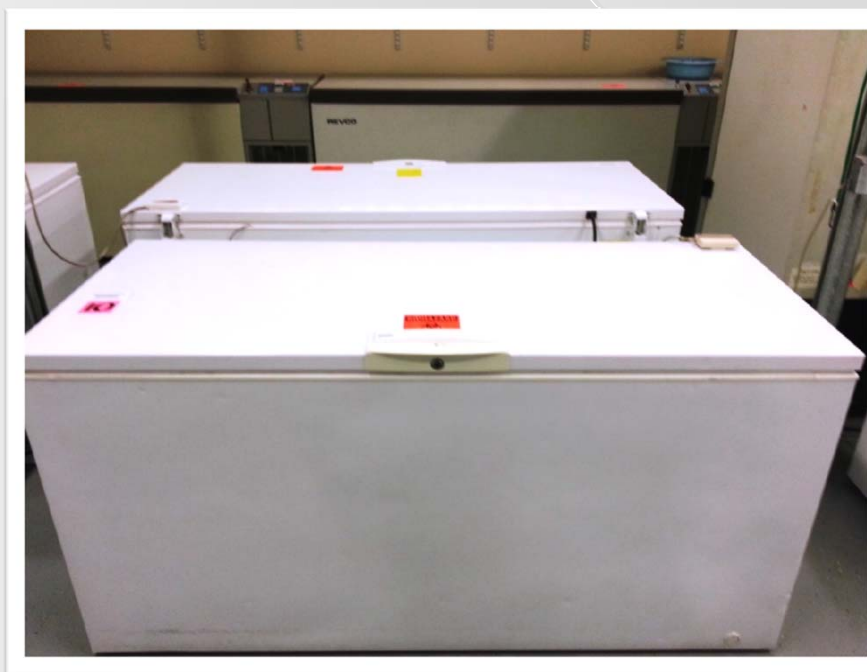


Freezer Replacement

- Replaced 1 (-70°C) freezer with 3 (-30°C) freezers



Old



New



Facility: Fume Hood Ductwork



- Polymer coating by DIVCO

