

Example of Work:

GOLD



CHEMICAL/PSHYICAL PROPERTIES

Name: Gold
 Symbol: Au
 Atomic Number: 79
 Atomic Mass: 196.9665
 Melting Point: 1064.43 °C
 Absolute Melting Point: 1337.58 K
 (Decomposes)
 1947.97 °F
 Boiling Point: 2807.0 °C
 Absolute Boiling Point: 3080.15 K
 (Decomposes)
 5084.6 °F
 Group: 11
 Oxidation Number: (III)
 Metal

ISOTOPES

The most common gold compounds are Auric Chloride and Chlorauric Acid, being used in photography for toning the silver image. Gold has 18 isotopes with a half-life of 2.7 days, is used for treating cancer and other diseases.



FACTS

Gold Chloride is very hygroscopic and highly soluble in water ethanol, it decomposes above 186 °C or in light



USES & BENEFITS

- Jewelry
- Coins
- Artwork
- Conductor of Heat and Electricity
- Dental work
- Protective coatings for space satellites
- Infrared protective faceplates in thermal suits and Astronaut's helmets, as it's a good reflector for electromagnetic radiation
- Food Gold Leaf, flake or dust is used on or in some gourmet foods as a decoration (example: notable sweets and drinks)

Auric Chloride

Chemical Compound with the Formula AuCl₃
 (Most stable form for gold in its compounds)



DISCOVERY

Although it was not known who discovered this compound, its records of usage have been traced as far back from the early 1900s; first in medicines, to then purifying the quality of gold.





HAZARDS

The Human body does not absorb gold very well; the compounds of gold are not normally very toxic. However, liver and kidney damage has been reported for up to 50% of arthritis patients treated with gold-containing drugs.



Chloroauric Acid

(liquid gold)
 Obtained by the oxidation of gold in the presence of Chloride as in Aqua Regia
 Formula: HAuCl₄

HISTORY

Although the actual discovery of gold is unknown, Gold is spread widely throughout the world, its discovery occurred within to many different groups, in many different locations at different times.

The most famous discovery for America was the California Gold Rush between the years of 1948-1259. It can also be traced back at early as 2600 B.C. to the Ancient Egyptians, where it was used for their Pharos. Even further in our history, gold was a gift from one of the wise men.



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Aqua Regia

A yellow fuming Corrosive mixture of Nitric and Hydrochloric that dissolves metals (GOLD!)









































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