

# Council of the 118 Elements

*Santa Claus ~ Ho...Ho...Holmium*



Name **Holmium**

Member of the  
Lanthanides

Atomic No.  
**67**

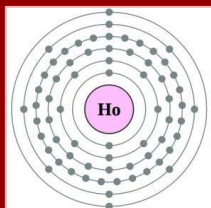
Atomic Weight  
**164.9303**

Origin of the Name  
*Holmia 'Stockholm'*

Home town of Cleve  
(the discoverer)

Melting Point	1461 °C
Boiling Point	2720 °C
Density	8.54 g/cm <sup>3</sup>
Abundance	1.3 mg/kg
Category	Metal

Electronic  
Arrangement  
2,8,18,29,8,2



## Discovery of the Santa Element

Discoverer : Swede  
Per Teodor Cleve

Year of Discovery: 1878

Cleve removed all of the known contaminants from erbia earth (erbium oxide) using the method developed by Swedish chemist Carl Gustaf Mosander. One of the materials that resulted is holmium oxide. Holmium is highly reactive so he can't be found uncombined in nature.

Seating plan of the Council  
[The Periodic Table]

*Seat of Holmium*

Period 6

Member of The Lanthanides



Ho Ho Ho, Merry Christmas! It's that time of the year, it's Christmas time! I'm thrilled to introduce you to the element who has a chemical symbol the same as Santa's signature hearty laugh. Let's give a warm welcome to Holmium in this chilly month of Christmas.

He is a member of the Lanthanide series. The Lanthanides are put in a disembodied block below the main body of the Periodic Table. It comprises 15 elements with atomic numbers 57 to 71, from Lanthanum to Lutetium.

Holmium has the highest magnetic strength of any element, and therefore is used to create the strongest artificially generated magnetic fields. Another special trait is that he readily absorbs excess neutrons and so controls the chain reaction that fuels the nuclear reactor.

Humans also owe a huge thanks to Holmium for his significant contributions in the medical and dental fields. Holmium lasers can produce a wavelength of light close to that of a microwave oven. Such electromagnetic radiation is efficiently absorbed by water molecules because it perfectly excites the hydrogen-oxygen bonds in water. Soft tissue in our bodies is largely made up of water and these lasers are energetic enough to cut through flesh. Cuts made by holmium lasers are very accurate, within a millimetre's precision. They also have the benefit of self-cauterising, as the heat seals off any blood vessels that it slices through.

