

Chapter 4

Use with Section 3

ENRICHMENT

● Transition Elements

The Actinide Group

The actinide group is a series of elements that are all radioactive. There are 15 elements in the actinide group, but only four of them have been found in any appreciable amount in nature. Actinium, thorium, protactinium, and uranium are the four elements that occur naturally. All of the elements that have been artificially produced are referred to as the transuranium elements. It is easy to remember the transuranium elements as the ones that have an atomic mass greater than or equal to 93. Many of the transuranium elements have been named in honor of important scientists or important scientific institutions.

For the transuranium elements listed below, describe how they are created, when they were discovered, their melting point, their boiling point, any important uses for them, and who or what they were named for (if applicable).

1. Americium

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|---------------------------------------|--|--------------------------------------|---|---|---|
| Thorium 90 Th 232.038 | Protactinium 91 Pa 231.036 | Uranium 92 U 238.029 | Neptunium 93 Np 237.048 | Plutonium 94 Pu 244.064 | Americium 95 Am 243.061 |
|---------------------------------------|--|--------------------------------------|---|---|---|

Actinide Series

2. Curium

3. Berkelium

4. Einsteinium

5. Mendeleevium
