

NEW CHEMICAL ELEMENT 101 RE-CREATED

AEC Says U.C. Scientists Identify Only 17 Atoms

A new chemical element—No. 101—which may have existed briefly when the earth was born, has been re-created by University of California cyclotron scientists.

The Atomic Energy Commission disclosed yesterday that the Berkeley group has identified only seventeen atoms of the intensely radioactive substance, an invisible, unweighable and almost unimaginably tiny amount of matter.

The element has been named mendelevium, after Dmitri Mendeleev, the nineteenth century Russian chemist who was the first man to use the periodic table system as a means of predicting the properties of undiscovered elements.

NO PRACTICAL USE.

Despite the fact that it is probably the most radioactive material known to science, mendelevium will have no practical use in atomic energy, either for bombs or power.

The discovery was credited to Albert Ghiorso, Bernard G. Harvey and S. G. Thompson, research chemists, and Glenn T. Seaborg, Nobel Laureate.

This same group, in conjunction with Nobel Laureate Physicist Edwin MacMillan, already has been responsible for the discovery of a number of other transuranium (heavier than uranium, No. 92 in the periodic table), elements such as berkelium, No. 97, named for the city, and californium, No. 98, named for the State.

Mendelevium was created by bombarding element No. 99, another synthetic form of matter, with 41,000,000 electron volt alpha particles—the nuclei of helium atoms—fired by the sixty inch Crocker cyclotron, especially "souped-up" for the experiment.

The intense radioactivity of the new element is indicated by the fact that its half-life is somewhere in the range between a half hour and several hours—that is, half of a given quantity will decay in the form of radioactive emanations in that period.

DOESN'T EXIST.

The element does not exist in nature and certainly has never been "seen" by man before.

Those seventeen atoms of mendelevium which appeared to the scientists in the form of tremendous bursts of fissioning energy probably constituted the rarest units of matter known for nearly five billion years.

It is believed by most scientists that mendelevium and other heavier than uranium elements existed at the formation of the earth.

However, such highly radioactive elements as mendelevium probably almost immediately decayed into lighter elements.

Soon after the newly created seventeen atoms were formed they, too, decayed away to lighter elements, and the "new" elements are for the present extinct again.