

# Antimony in alchemy

*A survey of antimony and its compounds in alchemy*

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**Alchemical symbol for antimony** 

**Derivation of name** : Middle English antimonie, from Medieval Latin antimonium, perhaps from Arabic al-'itmid : al-, the + 'itmid, antimony (perhaps from Greek stimmi).

**Antimony ore** : Stibnite (antimony trisulphide) and valentinite (antimony trioxide). Stibnite was found particularly in Hungary, Bohemia, Transylvania and Germany.

**Extraction from the ore** : The metal antimony was produced from the ore by first roasting it to form the oxide, then reducing the oxide with carbon or iron. Antimony compounds especially the trisulphide were used in antiquity, for example Kohl (al-koh'l of the Arabs), used to stain the eyelids.

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## Names of antimony compounds:

*Regulus of antimony* = metallic antimony

*Antimony Black* = metallic antimony

*Butter of antimony* = antimony trichloride, in the form of a waxy paste or translucent fatty mass.

*Tartar Emetic* = Antimony Potassium Tartrate, a soluble poisonous compound of antimony which induces vomiting. Transparent crystals or a white powder, with a metallic sweetish taste. It promotes sweating. Used also as a mordant in dyeing.

*Crocus of antimony* = a brownish-yellow impure sulphide of antimony and sodium, formed as a scoria or slag in the smelting of antimony

*Flowers of antimony* = name for the crystals of the trioxide formed when the metal is sublimed

*Antimony blende* = kermesite, an antimony oxysulphide, also called red antimony, formed in some mines as an alteration product of stibnite as soft tufts of cherry-red crystals.

*Lupus metallorum* = The grey wolf or stibnite, used to purify gold, as the sulphur in the antimony sulphide bonds to the metals alloyed with the gold, and these form a slag which can be removed. The gold remains dissolved in the metallic antimony which can be boiled off to leave the purified gold.

*Glass of antimony* = a vitreous oxide of antimony mixed with sulphide, made by melting antimony trisulphide and trioxide together in a crucible.

*Saffron of antimony* = Golden sulphide of antimony, or Golden sulphuret of antimony, the pentasulphide of antimony, which is of a golden or orange yellow powder.

*Antimony vermilion* = a red or orange colloidal antimony sulphide pigment precipitated from an antimonial solution. Ranged in hues from orange to deep red.

*Red Flowers of Antimony* = a form of antimony sulphide.

*Powder of Algaroth* = white powder of Antimonious Oxychloride ( $\text{SbOCl}$ ), made by precipitation when a solution of Butter of Antimony in spirit of salt is poured into water.

*Kermes Mineral* = a soft brown-red powder consisting essentially of oxides and sulphides of antimony and used formerly as an alterative, diaphoretic, and emetic. It is a compound of antimony trioxide and trisulphide. This substance occurs in nature as the mineral Kermesite. It can be made obtained in the laboratory by the actions of Potassium Carbonate ( $\text{K}_2\text{CO}_3$ ) on antimony Sulphide.

*Liver of Antimony* = Fused antimony sulphide. Usually produced from the detonation of equal parts of crude antimony and nitre (potassium nitrate).

*Antimony glance* = gray antimony, another name for a form of stibnite.

*Antimony ochre* = Stibiconite, an Antimony mineral,  $\text{Sb}_2\text{O}_3(\text{OH})_2$ , which can appear in Brown, Gray, Lemon white, Light yellow, Orange brown, forms. Also more rarely, Cervantite, another mineral oxide of antimony, found in Germany and usually of a brownish yellow colour.

*Plimmer's Salt* = Sodium Antimony Tartrate,  $\text{Na}(\text{SbO})\text{C}_4\text{H}_4\text{O}_6$ . The sodium based form of Tartar Emetic.

*Antimony bloom* = white antimony, or antimony trioxide, which appears as the mineral Valentinite.

*Vinegar of antimony* = supposed acetate of antimony mentioned in texts of Basil Valentine. An triacetate of antimony exists but it is unstable being easily hydrolised by moisture. It requires modern chemical methods in order to manufacture it, and it does not seem possible be make it by the action of acetic acid on antimony.