

Isotopes of Hassium

Isotope	Atomic Mass	Half-life	Mode of Decay	Nuclear Spin	Nuclear Magnetic Moment
Hs-263	263.1287	1.00 second	α to Sg-259	No data available	No data available
Hs-264	264.1284	0.00008 seconds	α to Sg-260; SF	No data available	No data available
He-265	265.13016	0.0018 seconds	α to Sg-261; SF	No data available	No data available
Hs-266	266.1300	0.033 seconds	α decay	No data available	No data available
Hs-267	267.1318	52.00 milliseconds	α to Sg-263; SF	No data available	No data available
Hs-268	268.1321	0.40 seconds	α decay	No data available	No data available
Hs-269	269.1341	9.30 seconds	α to Sg-265	No data available	No data available
Hs-277	277	11.00 minutes	No data available	No data available	No data available

108
Hs

Hassium is a synthetic element (an element that can be created in a laboratory but is not found in nature), officially discovered in 1984 by a German research team led by Peter Armbruster and Gottfried Münzenberg at the Institute for Heavy Ion Research (Gesellschaft für Schwerionenforschung - GSI) in Darmstadt, Germany. The team bombarded a target of Lead-208 with accelerated nuclei of Iron-58 to produce three atoms of the isotope Hassium-265. More than 100 atoms of hassium have been synthesized to date. The name *hassium* derives from the Latin name (*Hassia*) for the German state of Hesse, where the institute is located.

The chemical properties of hassium are characterized only partly, but they compare well with the chemistry of the other group 8 elements. It is expected to be a silvery metal that reacts readily with oxygen in the air, forming a volatile tetroxide. It is predicted to be a solid at room temperature and to crystallize in the hexagonal close-packed structure. It is expected to be the densest element of the first seven periods.

Properties of Hassium

Name	Hassium
Symbol	Hs
Atomic number	108
Atomic weight	[277] (status unclear)

Properties of Hassium (continued)

Standard state	Presumably a solid at 298 °K
CAS Registry ID	54037-57-9
Group in periodic table	8
Group name	None
Period in periodic table	7
Block in periodic table	d-block
Color	Unknown, but probably metallic and silvery white or grey in appearance
Classification	Metallic
Melting point	No data available
Boiling point	No data available
Density of solid	28.60 g/cm ³ (predicted)
Electron configuration	[Rn]5f ¹⁴ 6d ⁶ 7s ²