

Isotopes of Mendeleevium

Isotope	Atomic Mass	Half-life	Mode of Decay	Nuclear Spin
Md-255	255.09108	27.00 minutes	α to Es-251; EC to Fm-255; SF	7/2
Md-256	256.0941	1.30 hours	α to Es-252; EC to Fm-256; SF	No data available
Md-257	257.09553	57.00 minutes	α to Es-253; EC to Fm-257; SF	7/2
Md-258	258.09857	51.50 days	EC to Fm-258	8
Md-259	259.1005	1.60 hours	α to Es-255; SF	7/2
Md-260	260.104	32.00 days	EC to Fm-260; α to Es-256; β^- to No-260	No data available



Mendeleevium is a radioactive rare earth metal named after the Russian chemist Dmitri Ivanovich Mendeleev, the “father of the Periodic Table.” It was discovered in 1955 by Glenn T. Seaborg, Albert Ghiorso, Bernard G. Harvey, Gregory R. Choppin and Stanley G. Thompson at the University of California - Berkeley, USA. The team produced Mendeleevium-256 (with a half-life of 87 minutes) when they bombarded an Einsteinium-253 target with alpha particles (helium nuclei).

Researchers have shown that mendeleevium has a moderately stable dipositive (II) oxidation state in addition to the more characteristic (for actinide elements) tripositive (III) oxidation state, the latter being the more dominantly exhibited state in an aqueous solution (chromatography being the process used). Mendeleevium-256 has been used to find out some of the chemical properties of this element while in an aqueous solution. There are no other known uses of mendeleevium, and only trace amounts of the element have ever been produced.

Sixteen isotopes of mendeleevium from mass 245 to 260 have been characterized, the most stable being Mendeleevium-258, with a half-life of 51.50 days; Mendeleevium-260, with a half-life of 31.80 days; and Mendeleevium -257, with a half-life of 5.52 hours. All of the remaining radioactive isotopes have half-lives that are less than 97 minutes, and the majority of these have half-lives that are less than 5 minutes.

Properties of Mendeleevium

Name	Mendeleevium
Symbol	Md
Atomic number	101
Atomic weight	[258]

Properties of Mendeleevium (continued)

Standard state	Presumably a solid at 298 °K
CAS Registry ID	7440-11-1
Group in periodic table	N/A
Group name	Actinoid
Period in periodic table	7 (Actinoid)
Block in periodic table	f-block
Color	Unknown, but probably metallic and silvery white or grey in appearance
Classification	Metallic
Melting point	About 1100 °K [or 827 °C or 1521 °F]
Boiling point	No data available
Density of solid	No data available
Electron configuration	[Rn]5f ¹³ 7s ²