Dictionary of Alchemical Terms

A-H

Absorbent Earth
: Chalk, marble, and clays. No specific formulas. Generally carbonates, silicates, and sulfates.

Acesunt
: Any substance which is slightly acid, or turning sour.

Acetated Earths, Metals, Etc.
: Acetates ($C_2H_3O_2^-$).

Acetous Acid
: Impure Acetic Acid from vinegar.

Acetum
: Referring to vinegar, or to a compound made from vinegar, as in "acetum radicatum."

Acid Air (Priestley)
: Hydrogen Chloride (HCl).

Acid of Ants
: Formic Acid (HCOOH).

Acid, Nitri Phlogistic
: See Nitrous Air.

Acid of Amber
: Succine Acid ($C_4H_6O_4$). Also written $HOOCCH_2CH_2COOH$

Acid of Apples
: Malic Acid ($C_4H_6O_5$).

Acid of Arsenic
: Arsenic Acid (H_3AsO_4).

Acid of Barberry
: Malic Acid.

Acid of Benzoin
: Benzoic Acid (C_6H_5COOH).

Acid of Borax
: Boric Acid (H_3BO_3).

Acid of Burning Sulphur
: Sulfurous Acid (H_2SO_3).

Acid of Four Spar
: Hydrofluoric Acid (mixed usually with silicon fluoride) (HF; SiF_4).

Acid of Lemons
: Citric Acid ($C_6H_8O_7$).

Acid of Milk
: Lactic Acid ($C_3H_6O_3$).

Acid of Milk-Sugar
: Mucic Acid ($COOH(CHOH)_4COOH$).

Acid of Molybdaena
: Molybdic Acid (H_2MoO_4).

Acid of Nitre
: Nitric Acid (HNO_3).

Acid of Phosphorus
: Phosphoric Acid (H_3PO_4).

Acid of Salt
: Hydrochloric Acid (HCl). (***Acidum Salis***, Marine Acid, Muriatic Acid, Spirit of Salt). [Scheele]

Acid of Sea-Salt
: Hydrochloric Acid, alone, or in a compound (i.e., the Cl^- radical).

Acid of Sorrel
: Oxalic Acid (COOH COOH).

Acid of Sugar
: Oxalic Acid (COOHCOOH). Also written $(COOH)_2$.

Acid of Tamarinds
: Tartaric Acid ($C_4H_6O_6$).

Acid of Tartar
: Tartaric Acid.

Acid of Urine
: Phosphoric Acid (H_3PO_4)

Acid of Vinegar
: Acetic Acid (CH_3COOH).

Acid of Vitriol
: Sulfuric Acid (H_2SO_4)

Acidium Aereum
: Carbon Dioxide (CO_2).

Acidium Mephiticum
: Carbon Dioxide (CO_2).

Acidium Pingue
: J.F. Meyer's hypothesized "fatty acid."

Acidium Sacchari
: Oxalic Acid (COOH COOH).

Acid Vitriolated Tartar
: Potassium Hydrogen Sulphate ($KHSO_4$).

Adopters
: Small, circular vessels with a necked opening and a spout opposite. They were connected between the distilling head and the receiver.

Aduration
: A union or combination into one.

Ad Siccum
: To dryness, as in evaporation to dryness. [Scheele]

Aerated Alkali
: Any alkali Carbonate (e.g., K_2CO_3).

"Aerated" Compounds (Bergman)
: Carbonates (CO_3^{2-}).

Aerated Lime
: Calcium Carbonate ($CaCO_3$).

Aerated Water
: Water containing dissolved carbon dioxide.

Aer Hepaticus
Hydrogen Sulfide (H_2S).
Aerial Acid
Carbon Dioxide (CO_2). Which forms Carbonic Acid, in aqueous solution [Scheele]
Aerugo (Aeruca) (Rust of Copper)
See Verdigris.
Aer Urinosum
Ammonia (NH_3).
Aes cyprium
Cyprian Brass or Copper.
Aethiops Mercuriales
See Athiops Mineralis.
Aethiops Mineralis (Aethiops Mercuriales)
Black Mercuric Sulphide (H_2S).
Air
Generally, any substance in gaseous state.
Air (Priestley)
A gaseous substance which could not be liquified by cold.
Air, Dephlogisticated
Oxygen (O_2).
Air, Fixed
Carbon Dioxide (CO_2).
Air, Hepatic
Hydrogen Sulphide (H_2S).
Air, Inflammable
Hydrogen (H_2).
Air, Marine Acid
Hydrogen Chloride (HCl).
Air, Mephitic
Carbon Dioxide (CO_2).
Air, Phlogisticated
Nitrogen (N_2).
Air, Vital
Oxygen (O_2).
Air of Flour Spar
Hydrofluoric Acid, HF, gas (usually with Silicon Fluoride).
Air of Vitriol
Sulphur Dioxide (SO_2).
Alaunerde
Alumina (Al_2O_3).
Alcali Volatil
Ammonium Hydroxide.
Alcohol Sulphuris
Carbon Disulfide, CS_2; not an alcohol at all, but a volatile liquid that contains Sulfur.
Alcohol
Usually spirit of wine (CH_3CH_2OH) (sometimes *any* very fine powder).

Alembic
A type of distillation apparatus.

Alembroth, Salt of
A double Chloride of Mercury and Ammonium, $Hg_2(NH_4)_2Cl_4 \cdot H_2O$; See White Precipitate [Lavoisier]

Alexipharmic
A remedy or preservative against poison.

Algaroth, Powder of
Antimony Oxychloride, SbOCl, an emetic named after its inventor, a Vittorio Algarotti. [Lavoisier]

Alicant Kelp
Crude Sodium Carbonate (Na_2CO_3).

Alizarin
1,2-Dihydroxyanthraquinone, $C_{14}H_8O_4$, a red dye long extracted from *Rubia tinctorium* (madder), synthetically prepared from Anthracene in the 19th century. Click here for structures.

Alizarin , Black
Naphtharazine, 5,8-dihydroxy-1,4-naphthoquinone, $C_{10}H_6O_4$, a black dye.

Alizarin , Blue (Anthracene blue)
A Dihydroxyanthraquinone Quinoline, $C_{17}H_9O_4$.

Alizarin , Bordeaux (Brown)
1,2,3-trihydroxyanthraquinone, $C_{14}H_8O_5$, a dye derived from anthraquinone

Alizarin , Red
Alizarin Sodium Sulfonate, $NaC_{14}H_7O_7S$, the Sodium Salt of the Sulfonic Acid of Alizarin; an acid-base indicator that changes from red to yellow as the pH is raised through 5.5

Alizarin , Yellow
Sodium *p*-Nitraniline Salicylate, $C_{13}H_{10}NO_5$, an acid-base indicator that changes from yellow to purple as the pH is raised through 11.1

Alk. Min. Vitriol
Sodium Sulphate (Na_2SO_4).

Alkahest
An alchmeical term invented by Paracelsus to denote a universal solvent. [Boyle]

Alkahest Glauber
See Fixed vegetable alkali (K_2CO_3)

Alkahest of Reapour
See fixed vegetable alkali (K_2CO_3)

Alkahest of Van Helmot (Glauber's Alkahest)
concentrated Potassium Carbonate (K_2CO_3)

Alkalescent
Any substance which is slightly alkaline or turning alkaline

Alkali, Caustic
Hydroxides (OH^-). See Alkaline Air, Fossil Alkali, Marine Alkali, Mineral Alkali, Vegetable Alkali, Volatile Alkali.

Alkali, Common Mineral
Sodium Carbonate ($Na_2CO_3 \cdot 10H_2O$)

Alkali, Concrete Volatile
Ammonium Carbonate $(NH4)_2CO_3$)
Alkali, Fossil
Sodium Carbonate (Na_2CO_3)
Alkali, Marine
Sodium Carbonate (Na_2CO_3)
Alkali, Mild
Carbonates (CO_3^{2-})
Alkali, Vegetable, Fixed
Potassium Carbonate (K_2CO_3)
Alkali, Vegetable, Mild
Potassium Carbonate (K_2CO_3)
Alkali, Volatile
Ammonia (NH_3)
Alkali of Soda
Sodium Carbonate (Na_2CO_3)
Alkali of Tartar
Potassium Carbonate (K_2CO_3)
Alkali of Wine Lees
Potassium Carbonate (K_2CO_3)
Alkali Veg. Saltium
Potassium Chloride (KCl)
Alkali Veg. Vitriolat
Potassium sulphate (K_2SO_4)
Alkaline Air (Priestly)
Ammonia gas (NH_3)
Alkalized Nitre
See fixed nitre
Allay
Alloy
Allonge
See Adopters
Alterant
Anything which alters of changes the state of another
Aludels
A unit of a mutiple-head, earthenware distilling apparatus. Usually used for sublimations.
Alum
Potassium Aluminum Sulfate, $KAl(SO_4)_2 \cdot 12H_2O$; more recently the term also includes salts in which Sodium or Ammonium substitute for Potassium. [Black, Lavoisier]
Alum
Mixed double salts of Aluminum Sulphate with Potassium, Sodium, or Ammonium Sulfate. (Potassium salt, when pure, was most commonly called "Alum."). $(Al_2(SO_4)_3 \cdot K_2SO_4 \cdot 24H_2O)$; $(Al_2(SO_4)_3 \cdot (NH_4)_2SO_4 \cdot 24H_2O)$; $(Al_2(SO_4)_3 \cdot Na_2SO4 \cdot 24H_2O)$.
Alumen
Aluminum Sulphate $(Al_2(SO_4)_3$.
Alumen Ustum (Burnt Alum)

alum dehydrated by heating

Alumina

Aluminum Hydroxide. $(Al(OH)_3$

Amalgam

Any Mercury alloy

Ammoniacal Nitre

Ammonium Nitrate (NH_4NO_3)

Ammonium Fixatum (Fixed Ammoniac)

The residue on heating sal ammoniac with lime, i. e., Calcium Chloride ($CuCl_2$)

Ammonium Nitrosum

Ammonium Nitrate (NH_4NO_3)

Amyl

Derives from *amylum*, starch. Some terms (amylase, amylose, amylo-pectin) are still directly related to starch. The following terms come from starch-derived amyl alcohols.

Amyl

A pentyl radical or substituent, C_5H_{11}-.

Amylene

Pentene, C_5H_{10}, usually 1-pentene or 2-pentene; isoamylene is one of the isomers of 2-methyl-2-butene.

Amyl Hydrate

An Amyl (*i.e.*, pentyl) alcohol

Aniline Purple

Mauvein, $C_{27}H_{24}N_4$, the first aniline dye, 1856 (Perkin's mauve).

Animal Alkali

Ammonium Carbonate $[(NH_4)_2CO_3]$

Anodyne

A medicine or drug which alleviates pain.

Antichlor

Hydrated Sodium Thiosulfate ($Na_2S_2O_3$)

Antimonial Caustic

Antimony Trichloride ($SbCl_3$)

Antimonium Diaphoreticum

Mixture of Antimony Oxide and Potassium Antimoniate (Sb_2O_3; $KSbO_3$)

Antimony

Antimony Sulfide (Sb_2S_3) (pre-18th. century). Pure Antimony was called "regulus of antimony."

Antimony

From latin "antimonium" used by Constantinius Africanus (c. 1050) to refer to Stibnite.

Antimony Black

Antimony Trisulfide. Antimony (III) Sulfide, Sb_2S_3, a grey-black powder.

Antimony Bloom, White

Antimony Trioxide. Antimony (III) oxide, Sb_2O_3.

Antimony Glance

Antimony Trisulfide. Stibnite, a native Antimony (III) Sulfide. (See Glance.)

Antimony Red

Antimony Oxysulfide.

Antimony Vermilion, (Red, Flowers)
: Antimony Oxysulfide. Antimony (III) Oxysulfide, $Sb_2O_3 \cdot Sb_2S_3$, containing some $SbOS_2$. See Flowers.

Antizeumic
: Opposed to fermentation

Apothecary Measures, Dram (Drachm)
: Unit of weight equal to 3.888 g. [Black]

Apothecary Measures, Fluid Dram (Drachm)
: Unit of volume equal to 3.55 mL (60 minims). [Scheele]

Apothecary Measures, Minim
: Unit of volume equal to 0.0616 mL

Apothecary Measures, Pound (Libra) Troy
: Unit of weight equal to 373.2 g

Apothecary Measures, Scruple
: Unit of weight equal to 1.296 g. [Black]

Aqua
: Literally water (Latin). In addition to terms denoting a condition or source of water (such as *aqua tepida*, warm water, or *aqua nivialis*, water from snow), some *aqua* terms denote aqueous solutions.

Aqua Fortis
: Concentrated Nitric Acid (HNO_3). Literally "strong water". See Nitrous Acid, Spirit of Nitre. [Bacon, Black, Scheele]

Aqua Phaganeda or Phagadenica
: A mixture of corrosive sublimate and limewater

Aqua Regia
: Literally "Water of the King" or "Royal Water". A mixture of Nitric Acid, HNO_3 and Hydrochloric Acid, HCl capable of dissolving the "Royal Metal" gold. Various proportions were used, depending on the material to be dissolved. Commonly, more Nitric Acid than Hydrochloric Acid was employed. [Bacon, Scheele]

Aqua Secunda
: Dilute Nitric Acid , often used for cleaning metals and minerals.

Aqua Tofani
: Arsenious Oxide. Extremely poisonous. Used by Paracelsus.

Aqua Vitae
: Literally, "Water of Life"; concentrated Aqueous Ethanol, C_2H_5OH, typically prepared by distilling wine [Arnald of Villanova] (Spirit of Wine)

Ardent Spirit
: Ethyl Alcohol obtained after repeated distillations (CH_3CH_2OH)

Argentum
: Latin for Silver hence the symbol Ag; *argentum vivum*, literally "Living Silver", is native Mercury [Pliny]

Argillaceous Earth
: Clay

Arnaudon's Green, (Plessy's Green)
: Chromium (III) Phosphate, $CrPO_4$, a green pigment.

Aromatic Oil

Any "oil" with a sweet or exotic odor. Often an essential oil.

Arsenic

Arsenic Trioxide (As_2O_3)

Arsenic, Red

Arsenic (II) sulfide, As_2S_2 (Realgar, Red Orpiment).

Arsenic, White

Arsenic (III) oxide, As_2O_3.

Arsenical Sal Ammoniac

Ammonium Arsenate $(NH_4)HAsO_4$.

Ash, Black

Impure Sodium Carbonate (Na_2CO_3).

Ash, Pearl

See Pearl Ash

Ash, Pot

See potash

Ashes of Tin

Stannic Oxide (SnO_2)

Assay

A quantitative determination of the metal in an ore or alloy

Astrum Lunare Microcosmicum (Phosphorus, Phospheros, Fosperus)

Elemental Phosphorous (P)

Atom

Does not necessarily correspond to the modern picture of the ultimate particle of an element. Dalton, for example, meant something more along the lines of "ultimate particle of a substance"; to him the smallest unit of a chemical compound was a *compound atom* (*molecule* in modern terminology), while the smallest particle of a chemical element was a *simple atom* (now just atom, although several of Dalton's simple atoms turned out to be molecules of elements, such as O_2). (See Molecule.)

Atramentum

Ferrous Sulfate ($FeSO_4$)

Attrition

The action of rubbing one body against another; mutual friction.

Auripigmentum

Arsenic trisulfide (As_2S_3)

Aurum

Latin for Gold, hence the symbol Au; *aurum fulminans* (fulminating gold): gold hydrazide, $AuHNNH_2$, an olive-green powder that can explode on concussion [Black, Scheele]

Aurum Fulminans

An explosive gold compound prepared from gold dissoled in "Aqua Regia" and a solution of Ammonium Carbonate. The exact formula is still in doubt.

Avolation

Evaporation,escape, act of "flying away."

Azote, Asotic Air

Nitrogen (N_2) (Phlogisticated Air; see also Mephitic Air), named because it did not support respiration and was therefore "lifeless". Azote is still the French word for this element. [Lavoisier, Prout, T. Thomson]

Azure
A blue pigment from cobalt

Azurite
Basic Copper (cubric) Carbonate ($2CuCO_3 \cdot Cu(OH)_2$

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Baker's Salt
Ammonium Carbonate, $(NH_4)_2CO_3$.

Baking Soda
Sodium Bicarbonate ($NaHCO_3$)

Balloons
Vessels used to receive condensation products in distillation.

Balneum Mariae
The water bath used for heating more delicate materials such as animal and vegetable matter.

Balsam
Light oily aromatic extracts from trees which cure into resins.

Barilla
Impure soda extracted from soap-wort (impure Sodium Carbonate, Na_2CO_3) [Rey]

Barite, Baryte(s)
Barium Sulfate ($BaSO_4$)

Barium White
Barium Sulfate, $BaSO_4$.

Baryta, Barytes
Barium Oxide (BaO) Used for the earth from which Barium was eventually isolated, namely Barium Oxide, BaO. [Dalton, Lavoisier, Ramsay, *et al*.]. *Barytes* can also refer to *barite*, a Barium Sulfate ($BaSO_4$) mineral also known as heavy spar. *Baryta* can also refer to Barium Hydroxide (caustic baryta) or its hydrate. *Barytium* is an older name for Barium [Pasteur, Prout].

Basis or Base
Any substance "A" which (1) is dissolved by substance "B"; (2) receives "B" and "fixes" it; (3) forms a compound of "B."

Bath Metal
A 4:1 alloy of Copper and Zinc, respectively.

Bay Salt
Sodium Chloride (NaCl).

Beak
A tube, usually tapered, attached to a vessel to allow the exit of its contents.

Benzine
Ligroin or Petroleum Ether [Rayleigh]; sometimes Benzene, C_6H_6

Berlin Blue

Ferric Ferrocyanide ($Fe_4[Fe(CN)_6]_3$.

Berlin Green

Ferric Ferricyanide ($Fe[Fe(CN)_6]$.

Berthollet's Salt

Potassium Chlorate ($KClO_3$).

Bezoardicum Minerale

See Bezoar Mineral.

Bezoar (Bezoar Stone, Bezoardicum Minerale)

A counter-poison or antidote, especially a stony calculus from an animal's stomach. [Mayow]

Bezoar Mineral

Antimonic Acid (H_3SbO_4).

Bismuth Corne

Bismuth Oxychloride (BiOCl).

Bitter Cathartic Salt

Magnesium Sulfate ($MgSO_4$).

Bitter Earth

Magnesium Oxide or Carbonate (MgO; $MgCO_3$).

Bittern

Liquor remaining after salt-boiling; a solution containing Magnesium salts and bromides from the preparation of salt from sea-water by evaporation.

Bitter Salt

Magnesium Sulphate ($MgSO_4 \cdot 7H_2O$).(Epsom Salts)

Bitter Spar

"Dolomite" -Calcium and Magnesium Carbonate ($CaCO_3 \cdot MgCO_3$).

Bitumens

An amorphous grouping of resinous and petroleum products: crude oil, amber, asphaltum, coal.

Black Ash

Impure Sodium Carbonate (Na_2CO_3) mixed with unburnt Carbon (hence "black") and incombustible mineral residue.

Black Copper

Copper Sulfide (CuS).

Black Flux

A mixed product from the deflagration of charcoal, metal filings, nitre, and excess tartar.

Black Jack

See Blend.

Black Lead

Natural graphite of the sort used in pencils.

Black Wad

Manganese Dioxide.

Bleaching Powder

Formed by passing Chlorine Gas (Cl_2) over dry Calcium Hydroxide $Ca(OH)_2$, hence also called Chlorinated Lime. When dry the substance is mainly Calcium Oxychloride, $CaOCl_2$; after absorbing moisture, it becomes a mixture of Calcium Chloride, $CaCl_2$ and Calcium Hypochlorite, $Ca(OCl)_2$.

Blend
: A mineral which looks very much like galena (PbS) and thus sometimes called "false galena." Now known as sphalerite. Primarily Zinc Sulfide (ZnS).

Blind Head
: The top portion of a distilling apparatus which is not equipped with a beak or spout.

Blue Copperas
: Copper Sulfate.

Blue Salts
: Nickel Sulfate

Blue Stone
: A native crystalline Copper Sulfate, $CuSO_4 \cdot 5H_2O$.

Blue Vitriol or Bluestone
: Cupric Sulfate ($CuSO_4$)

Bole, or Bolar Earth
: Clays which adhere to the tongue when applied dry and which are colored yellow and red by a ferruginous (Iron Oxide) earth.

Bone Ash
: Impure Calcium Carbonate. ($CaCO_3$). Also an impure Calcium Phosphate, $Ca_3(PO4)_2$

Bone Black
: Animal charcoal prepared from bones and blood charcoal.

Borax
: Sodium Tetraborate ($Na_2B_40_7 \cdot 10H_2O$).

Brass
: An alloy of Copper and Zinc.

Braustein
: Manganese Dioxide (MnO_2).

Brevium
: An isotope of Protactinium produced in Uranium decay, namely ^{234}Pa (half-life = 1.6 min) [Fajans 1913] (Yes, Yes, I Know. It doesn't belong in this section.)

Brimstone
: (from German Brennstein "burning stone") Sulphur (S). [Boyle]

Bromcresol Green
: $C_{21}H_{14}Br_4O_5S$, an acid-base indicator that changes from yellow to blue as the pH is raised through 5

Bromcresol Purple
: $C_{21}H_{16}Br_2O_5S$, an acid-base indicator that changes from yellow to purple as the pH is raised through 6

Bromphenol Blue
: Tetrabromophenolsulphonphthalein, $C_{19}H_{10}Br_4O_5S$, an acid-base indicator that changes color from yellow to blue as the pH rises through 3.8

Bromphenol Red
: Dibromophenolsulphonphthalein, $C_{19}H_{12}Br_2O_5S$, an acid-base indicator that changes color from yellow to red as the pH rises through 6.5

Bromthymol Blue
: Dibromothymolsulfonphthalein, $C_{27}H_{38}Br_2O_5S$, an acid-base indicator that changes from yellow to blue as the pH rises through 6.8.

Bronze
An alloy of Copper and Tin.
Brunswick Green
A basic Copper Oxychloride, $CuOCl{\cdot}Cu(OH)_2$, or a green Copper Carbonate.
Buddling Dish
A flat pan or vat used in washing ores.
Burning Spirit of Saturn
Impure Acetone (CH_3COCH_3).
Burnt Alum
Exsiccated Alum ($AlK(SO_4)_2$. Product of heating Potassium Alum.
Burnt Lime
See Quicklime.
Butter of Antimony
Deliquescent white crystalline Antimony Trichloride ($SbCl_3$). Made by Basil Valentine by distilling roasted stibnite with corrosive sublimate. Glauber later prepared it by dissolving stibnite in hot concentrated Hydrochloric Acid and distilling.
Butter of Arsenic
Arsenic Trichloride ($AsCl_3$); Arsenic III Chloride [J. Davy, Lavoisier]
Butter of Tin
Hydrated Stannic Chloride, $SnCl_4{\cdot}5H_2O$ + 1/2 its weight in water.
Butter of Zinc
Zinc Chloride ($ZnCl_2$) + 1/4 its weight in water.
Butyrum Antimonii
See Butter of Antimony.

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Cadet's Fumming Liquid (Cadet's Lequid)
A heavy brown liquid first prepared by the French chemist Louis Claude Cadet de Gassicort. Cadet's liquid is highly toxic, smells strongly of garlic, and spontaneously bursts into flame when exposed to air. It is mainly Cacodyl Oxide, $((CH_3)_2As)_2O$, with other Cacodyl compounds such as Dicacodyl, $((CH_3)_2As)_2$). Berzelius coined the name Kakodyl (later changed to Cacodyl) for the Dimethylarsinyl Radical, $(CH_3)_2As$, from the Greek *Kakodes* (evil-smelling) and *Hyle* (matter).
Cadmia (Cadmia Fornacea, Cadmia Fornacum)
A term used for various forms of several substances, including Cobalt. Minerals containing Carbonates of Zinc and various compounds of Iron, among other things, were often called cadmia or "calamine." It was also called Tuttia or Tutty. An older name for the common zinc ore **Calamine**; also applied to a sublimed Zinc Oxide and to a Cobalt Ore. (The element now called Cadmium is often found associated with Zinc.) [Agricola]
Calamine
In its purest form, Zinc Carbonate ($ZnCO_3$). Two ores of Zinc were known by this name: Zinc Carbonate ($ZnCO_3$, also known as *Smithsonite*) and Hydrous Zinc Silicate ($Zn_2SiO_4{\cdot}H_2O$). They were distinguished by Smithson in 1802, but the term continued to

be applied to both ores. The Silicate was sometimes distinguished as *siliceous* or *electric calamine. calamine*

Calamy (Calamine)

Zinc Carbonate ($ZnCO_3$), sometimes ($Zn_2SiO_4 \cdot H_2O$).

Calcareous Earth

Calcium Oxide, CaO (Lime, Quicklime). [Black, Lavoisier]

Calcareous Earth, Caustic

Calcium Hydroxide, $Ca(OH)_2$ (Slaked Lime)

Calcareous Earth, Mild

Usually chalk ($CaCO_3$). Also possible magnesia and/or alumina and/or barytes. Also lime. (Chalk, Carbonate of Lime).

Calcarium Potentiale

Potassium Carbonate (K_2CO_3).

Calcic Liver of Sulfur

Calcium Sulfide (CaS).

Calcination

The action of fire on mineral substances in which the reactants (a) often lose a noticeable amount of weight, (b) acquire
a white color, (c) become friable (easily crumbled or pulverized). Almost always, a very high heat is employed. Formation of a Calx, *i.e.*, oxidation of a metal, often by roasting. [Bacon, Black, Rey]

Calcined Metals

Oxides.

Calcite

Calcium Carbonate ($CaCO_3$)

Callus

Any hard formation on the surface of a liquid or another solid.

Calomel

Mercurous Chloride (Hg_2Cl_2) Also known as Mercury (I) Chloride. Purgative, made by subliming a mixture of Mercuric Chloride and metallic Mercury, triturated in a mortar. This was heated in a iron pot, a crust of calomel formed on the lid which was ground to powder and boiled with water to remove the very poisonous Mercuric Chloride.

Caloric

a postulated Elastic Fluid associated with heat. [Avogadro, Davy, Dalton, Lavoisier, *et al*.]

Calx

Plural *Calces*. Any powder obtained by strongly heating a substance in air. Almost always a Metal Oxide (Earth), the result of roasting a metal or mineral. [Rey, Stahl] Sometimes used for a particular *calx*, namely Lime.

Calx Acetosell

Calcium Oxalate (CaC_2O_4)

Calx Aerata

Calcium Carbonate ($CaCO_3$)

Calx Citrata

Calcium Citrate ($Ca_3(C_6H_5C_7)_2 \cdot 4\ H_2O$).

Calx Molybdaenata

Calcium Molybdate ($CaMoO_4$)

Calx of Antimony

Antimony Trioxide (Sb_2O_3)

Calx of Gold

Not a true compound, but small discolored pieces of gold formed after exposure to relatively high heat.

Calx of Stone

Calcium Oxide (CaO).

Calx Plumbi Aerata

See White Lead.

Calx Saccharata

Calcium Oxalate (CaC_2O_4).

Calx Tartarisata

Calcium Tartrate ($CaC_4H_4O_6 \cdot 4H_2O$).

Calx Viva

Quicklime (CaO).

Camphire (Camphora, Canfora, Etc.)

See Camphor.

Camphor

An aromatic extract from the sap of certain trees found in Brazil and the Far East.

Caput Mortum

Most commonly signifies any solid residue remaining after dry distillation. Sometimes used for Ferric Oxide (Fe_2O_3)

Carbolic Acid

Phenol, C_6H_5OH.

Carbonate of Lime

Calcium Carbonate ($CaCO_3$).

Carbonic Acid

Formerly referred to Carbon Dioxide (CO_2). (Fixed Air) [Dalton; but also Arrhenius, Maxwell, Mendeleev, Rutherford, J. J. Thomson *et al.*]

Carbonic Oxide

Carbon Monoxide (CO). [Dalton, Gay-Lussac, Maxwell, Ramsay, T. Thomson *et al.*]

Carburetted Hydrogen Gas

Methane (CH_4) [Prout]

Caro's Acid

Permonosulfuric acid (i.e., Peroxymonosulfuric acid), H_2SO_5, first prepared by Heinrich Caro in 1898.

Cassel Yellow

Lead Oxychloride, $PbCl_2 \cdot 2PbO$ (Mineral Yellow).

Cassiopeium

Auer von Welsbach's name for lutetium, Lu.

Cathartic Salt of Glauber

Sodium Sulphate (Na_2SO_4).

Cathode Rays

Sometimes **Kathode Rays** in 19th century English translations: streams of electrons issuing from the cathode of an evacuated tube. They were identified as what are now called electrons late in the 19th century. [Perrin, Rutherford, J. J. Thomson] Hydroxides.

Caustic Alkalis

Hydroxides ($-OH^{-}$).

Caustic Baryta

Barium Hydroxide ($Ba(OH)_2 \cdot 8H_2O$).

Caustic Calcareous Earth

Calcium Hydroxide ($Ca(OH)_2$).

Caustic Ley (Caustic Lees, Etc.)

See Caustic Lye.

Caustic Lye

Since "lye" had several meanings, this phrase was often used to refer specifically to the three strong mineral (NaOH, KOH, and NH_4OH) bases and usually meant Potassium Hydroxide (KOH).

Caustic Ponderous Earth

Hydrated Barium Hydroxide ($Ba(OH)_2 \cdot 8H_2O$).

Caustic Marine Alkali

See Caustic Soda. Sodium hydroxide. Made by adding lime to natron.

Caustic Soda

Sodium hydroxide. Made by adding lime to natron.

Caustic Volatile Alkali

Ammonium Hydroxide.

Caustic Wood Alkali

Caustic potash. Potassium Hydroxide. Made by adding lime to potash.

Causticuni antimoniale

Probably Antimony Trichloride ($SbCl_3$)

Cawk

Barium Sulphate ($BaSO_4$)

Celsius Scale

Temperature scale devised in the early 18th century by a certain Elvius from Sweden (1710), a Christian of Lyons (1743), and the botanist Linnaeus (1740), apparently independently. Temperatures on this scale are denoted by °C. The normal freezing point of water is 0°C and the normal boiling point of water is 100°C. The scale was named after Anders Celsius who proposed a similar scale in 1742, but designating the freezing point to be 100 and the boiling point to be 0. The scale is sometimes also called the *Centigrade scale*. (See Fahrenheit Scale, Kelvin Scale, Rankine Scale, Réaumur Scale.)

Cementation

Any process by which a solid is caused to penetrate and combine with another substance.

Cendres Gravellees

Potassium Carbonate (K_2CO_2).

Cerusa (Ceruse) (Cerussa)

See White Lead.

Cerusse Antimony

White Antimony Trioxide (Sb_2O_3).

Chalk

Calcium Carbonate ($CaCO_3$). (Carbonate of Lime, Mild Calcareous Earth). [Lavoisier; Priestley; T. Thomson]. ***Acid of chalk*** is Carbon Dioxide, CO_2 (Carbonic Acid, Fixed Air) [Lavoisier]

Chalybeate (Water)
: Any water which is impregnated or flavored with Iron.

Chalybs cum Sulphure Preparatus
: Ferrous Sulfide (FeS).

Chalybs Tartar (Tartarified Iron)
: A substance produced by the action of Cream of Tartar on Iron filling. Probably ($FeC_4H_4O_6$).

Chamber Crystals
: Nitrosyl Sulfate, $NO \cdot HSO_4$, formed in lead chambers of sulfuric acid manufacture.

Chile Nitre
: Sodium Nitrate ($NaNO_3$)

Chile Saltpeter
: Sodium Nitrate ($NaNO_3$)

Chrome Green
: Mixture of Chromic Oxide, Cr_2O_3, and Cobalt Oxide.

Chrome Orange
: Mixture of chrome yellow and chrome red.

Chrome Red
: Basic Lead Chromate, $PbCrO_4 \cdot PbO$.

Chrome Yellow (Paris Yellow, Leipzig Yellow)
: Lead Chromate, $PbCrO_4$.

Chromic Acid
: Chromium Trioxide, Chromium (VI) oxide, CrO_3, or its formal hydrate, H_2CrO_4

Chymical
: Sometimes the modern term *alchemical* is more accurate than *chemical*. Similarly *chymist* often means *alchemist*. [Boyle]

Chymists Spirit
: Any solution of Ammonia (NH_4OH).

Cineres Clavellati
: Potassium Carbonate (K_2CO_3).

Cinnabar or Vermillion
: Mercuric Sulfide (HgS).

Cinnabar of Antimony
: Mercuric Sulphide (HgS), when produced by heating together Mercuric Chloride and crude Antimony (Antimony Trisulfide).

Circulation
: Cyclic distillation or refluxing.

Citrated Alkalies
: Citrates.

Clays
: Any stiff but malleable and sticky mineral solid.

Clyssus

Any vapors from the detonation of nitre with other substances which have been condensed and collected, as in clyssus of Sulphur.

Coagulation

Reducing fluids to solid form.

Coagulum

A precipitate.

Cobalt

Cobalt ore. Pure Cobalt was regulus of cobalt (CoAsS). Named by the copper miners of the Hartz Mountains after the evil spirits the "kobolds" which gave a false copper ore.

Cobalt, Black

A native, earthy Cobalt

Cobalt, Blue

A pigment containing Cobalt (II) Oxide, CoO; Zinc Oxide, ZnO; and chalcedony, an amorphous quartz, SiO_2.

Cobalt, Green

A green pigment, solid solution of Cobalt (II) and Zinc Oxides, CoO and ZnO

Cobalt, Red

Erythrite, a native Cobalt Arsenate, $Co_3(AsO_4)_2 \cdot 8H_2O$

Cobalt, Violet

Cobalt (II) Phosphate, $Co_3(PO_4)_2 \cdot 2H_2O$, a pigment in oil paints.

Cobalt, Yellow

Cobalt (III) Potassium Nitrite, $K_3Co(NO_2)_6 \cdot xH_2O$

Cochineal

A scarlet dye made from the insect *Coccus cacti*, native to Mexico and Central America.

Coction

Any process in which heat was applied over a long period. This term usually implied less strenuous applications of heat than calcination, but it was used more broadly than decoction.

Cohobation

Repeated distillations, or any cyclic process in which a liquid is vaporized and condensed as, for example, in refluxing.

Colcothars

Any colorless Sulfates (Vitriols) in which the water of hydration was removed ($-SO_4$).

Colcothar

Ferric Oxide (Fe_2O_3), by-product from Sulfuric Acid, H_2SO_4 manufacture (*Paris red*) [Lavoisier]

Colcothar Vitrioli

Red Oxide of Iron ($Fe_2O_3 \cdot FeO$) produced by heating Green Vitriol.

Collature

Filtration through a relatively coarse filter, e.g., a hair sieve, woolen cloth, etc.

Colophony

A resinous substance from distillation of light oil from turpentine.

Columbium

An older name for Niobium, Nb

Common Ammoniac

Ammonium Chloride (NH_4Cl).

Common Caustic
Potassium Hydroxide (KOH) or, less often, Sodium Hydroxide (NaOH).

Common Magnesia
Magnesium Carbonate ($MgCO_3$).

Common Mineral Alkali
Sodium Carbonate (Na_2CO_3).

Common Nitre (Saltpeter)
Potassium Nitrate (KNO_3).

Common Salt
Sodium Chloride (NaCl).

Concentration
Any process in which the solute/solvent ratio is increased. Less often, this term was used to describe the separation of
a substance A from a substance B joining it to a third substance, C.

Concreted
Solidified, congealed, coagulated, or (as verb) to unite, combine physically, as in solidity. Very rarely used for chemical combinations.

Concrete Volatile Alkali
Ammonium Carbonate ($(NH_4)_2CO_3$).

Congo, Blue, (Diamine Blue, Niagara Blue, Trypan Blue)
$C_{17}H_{12}N_3O_7S_2Na_2$, A blue dye and antimalarial compound.

Congo, Red
$C_{32}H_{22}N_6O_6S_2Na_2$, a red azo dye and acid-base indicator that changes from blue to red as the pH rises.

Congo Yellow
An orange-yellow dye, $C_{24}H_{18}O_4N_5SNa$

Copperas, See Vitriol.
Originally Blue Vitriol. Also Ferrous Sulfate ($FeSO_4 \cdot 7H_2O$). Later sometimes used for the entire class of Vitriols (Sulfates).

Copperas, Blue
Copper Sulfate, $CuSO_4$

Copperas, Green
A native Iron (II) Sulfate, $FeSO_4 \cdot 7H_2O$

Copperas, White
Coppiapite (native $Fe_4S_5O_{18} \cdot H_2O$)

Copperas, Yellow
Zinc Sulfate, $ZnSO_4$.

Copper Glance
Cuprous Sulphide ore.

Corneous (Horn) Lead
Lead Chloride ($PbCl_2$).

Corning
Any process in which a whole or coarsely ground substance is granulated.

Cornu Cervi
Impure Ammonium Carbonate ($(NH_4)_2CO_3$).

Corpuscle

Generally (and still) a small particle; in the late 19th and early 20th centuries, a competing name for the electron. [J. J. Thomson]

Corrosive Sublimate

Mercuric Chloride ($HgCl_2$). First mentioned by Geber, who prepared it by subliming Mercury, Calcined Green Vitriol, Common Salt and Nitre. [Scheele]

Corundum

Aluminum Oxide. (Al_2O_3)

Coruscate

To give off intermittent flashes of light, to sparkle.

Coupier's Blue

Azodiphenyl, $C_{24}H_{18}N_2$, a blue dye.

Cream of Lime

Fine precipitate of Calcium Hydroxide ($Ca(OH)_2$) from water.

Cream of Tartar (Tartar)

Potassium Hydrogen Tartrate (KHC_4H_4O).

Creech

Calcium Sulfate ($CaSO_4$).

Cremor

Any scum gathering at or near top of a liquid. Also, a thickening or change in color or consistency on top or within a liquid.

Cresol, Purple

m-cresolsulfonphthalein, $C_{21}H_{18}O_5S$, an acid-base indicator that changes from red to yellow as the pH rises through 2.

Cresol, Red

o-cresolsulfonphthalein, $C_{21}H_{18}O_5S$, an acid-base indicator that changes from yellow to red as the pH rises through 8.

Creta Alba

Gypsum (Calcium Sulfate Dihydrate) ($CaSO_4 \cdot 2H_2O$).

Crocus

Any solid of a saffron or reddish color, as in Crocus of Mars. A yellow or reddish powdered calx (Oxide)

Crocus of Antimony (Antimonii, Metallorum)

An impure antimony oxysulfide

Crocus of Copper

Cuprous Oxide, Cu_2O.

Crocus Martis

Ferric Oxide (Fe_2O_3).

Crocus of Iron

Ferric Oxide. Also referenced as Iron Sesquioxide or Iron Peroxide. [Scheele].

Crocus of Mars

Ferric Oxide.

Crocus Saturni

Red Lead (minium) (Pb_3O_4).

Crookes Tube

A highly exhausted electrical discharge tube, named for William Crookes, who experimented with such tubes.

Crude Antimony
Natural Antimony Sulfide (Sb_2S_3).
Crude Flux
Nitre and tartar mixed in any proportion without detonation.
Crystalline Earths
Any solid which is (1) not attached in acids, (2) friable, (3) hard enough to strike fire with steel.
Crystallized Alkali
Sodium Carbonate (Na_2CO_3).
Crystallized Verdigris
Cupric Acetate ($Cu(C_2H_3O_2)_2 \cdot H_2O$).
Crystallized Volatile Alkali
Ammonium Carbonate $(NH_4)_2CO_3$.
Crystallization
Any process in which crystals are formed from a liquid. Usually accomplished through concentrating and/or cooling a solution.
Crystals of Copper
Mostly Copper Acetate ($Cu(C_2H_3O_2)_2$).
Crystals of Silver (Lunar Crystals)
Silver Nitrate, usually as a powder ($AgNO_3$).
Crystals of Venus
Copper Acetate ($Cu(C_2H_3O_2)_2$).
Crystal Violet
Hexamethyl-*p*-rosaniline hydrochloride, $C_{25}H_{30}N_3Cl$, an acid-base indicator that changes from green to blue as the pH passes through 1.0.
Cubic Nitre
Crystallized Sodium Nitrate ($NaNO_3$).
Cucurbit
The lower part of an alembic. Shorter, more squat and ovoid than a matrass.
Cuprite
Red Cuprous Oxide ore.
Cyprian Vitriol
Copper Sulfate ($CuSO_4$).

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Damps
Any dangerous vapors in caves, mines etc.
Decantation
To a separate the supernatant liquid from a solid precipitate by pouring the liquid off, being careful that all of the solid remains in the vessel.
Decoction
Continuous application of boiling heat to a reaction mixture.
Decompounded
Doubly compounded, or composed of three or more substances.

Decrepitation
: Rapid physical decomposition of some crystals when heated. Characterized by a crackling noise.

Deflagration
: To cause a substance to burn rapidly, with flame.

Deliquescence
: The property some crystalline substances have of dissolving spontaneously in liquid absorbed from the air.

Deliquium
: Change of salt from a solid to a fluid state by contact with air only.

Demi-Metal
: See Semi-Metals

Dephlegmation
: To remove water from a solution, usually one of an acid or alcohol. There is a sense of purifying about the term, as opposed to simple concentration.

Dephlogisticated Acid of Salt
: Chlorine (Cl_2).

Dephlogisticated Air
: Oxygen (O_2).

Dephlogisticated Calx of Iron
: Ferrous Oxide (Hydroxide) (FeO or $Fe(OH)_2$).

Dephlogisticated Marine Acid
: Chlorine (Cl_2). (Oxymuriatic Acid). See Marine Acid. [Scheele]

Depuration
: To free from impurities, purify.

Desquamation
: The process of removing scaly crusts which form on a surface.

Detonation
: Any rapid chemical reaction accompanied by noise and often heat and light, e.g., explosions.

Diaphoretic
: Any substance which induces perspiration when administered to a patient.

Diaphoretic Antimony
: Mixture of a Antimony Oxide and Potassium Antimonate (Sb_2O_3; $KSbO_3$).

Didymium
: A mixture of Praseodymium, Pr, and Neodymium, Nd, believed to be an element until 1885. [Mendeleev, Newlands].

Digestion
: The process in which heat is continuously applied to a substance without boiling it (usually in open vessels).

Digestive Salt
: Potassium Chloride (KCl).

Digestive Salt of Sylvius
: Potassium Chloride (KCl).

Diminished Nitrous Air (Priestly)
: Nitrous Oxide (N_2O).

Distillation
A process in which all or some portion of a substance is vaporized and then condensed and collected.

Distillation Per Ascensum
Distillation with the collecting vessel above the heated vessel.

Distillation Per Decensum
Any distillation where the collecting vessel is below the heated vessel.

Distillation Per Obliquium
Distillation in a retort used for substances of (a) relatively low vapor pressure and (b) other properties that make distillation difficult, e.g., honey.

Distillation with Addition
Adding some substance prior to distillation that will aid the process by (1) loosening the desired volatile product chemically from its compound; (2) fixing the product not desired, thus retaining it in the vessel; (3) by adding a volatile substance desired, thus making the fixed substance volatile (addition of properties).

Diuretic Salt
Potassium Acetate ($KC_2H_3O_2$).

Division
Any process in which mixtures are separated into their homogeneous components by mechanical means.

Docimacy
Assaying

Dram, Drachm
See Apothecary Measures.

Dry Way
Term used for all operations that are conducted without adding a liquid medium. Reactions done through fusion, however, are still regarded in the dry way.

Dulcification
Any process in which a caustic substance is rendered less corrosive.

Dutch Oil (Dutch Liquid, Oil of the Dutch Chemists)
Ethylene Chloride, $C_2H_4Cl_2$, first prepared by the action of Chlorine on Ethylene (hence Olefiant Gas) in 1794 by four Dutch chemists: Johann Rudolph Deimann, Adrien Paets van Troostwyck, Anthoni Lauwerenburgh and Nicolas Bondt. [Wurtz].

Dutch White
Mixture of one part of White Lead to three of Barium Sulphate, ($BaSO_4$).

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Earth
Usually a Carbonate, Oxide or Hydroxide. Earths were originally classified by physical properties as absorbent, crystalline, and dry, insipid, not inflammable, fusible solids which often recovered their original texture after fusion. A Metal Oxide (Calx); see Calcareous Earth, Magnesian Earth, Siliceous Earth. [Dalton, Priestley, Scheele, T. Thomson]

Earth, Calcareous, Caustic

Calcium Hydroxide ($Ca(OH)_2$).

Earth, Mild Calcareous

Calcium Carbonate ($CaCO_3$).

Earth, Mild Magnesian

Magnesium Carbonate ($MgCO_3$)

Earth, Silicous

Silica (SiO_2)

Earth Rhubarb

Calcium Oxalate (CaC_2O_4)

Earthy Salts

Compound of acids and earths.

Eau Forte

(Strong Water) Usually concentrated Nitric Acid (HNO_3), sometimes (1) spirit of wine (Ethanol, CH_3CH_2OH), (2) Caustic Soda solution.

Ebullition

The agitating, bubbling action of a liquid that is undergoing rapid, active boiling.

Edulcorated Quicksilver

Mercurous Chloride (Hg_2Cl_2)

Edulcoration

The washing of a solid (often a precipitate) with water to free it from soluble impurities such as salts and acids. Because of the latter, there are overtones of sweetening, purification, and softening with this term.

Elaeosaccharum

A mixture of an oil and sugar. Used to make oils soluble in water, wines, spirits, etc.

Elastic Fluid

Usually a descriptive term for gas (Air) [Black, Dalton, Gay-Lussac, Lavoisier, T. Thomson *et al.*]; however, certain elastic fluids were postulated that correspond to no actual material (Caloric, Ether, Phlogiston). A gas is an "elastic fluid," elastic in that it is compressible in a reversible way and fluid in that it flows.

Electuaries

Medicinals in the form of a paste or conserve.

Elixation

The action of boiling or stewing.

Elutriation

Separation and purification of a mixture of granular solids with water by (a) decanting, (b) straining, or (c) washing.

Emanation

A radioactive gas (Radon) produced in the decay of other radioactive elements. Specifically, **Thorium Emanation** (also **Thoron**) is ^{220}Rn (half life = 55 s) produced from the decay of Thorium; **Radium Emanation** is ^{222}Rn (half life = 3.8 d) produced from the decay of Radium; **Actinium Emanation** (also **Actinon**) is ^{219}Rn (half life = 4 s). See Niton and Table of Isotopes.

Emetic

Any substance that induces vomiting.

Emetic Powder

Potassium Antimonyl Tartrate ($KSbC_4H_4O_7 \cdot (1/2)\ H_2O$)

Emplastrum Simplex
Impure Lead Oleate ($Pb(C_{18}H_{33}O_2)_2$)

Empyreumatic
Tasting or smelling or burnt organic matter.

Empyreumatic Oils
Liquid oils that (a) are acid, (b) are soluble, (c) do not retain the taste and odor of the substance from which they are obtained, (d) have a taste and/or odor of burnt organic matter.

Enfiladid Ballon
A spherical vessel with opposed, necked openings.

English Laxative Salt
Magnesium Sulphate ($MgSO_4$)

English Salt
See Bitter Salt

Ens Martis
A mixture probably consisting of Iron Chlorides and Ammonium Chloride. Used as a medicine.

Ens Veneris
A mixture probably consisting of Copper Chlorides and Ammonium Chloride. Used as a medicine.

Epsom Salts
Magnesium Sulfate, $MgSO_4 \cdot 7H_2O$; See Bitter Salt.

Essay
See Assay

Essence
Any essential oil.

Essential Oil
Any oil that smells the same as the vegetable from which it was obtained and has a low boiling point (below that of water)

Essential Oil of Turpentine
The most volatile portion of turpentine.

Etain de Glace
Bismuth (Bi)

Ether
In the 18th century, Alykyl Chlorides and Nitrates often were confused with true ethers, such as Ethyl Ether (CH_3CH_2-O-CH_2CH_3).

Ether, Chemistry
Originally the name of a volatile compound resulting from the action of an acid on alcohol. The current meaning is an organic compound whose formula is ROR', where R and R' are alkyl or aryl groups; especially Diethyl Ether, $C_2H_5OC_2H_5$. Some ethers in the older sense include: **Acetic Ether**, (Ethyl Acetate, $C_2H_5O_2C_2H_3$); **Muratic Ether**, (Ethyl Chloride, C_2H_5C); **Nitric Ether**, (Ethyl Nitrate, $C_2H_5NO_3$. Also referred to as Aether Nitri [Scheele]); **Nitrous Ether**, (Ethyl Nitrite, $C_2H_5NO_2$. Also referred to as Spirit of Nitre); **Sulfuric Ether**, (Diethyl Ether, $C_2H_5OC_2H_5$ [Gay-Lussac]).

Ether, Physics (Aether, Luminiferous Ether)

A hypothetical Elastic Fluid postulated to support the transmission of light. [Clausius, Röntgen, J. J. Thomson].

Ether of Benzoin
Ehtyl Benzoate ($C_9H_{10}O_2$)

Ether of Nitre
Mainly Ethyl Nitrite ($C_2H_5NO_2$)

Ether of Vinegar
Ethyl Acetate ($C_4H_{10}O_2$)

Ether of Vitriol
Ethyl Ether ($C_4H_{10}O$)

Ethiops Mineral, Aethiops Mineral
Mostly black Mercury (I) Sulfide (Hg_2S).

Ethyl, Aethyle
The hydrocarbon radical C_2H_5-.

Ethyl Gas, Ethyl Gasoline
Leaded gasoline, i.e., gasoline including Tetraethyllead, $(C_2H_5)_4Pb$, as an additive.

Ethyl Red
According to Hackh's dictionary, $C_{23}H_{23}N_2$, a Quinoline dye and acid-base indicator that changes from colorless to red as the pH rises through 5.4; current chemical catalogs say $C_{17}H_{19}N_3O_2$.

Euchlorine
Name given by Humphry Davy to a bright green gas he believed to be a compound of Chlorine and Oxygen; in fact, it seems to have been mixture of Chlorine Dioxide and Chlorine. [H. Davy, J. Davy].

Evaporation
Any process in which the liquid portion of a solution or mixture is vaporized, often with the help of heat.

Everitt's Salt
Potassium Ferrous Ferrocyanide, $K_2Fe[Fe(CN)_6]$

Exalt
To make more spiritous, volatile, or generally more active; activate.

Exsiccate
To dry; remove moisture.

Exhalation
When parts of substances are separated by heat from the solid and fly off into the air. Used as a tool to obtain fixed parts as well as volatile parts. This includes calcination, distillation, etc.

Expression
To separate a component from organic matter or any other solids or semisolids by squeezing the material in a press. A mechanical rather than chemical means of separation.

Extemporaneous Alkali
See white flux.

Extraction
To separate one substance from others by using solvents.

Extract of Lead
Impure Lead Acetate ($Pb(C_2H_3O_2)_2$).

Extract of Mars
Solid Ferrous Tartrate ($FeC_4H_4O_6$).

Extravasation
The escape of an organic fluid (e.g., blood, sap) from its proper vessels into surrounding tissues.

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Fahrenheit Scale
The temperature scale devised in 1717 by D. G. Fahrenheit and denoted by °F. The normal freezing point of water is 32°F and the normal boiling point of water is 212°F. (See Celsius Scale, Kelvin Scale, Rankine Scale, Réaumur Scale.)

Faints
The second identifiable, thin, and light liquid fraction from distillation.

Fearce
To pulverize or mascerate.

Febrifugal Salt
Potassium Sulphate (K_2SO_4).

Febrifugal Salt of Sylvius
Potassium Chloride (KCl).

Ferment
A substance actually fermenting, inclined to ferment, or used to cause fermentation, e.g., yeast.

Ferro Prussiate
Potassium Ferricyanide.

Ferrum
Latin for Iron, hence the symbol Fe

Fetid Oil
Any oil substance that was empyreumatic, i.e., had the odor of burned animal matter.

Filtration
To separate a liquid from a particulate solid by passing the liquid through a porous material, e.g., cloth or paper.

Finery Cinder
Iron Oxide (Fe_3O_4).

Fire Air (Scheele)
Oxygen (O_2).

Fixed Air
Carbon Dioxide (CO_2). [***aer fixus*** Scheele]

Fixed Alkali (Soda)
Sodium Carbonate (Na_2CO_3).

Fixed Alkali Salt
Solid Potassium Carbonate (K_2CO_3).

Fixed Ammoniac (Fixed Sal Ammoniac)
Calcium Chloride ($CaCl_2$).

Fixed Nitrate

Usually Potassium Carbonate (K_2CO_3); sometime Potassium Sulfate (K_2SO_4).

Fixed Sulphur of Antimony

Oxides of Antimony, probably primarily the Trioxide (Sb_2O_3) which forms when Antimony Ore (Sb_2S_3) is heated in air. Antimony Calx.

Fixed Vegetable Alkali

Potassium Carbonate (K_2CO_3).

Fixity

The degree of solidity of a substance as measured by the ability of that substance to resist the action of fire. The opposite of volatility.

Flores

See Flowers.

Flores ac Vitrum Antimony

Probably Antimony Trioxide (Sb_2O_3) with small amounts of Antimony Trisulfide (Sb_2S_3).

Flores Antim

See Flowers of Antimony.

Flores Benzoini

Benzoic Acid (C_6H_5COOH).

Flores Martiales (Ens Veneris)

Impure Ammonium Chloride (NH_4Cl). Also includes iron filing used in the reaction, with possibly some Chlorides of Iron. Also Ferriammonium Chloride, NH_4FeCl_4. See Flowers.

Flores Martis

Anhydrous Ferric chloride.

Flores Sulfurous

See Flowers of Sulfur.

Flores Viridis Aeris

Crystallized Cupric Acetate ($Cu(C_2H_3O_2)_2$).

Flores Zinc

See Flowers of Zinc.

Flowers (Flores)

Any solid, often an Oxide, product of sublimation. Usually a powder.

Flowers of Antimony

Antimony Trioxide (Sb_2O_3). Also referrenced as Antimony Oxysulfide, $Sb_2O_3 \cdot Sb_2S_3$ (also called Antimony Red);

Flowers of Arsenic (White Arsenic)

Arsenious Oxide (As_2O_3). [Lavoisier, Priestley] Also called Pompholix.

Flowers of Benjamin

See Flowers of Benzoin.

Flowers of Benzoin

Benzoic Acid (C_6H_5COOH).

Flowers of Phosphorus

Volatile Oxides of Phosphorous (P_2O_3; P_2O_5).

Flowers of Sulfur

Sublimed and condensed sulfur vapors (S). Light yellow crystalline powder, made by distilling sulphur.

Flowers of Tin

Tin Oxide, SnO_2 [Lavoisier, Priestley] Also called Pompholix.

Flowers of Zinc

Volatile Zinc Oxide (ZnO). [Lavoisier, Priestley] Also called Pompholix.

Fluor (as adjective)

Flowing, an adjective indicating that the substance cannot be made solid, e.g., flour volatile alkali,; or, in referring to a mineral, a solid that is easily fusible.

Fluor Acid Air

Silicon Fluoride (SiF_4).

Fluorspar (Fluor Spar, Fluor)

Calcium Fluoride (CaF_2). Fluor was originally applied to readily fusible minerals, particularly those containing Fluorine, espeically Fluorite (Calcium Fluoride, CaF_2). Fluorspar for CaF_2 dates to the late 18th century; Fluorite to the 1860s.

Focus of a Furnace

That part of a furnace where the fuel is actually burned.

Foliated Earth of Tartar

Potassium Acetate ($KC_2H_2O_2$).

Fossil

Any mineral substance.

Fossil Alkali

Sodium Carbonate (Na_2CO_3). (Common Mineral Alkali, Marine Alkali, Soda)

Fossil Cadmia

A Cobalt mineral, probably Cobaltite (CoAsS).

Fossil Oil

Clear, distilled crude oil.

Frigorific

Having property of producing cold.

Focus

A substance which can act as a (usually opaque) surface coloring agent.

Fulginosity

Soot or any black deposit from flames of oily substances.

Fulminate

A compound containing the CNO^- ion, named because such compounds are explosive (from Latin, *fulminare*, to strike with lightning.

Fulminating Gold

Made by adding Ammonia to the Auric Hydroxide formed by precipitation by potash from metallic Gold dissolved in Aqua Regis. Highly explosive when dry.

Fulminating Silver

Silver Nitride, very explosive when dry. Made by dissolving Silver Oxide in Ammonia.

Fulmination

Any very rapid reaction which produces heat, light, and noise; e.g., explosions.

Fuming Liquor of Boyle

Ammonium Polysulfide ($(NH_4)_2S_y$).

Fuming Liquor of Libavious

Stannic Chloride solution ($SnCl_4$).

Funiculus

An invisible membrane postulated to hold up a column of mercury in the Torricellian experiment [Linus].

Fusion
The changing a solid body to a liquid by the action of fire.

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Galena
Lead sulfide (PbS). Plumbic sulphide. Chief ore of lead. The slag remaining after refining lead.

Galley
A type of furnace in which several vessels are heated side by side simultaneously.

Galls
Parasitic growths, commonly found on oaks, which, when dried, ground, and dissolved were useful indicators for iron.

Gentle Calx of Lead
Lead Nitrate ($Pb(NO_3)_2$.

German Ash
Potassium Carbonate (K_2CO_3).

German Potash
Probably a mixture of Potassium Carbonate and Oxide.

German Vitriol
An ore with both Copper and Ferrous sulfates ($CuSO_4$, $FeSO_4$).

Galacial Oil of Antimony (Butter of Antimony)
Antimony Trichloride ($SbCl_3$).

Glacial
Glass-like, crystallized. This usage persists in terms such as glacial Acetic Acid and glacial Phosphoric Acid.

Glance
A mineral with a glassy appearance.

Glance, Antimony
See Antimony Glance.

Glance, Bismuth
Bismuthinite, Bi_2S_3

Glance, Iron
Hematite, Fe_2S_3

Glance, Nickel
A native arsenic sulfide, Ni_2AsS.

Glance, Silver
See Silver Glance.

Glance, Tellurium
Nagyagite, a lead sulfotelluride that also contains gold and antimony.

Glass of a Substance
The fused form of the substance, especially if semitransparent.

Glass of Antimony

Antimony Oxysulfate ($Sb_2O_2SO_4$). Prepared by fusion of Antimony Sulfide, Antimony, and an Oxide of Antimony. Impure Antimony Tetroxide, obtained by roasting Stibnite. Used as a yellow pigment for glass and porcelain.

Glass of Borax
Fused borax.

Glass of Lead
Any fused lead compound (especially ceruse, minium, or litharge).

Glauber's Alkahest (Alkahest of Van Helmont)
Concentrated Potassium Carbonate solution (K_2CO_3(aq)).

Glauber's Sal Ammoniac
Ammonium Sulphate $(NH_4)_2SO_4$).

Glauber's Salt (Sal Mirabilis)
("sal mirabile" - wonderful salt) Sodium Sulphate ($Na_2SO_4 \cdot 10H_2O$). Named for Johann Glauber who prepared it.

Glauber's Spirit of Nitre
Fuming Mitric Acid (HNO_3).

Globuli Martiales
Iron powder boiled in Cream of Tartar solution. Presumably contains some Ferrous Tartrate ($FeC_4H_4O_6$). A pharmaceutical preparation of Iron.

Glucinum (Glucinum)
Beryllium (Be). [Berzelius, Marignac, Newlands, Ramsay].

Golden Spirit of Sulphur
Ammonium Sulphide ($(NH_4)_2S$).

Grain
Unit of mass. The English grain was equal to 1/7000 the mass of a pound avoirdupois, or 0.0648 grams; the French grain was 1/9216 of a Livre or about 0.0531 grams. For late 18th. century French system, see Livre. [J. Davy, Lavoisier, Priestley, Proust].

Grain Alcohol
Ethanol or Ethyl Alcohol.

Grain Vitriol
Ferrous Sulfate.

Graves
The residue left after extracting oils from animal fat by means of heat and moderate pressure.

Gravid
Heavy or dense.

Green Salt
Uranium (IV) fluoride, UF_4.

Green Vitriol (Vitriol of Mars)
Ferrous Sulfate ($FeSO_4$).

Gros
Unit of mass in late 18th. century France; see Livre.

Grume(s) (Grumous)
(1) Viscous, clotty; (2) heap(s), clusters.

Guaic (Guyac, Guacium)
A tropical wood sometimes used for the resinous extract of that wood.

Gum
: Resinous or musiloginous extracts from plants, shrubs, or trees.

Gum Acacia
: Like gum arabic, but thought to be distinguishable from it; the dried resinous exudation of certain varieties of the acacia tree.

Gum Arabic
: The dried exudation of certain varieties of the acacia tree.

Gum Benzoin
: The dried resin of the tree Styrax benzoin.

Gum Dragon
: See Gum Tragacanth.

Gum Lac
: Dark-red resionous incrustation produced in certain trees by the insect *Carteria lacca*. When refined by certain processes it beomes "shell-lac" or "shellac."

Gum Tragacanth (Gum Dragon)
: Dried gummy exhudation of the tree *Astragalus gummifer* and related speices.

Gypseous Earths
: Used for both gypsum or the "earth" contained in it , i.e., Calcium Oxide. Sometimes the Oxide was confused with Carbonate as the "earth" of gypsum.

Gypseous Substances
: Solid substances which (a) are not soluble in acids, (b) are not hard enough to strike fire from steel, (c) when mixed with water may form a paste which hardens into a solid, and (d) becomes powdery when exposed to fire.

Gypsum
: Calcium Sulfate Dihydrate ($CaSO_4 \cdot 2H_2O$).

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Halitus
: Matter in a very subtile form, as a "vapor" or "exhalation." Like these, a "halitus" was often hypothesized if a phenomenon was ascribed to material causes, but no material could be detected by known means.

Hard Oil
: Boiled Linseed Oil.

Hartshorn (Hart's Horn)
: Ideally, the horn of the male European red deer, but the horns of other deer species were acceptable substitutes.

Hartshorn Calcined to Whiteness
: Hartshorn subjected to heat over a long period and developing into a white substance.

Hartshorn Prepared Philosophically
: Much like hart's horn calcined to whiteness, but usually with less heat and for a longer period.

Head
: The upper part of a distillation apparatus. Also, the bulb or other enlargement at the end of a tube.

Heavy Carburetted Hydrogen
Ethylene (C_2H_4).

Heavy Earth
Barium Oxide (BaO). Also Barium Hydroxide and Barium Carbonate.

Heavy Inflammable Air
Used at various times for (a) Carbon Monoxide (CO), (b) water gas (a mixture of H_2 and CO), or (c) Methane (CH_4).

Heavy Spar
Barium Sulfate ($BaSO_4$).

Hellebore
A plant of the genus *Helleborus*. Usually *Helleborus niger*, the so-called "Christmas rose." The poisonous extract was used in dilute preparations as a medicinal in the 17th and 18th centuries.

Hemlock
The vulgar name for the poisonous plant *Conium maculatum* and/or its extract.

Henna
The plant Lawsonia inermis. The dried and powdered shoots and leaves were used as a dye or, with suitable medium, a cosmetic.

Hepar (Hepars**)**
This Latin word for liver referred to reddish-brown (*i.e.*, liver-colored) metal Sulfides (-S^{2-}). See Sulphuret.

Hepar Antimonii
Antimony Trisulfide (Sb_2S_3).

Hepar Calcis
Calcium Sulfide (CaS).

Hepar Sulphuris (Liver of Sulphur)
Produced by heating Potassium Carbonate with sulphur. Not a true compound, it was a metastable mixture of Potassium Polysulfides and Sulfate (K_2S, K_2S_2, K_2S_3, K_2S_4, K_2S_5, K_2SO_4). Hepar Sulphuris was synonym either for *potassa sulphurata* (a mixture of various compounds of Potassium and Sulfur made by fusing Potassium Carbonate and Sulfur) [Cavendish, Priestley, Stahl] or, in homeopathic contexts, for Calcium Sulfide, CaS.

Hepatic Air
Hydrogen Sulfide gas (H_2S).

Hessian Crucible
A type of crucible made in Hesse, Germany, of a mixture of native clay and fine sand. Such crucibles were noted for being able to withstand sudden changes in temperature.

Homberg's (Sedative) Salt
Boric Acid (H_3BO_3 (ortho); $H_2B_4O_7$ (tetra)).

Homoiomereia, Doctrine of (Homogeneity)
The parts of a body are in all respects similar to the whole. According to Democritus and the atomic school, after a certain number of sub-divisions, the drop would be divided into a number of parts each of which is incapable of further sub-division. We should thus, in imagination, arrive at the atom, which, as its name literally signifies, cannot be cut in two. This is the atomic doctrine of Democritus, Epicurus, and Lucretius.

According to Anaxagoras, on the other hand, the parts into which the drop is divided, are in all respects similar to the whole drop, the mere size of a body counting for nothing as regards the nature of its substance. Hence if the whole drop is divisible, so are its parts down to the minutest sub-divisions, and that without end.
Anaxagoras did not assert this of the parts of organised bodies such as men and animals, but he maintained that those inorganic substances which appear to us homogeneous are really so, and that the universal experience of mankind testifies that every material body, without exception, is divisible. The doctrine of atoms and that of homogeneity are thus in direct contradiction.

Horn (Corneous) Lead
Lead Chloride ($PbCl_2$).

Horn Mercury
Chloride of Mercury ($HgCl_2$; Hg_2Cl_2).

Horn Silver (Luna Cornea)
Fused Silver Chloride (AgCl). Argentum Cornu, a glass like ore of Silver Chloride.

Horn Tin
Stannous Chloride ($SnCl_2$).

Hungarian Vitriol
Usually Ferrous Sulfate ($FeSO_4$) but also used for Copper Sulfate ($CuSO_4$).

Hydrargyrum
Latin for Mercury, hence the symbol Hg

Hydromel
Mixture of honey and water, usually in equal proportions. Ferments into "mead."

I-R

Iceland Spar (Calcite)
A particular crystal form of Calcium Carbonate ($CaCO_3$).

Icy Butter
Antimony Chloride ($SbCl_3$).

Igneous Fluid
a postulated Elastic Fluid sometimes used synonymously with Caloric (matter of heat), sometimes with Phlogiston (matter of fire), and sometimes as a substance with the postulated properties of both.

Illinium
Another name proposed for promethium, element 61.

Imbibition
To soak or saturate with a liquid.

Infernal Stone
An Alkali Hydroxide (NaOH, KOH). [Not to be confused with the French term pierre infernale.]

Inflammable Air
Usually Hydrogen (H_2), though the usage is not constant among Priestley, Watt, Lavoisier, or Berthollet. Sometimes Carbon Monoxide (CO).

Inflammable Air from Metals
: Hydrogen (H_2).

Infusion
: The extraction of chemical substances by soaking them in a solvent, usually water. Sometimes boiling water was poured on a mixture of substances and then allowed to cool in order to aid the extraction; but if the heat were used, the temperature could not exceed that of boiling water.

Insolation
: Digestion in which the heat was supplied by the sun rather than a furnace.

Inspissate
: To thicken or condense.

Intermediate Salt of the Ley of Blood
: Potassium Ferrocyanide ($K_4Fe(CH)_6$).

Intermediate Salts
: Usually normal salts; occasionally acid salts.

Intermedium
: Any reagent or reactant believed to be necessary for a reaction but which does not always appear on the product.

Intumescence
: The process of swelling up.

Ionium
: An isotope of thorium produced in uranium decay, namely ^{230}Th (half-life = 80 kyr). See Table of Isotopes.

Ipecacuanha
: A preparation from the root of the South American plant *Cephaelis Ipecacuanha*.

Iron Ochre
: A mixture of silica, clay, and various Oxides of Iron. In red ochre the Oxide is simple Fe_2O_3; in yellow ochre it is $Fe_2O_3 \cdot H_2O$.

Iron Vitriol
: Ferrous Sulphate ($FeSO_4$).

Isinglass
: In the first half of the 18th. century a gelatinous substance extracted from the air-bladders of certain fish. Later, a synonym for sheet mica.

Ivory-Black
: A black pigment prepared by the calcination of ivory in a closed vessel.

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Jalap
: A powder from the dried roots of the Mexican plant *Exogonium purga*. Used as a purgative.

James' Powder
: A powder prepared by Dr. Robert James (1703-1776) that was used to reduce fevers.

Japanning

The coating of an object with a very dark varnish. The original varnish came from Japan, but substitutes were later found.

Jeweler's Etchant

3g. Silver Nitrate + 3g. Nitric Acid + 3g. Mercurous Nitrate + 100cc water.

Jove (of Jove)

Tin, or some compound or alloy of Tin.

Jupiter

In astrological and alchemical thought, the seven heavenly bodies known to the ancients were associated with Seven Metals also known in antiquity. Jupiter was associated with Tin. [Helmont].

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Kali

The plant Salsola kali or glasswort from which, oddly enough, "mineral" alkali (Sodium Carbonate) was extracted by calcination. Also sometimes used for crude Sodium Carbonate.

Kalium

Latin (and German) for Potassium, hence the symbol K.

Kaolin

A fine, white clay used in the manufacture of porcelain.

Kelp

Impure Soda (Na_2CO_3) from seaweed. In Britain, the term was sometimes used for crude Sodium Carbonate from any source. Also ashes of seaweed from which Carbonates or Iodine were extracted.

Kelvin Scale

An Absolute Temperature Scale (*i.e.*, one in which absolute zero is assigned the value zero) named after William Thomson, first (and last) Baron Kelvin of Largs, who first proposed an absolute temperature scale. One Kelvin (denoted simply K or sometimes in older sources °K) is the same size as a **Celsius** degree, so the normal freezing point of water is 273.15 K and the normal boiling point is 373.15 K. (See Celsius Scale, Fahrenheit Scale, Rankine Scale, Réaumur Scale.) [Kelvin].

Kermes Mineral

A natural mixture of Antimony Oxide or a mixture obtained in the laboratory by the actions of Potassium Carbonate (K_2CO_3) on Antimony Sulphide.

Killed Spirits

Zinc Chloride.

King's Yellow

A mixture of orpiment with white Arsenic. Also a native yellow Arsenic (III) Sulfide, As_2S_3 (**Yellow Arsenic**, Yellow Orpiment).

Kurrol's Salt

A Potassium pPhosphate, $(KPO_3)_4$, with ion-exchange properties.

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Lac (Laque)
: A relatively thick solution of a colorant or coating.

Lac Sulphuris
: See milk or Sulphur.

Lapis
: Latin for stone; also an alchemical term for non-volatile solids.

Lapis Calaminarus (Calamine)
: Mineral form of Zinc Carbonate ($ZnCO_3$)

Lapis Causticus
: Fused Sodium or Potassium Hydroxide, NaOH, KOH.

Lapis Haematites
: Hematite (Fe_2O_3)

Lapis Imperialis
: Silver Nitrate, $AgNO_3$.

Lapis Infernalis
: Fixed vegetable alkali, I., Potassium Carbonate (K_2CO_3)

Lapis Lunaris
: Fused Silver Nitrate, $AgNO_3$.

Lapis Philosophorum
: A mixture of fused Alum, Vitriol, Bolus, Cerussa, Camphor, Vinegar.

Lapis Ponderous
: Calcium Tungstate ($CaWO_4$)

Lapis Septicus
: Potassium Hydroxide (KOH)

Lapis Serpentin
: A mineral chiefly characterized by the presence of hydrous Magnesium Silicate ($Mg_3Si_2O_5(OH)_4$)

Laque
: See Lac.

Laudanum
: Any medicinal preparation with opium as a primary ingredient.

Laughing Gas
: Nitrous Oxide, N_2O.

Lead Black
: Graphite, an allotrope of Carbon.

Lead Fume
: Lead Oxide obtained from the flues at lead smelters.

Lead-Glance
: Lead sulphide (PbS)

Lead, Red
: Lead Oxide, Pb_3O_4 (Minium, **Paris Red**).

Lead White
: Basic Lead Carbonate, $2PbCO_3 \cdot Pb(OH)_2$ (*Ceruse*).

Ley of (Ox-) Blood
: The lixiviate from the residue produced by igniting blood with potashes.

Ley of Soapboilers

Potassium Hydroxide (KOH)

Libavius, Fuming Liquor of (Spiritus Fumans Libavii)

Tin Tetrachloride, $SnCl_4$, which fumes because it is hydrolyzed by moisture in the air to Stannic Oxide. First prepared at the beginning of the 17th. century by the German chemist Andreas Libavius. When mixed with one-third of its weight of water, it forms a hydrate formerly called Butter of Tin.[J. Davy].

Libra (Pound) Troy

See Apothecary Measures.

Light Carburetted Hydrogen

Marsh gas or methane (CH_4)

Light Inflammable Air

Hydrogen (H_2)

Ligne

Unit of length in late 18th. century France; see Pied. [Lavoisier].

Lignum Nephriticum

Two distinct woods were known as lignium nephriticum: (1) the small Mexican tree or shrub *Eysenhardtia polystacha* and the large Philippine tree *Pterocarpus indica*. In the 16th., 17th., and early 18th. centuries, cups, powders, and dried extracts of this wood were thought to have a great medicinal powers. The infusion was flourescent.

Lignum Vitae

"Tree of Life" The wood , and sometimes the resin, of several semitropical trees, but most often referring to Guaiacum.

Limation

Filing on a metal piece to reduce it to filings. Sometimes used for simply polishing an object.

Lime

Calcium Oxide (CaO). (*Burnt Lime*, Calcareous Earth, *Quicklime*) [Dalton, Lavoisier, Priestley, Ramsay, *et al.*]

Lime, Carbonate of

Calcium Carbonate ($CaCO_3$) (Mild Calcareous Earth, Chalk).

Lime, Chlorinated

See Bleaching Powder.

Lime, Milk of

A suspension of calcium hydroxide. See Milks.

Lime, Quick

Calcium Oxide (CaO) [Bacon, Black, Lavoisier, Priestley].

Lime, Slaked

A caustic substance Calcium Hydroxide, $Ca(OH)_2$, produced by heating limestone. (*Hydrated Lime*, Caustic Calcareous Earth).

Limestone

Calcium Carbonate ($CaCO_3$)

Lime Water

A solution of Calcium Carbonate ($CaCO_3$) Also a saturated aqueous solution of Calcium hHydroxide $Ca(OH)_2$ (*Liquor Calcis*) [Black, Dalton, Lavoisier, Ramsay *et al.*]

Liquescent (Salts)

See Deliquescence.

Liquor Fumans Boyle (Spiritus Fumans Boyle)
Ammonium Polysulphide ($(NH_4)S_2$; $(NH_4)_2S_5$).

Liquor Fumans Libavh (Fuming Liquor of Libavius)
Stannic Chloride ($SnCl_4$).

Liquor of Flints
See Liquor Silicum.

Liquor Hoffman
A mixture of Ethanol and Ether.

Liquor of Liravius
See smoking spirit of Libavius.

Liquor Silicum (Liquor of Flints)
A solution of Potassium Silicate (K_2 SiO_3). Sometimes Used for other soluble Silcates.

Litharge
Yellow Lead (II) Oxide (PbO); Reddish-Yellow crystalline form of Lead Monoxide, formed by fusing and powdering massicot. [Marignac, Priestley].

Lithomarge
Soft, claylike substances, such as kaolin.

Litmus
A blue pigment, extracted from certain lichens. It is acid sensitive, turning red in the presence of an acid. The red form turns blue again when a base is added.

Liver of Antimony
Fused Antimony Sulfide (Sb_2S_3). Usually produced from the detonation of equal parts of crude Antimony and Potassium Nitrate.

Liver of Arsenic
Fused mixture of Potassium Carbonate and (white) Arsenic. May have contained some Potassium Arsenate.

Liver of Sulphur (Hepar Sulphuris)
Produced by heating Potassium Carbonate with Sulphur. Not a true compund, it is a metastable mixture of Potassium Polysulfides and Sulfate. (K_2S, K_2S_2, K_2S_3, K_2S_4, K_2S_5, K_2SO_4). Complex of Polysulphides of Potassium, made by fusing Potash and Sulphur. (melted Potassium Carbonate + Sulfur).

Livre
Unit of mass in the late 18th. century France: 1 *livre* (Paris pound) = 16 ***onces***; 1 *once* (Paris ounce) = 8 ***gros***; 1 *gros* = 72 **grains**. In modern units, the *livre* is equivalent to 489 grams or about 1.08 pounds in the "English" system still commonly used in the United States. [Proust].

Lixivial Salts
Salts prepared by lixiviations.

Lixiviate of Mars
Possibly a tincture of Iron, of which there were many different preparations. Typically, these were solutions of salts of Iron to which rectified spirit of wine (Ethanol, (CH_3CH_2OH) was added .

Lixiviation
Separation of soluble from unsoluble solid substances by soaking the mixture of solids and removing the resulting solution which contained the soluble material.

Lixivium

A solution produced by lixiviation. Sometimes used as a general synonym for "Solution"

Lixivium of Tartar

A solution of Potassium Carbonate (K_2CO_3)

Load

Any ore.

Logwood

The American tree *Haematoxylon campechionum*, used in dying. It produces dark shades: blacks, blues, and dark grays.

Lucillite

A variety of limestones.

Lunar Cornea

Fused Silver Chloride (AgCl). The soft colourless tough mass of Silver Chloride, made by heating Horn Silver until it forms a dark yellow liquid and then cooling. Described by Oswald Croll in 1608.

Lunar Caustic

Fused Silver Nitrate ($AgNO_3$). See Moon.

Lunar Crystals

Finely divided parts of Silver Nitrate ($AgNO_3$). In preparing these crystals great care was taken to use only the purest Silver and Nitric Acid possible.

Lunar Nitre

Silver Nitrate ($AgNO_3$).

Lye

Potassium Hydroxide solution, KOH.

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Mageration

The softening and weakening of a solid sample, even to the point of partial decomposition, by soaking it in a liquid.

Magisterium Tartari Vitriolati

Probably Potassium Sulfate (K_2SO_4).

Magistery of (any substance)

A precipitate of any substance, i.e., a pure form of the substance which has been separated by precipitation.

Magistery of Bismuth

Basic Bismuth Nitrate ($BiNO_3 \cdot H_2O$); sometimes the Oxide (BiO) or even the Oxychloride (BiOCl).

Magistery of Coral

Calcium Carbonate ($CaCO_3$).

Magistery of Sulfur

Precipitated milk of Sulphur (S).

Magistry

Any substance prepared from the basic elements of the substance without impurities. A magistry was supposed to be closer to the ideal for a substance than was usual for real chemical preparations.

Magnesia
: Magnesium Carbonate ($MgCO_3$). [Modern Magnesia = Magnesium Oxide (MgO)]. Some chemists called Magnesium (Mg) by the name Magnesia.

Magnesia Aerata
: Magnesium Carbonate ($MgCO_3$).

Magnesia Alba
: Magnesium Carbonate ($MgCO_3$). Literally "white magnesia" was a hydrated Magnesium Carbonate, also known as mild Magnesian Earth. [Black, Scheele] $4MgCO_3 \cdot Mg(OH)_2 \cdot 5H_2O$ was Magnesia Alba Levis, and $MgCO_3 \cdot Mg(OH)_2 \cdot 4H_2O$ was Magnesia Alba Ponderosa.

Magnesia Nigra
: Natural Manganese Dioxide (MnO_2). Literally "Black Magnesia" was the mineral pyrolusite, sometimes also called simply Magnesia or Manganese. [Scheele] Eventually Manganese became the name of the metal present in the mineral.

Magnesia Salita
: Magnesium Chloride ($MgCl_2$).

Magnium
: Sir Humphry Davy's name for Magnesium (Mg), the metal obtained from Magnesia Alba, proposed to avoid confusion with the metal found in Magnesia Nigra.

Magnus Salt
: Tetrammineplatinum Tetrachloroplatinate, $Pt(NH_3)_4PtCl_4$, named after Heinrich Gustav Magnus.

Malachite, Green
: Pulverized Malachite, a basic Copper Carbonate mineral, ($CuCO_3 \cdot Cu(OH)_2$), used as a pigment; or a green Triphenylmethane dye, $C_{23}H_{25}N_2Cl$, also known as Victoria Green or Benzal Green, an acid-base indicator that changes from yellow to blue-green as the pH is raised through 1

Malic Acid
: An acid extracted from apples and various other fruits. Pure Malic Acid is $C_4H_6O_5$.

Malt
: Barley or other suitable grains after a preparation for brewing or distilling that usually included soaking, germination, and drying.

Manganese
: Manganese Dioxide (MnO_2). Manganese as we know it was called Reglus of Manganese.

Manganese, Black
: See Magnesia Nigra.

Manganese, Green
: Barium Manganate, $BaMnO_4$.

Manganese, Red
: Rhodonite, $MnSiO_3$, a Manganese Silicate mineral, or Rhodochrosite, a Manganese Carbonate mineral, $MnCO_3$.

Manna Mercurii
: Mercurous Chloride (Hg_2Cl_2).

Marble
: A hard, crystalline, mineral form of Calcium Carbonate ($CaCO_3$).

Marcasita Plumbea

Antimony (Sb).

Marcasites
Minerals similar in appearance or properties to Iron Pyrites (FeS_2). Later, a general term for Pyrites. Sometimes the term was used for Sulfides of Arsenic (As_2S_2, As_2S_3, As_2S_5). Mineral form of Iron Disulphide. Oxidises in moist air to Green Vitriol.

Marchpane
See Marzipan.

Marignac Salt
Potassium Tin (II) Sulfate, $K_2Sn(SO_4)_2$, named for Jean de Marignac, who is best known for atomic weight measurements.

Marine Acid
Hydrochloric Acid solution (HCl). (Muriatic Acid, Spirit of Salt).

Marine Acid Air
Gaseous Hydrogen Chloride (HCl). [Cavendish, Lavoisier, Priestley, Scheele, *et al*.].

Marine Alkali
Sodium Carbonate (Na_2CO_3). (Common Mineral Alkali, Fossil Alkali, Soda).

Mariott's Law
Better known today as Boyle's Law, that the product of pressure and volume of a gas is constant; named for Edme Mariotte, who discovered it independently some time after Boyle. ($P_1V_1 = P_2V_2$)

Marl (Marle)
A loose soil of clays and Calcium Carbonate ($CuCO_3$).

Mars (of Mars)
In astrological and alchemical thought, the seven heavenly bodies known to the ancients were associated with Seven Metals also known in antiquity. Mars was associated with Iron.

Marsh Gas
Methane (CH_4).

Martial Balls
A mixture of Iron fillings (Fe) and Cream of Tartar ($KHC_4H_4O_6$).

Martial Ethiops
Hydrated Ferrosoferric Oxide ($Fe_3O_4 \cdot xH_2O$).

Martial Extract
Concentrated tincture of mars. A concentrated solution, the chief component of which may have been Ferrous Hydroxide ($Fe(OH)_2$).

Martius Yellow
Yhe Calcium Salt of Naphthalene Yellow.

Marzipan
A confection of pounded almonds, sugar, and other ingredients.

Massicot
Yellow powder form of Lead Monoxide. PbO. Lead (II) Oxide, PbO.

Masurium, (Ma)
Another name proposed for technetium, element 43.

Matrass
A vessel with a round bottom and long, slender neck. Used as part of several common types of distillation apparatus.

Menstruum
: A solvent.

Mephitic (as adjective)
: Noxious; poisonous or pestilential.

Mephitic Acid
: Carbonic Acid (H_2CO_3).

Mephitic Air
: Carbonic Acid (CO_2).

Mercurius Calcinatus Per Se
: Mercuric Oxide (HgO), prepared by the Calcination of Mercury [Priestley, Watt]. The substance known as Precipitated Mercury Per Se [Lavoisier, Priestley] or Red Precipitate [Priestley, Scheele] is the same substance; however, because of its different preparation (by mixing Mercury with Nitric Acid, evaporating, and heating the residual Mercuric Nitrate), the identity was not at first realized.

Merc. Calcin. Nitrat
: Mercuric Nitrate ($Hg(NO_3)_2$).

Mercurius Corrosivus
: Mercuric Chloride $HgCl_2$.

Mercuric Corrosivus Ruber
: Mercuric Oxide (HgO).

Mercurius Dulcis (Calomel, Mercurious Sublimatus Dulcus, Mild Mercury)
: Mercurous Chloride (Hg_2Cl_2).

Mercurius Praecipitatus Per Se
: Red Mercuric Oxide (HgO). Described by Geber.

Mercurius Praecipitatus Ruber
: Mercuric Oxide (HgO).

Mercurius Solubilis Hahnemanni
: Mercuric Oxide (Hg_2O).

Mercurius Sublimatus Dulcis (Calomel, Mercurius Dulcis, Mild Mercury)
: Mercurous Chloride (Hg_2Cl_2).

Mercurius Sublimatus Rubeus non Corrosivas
: Mercuric Oxide (HgO).

Mercurius Vitae
: Mixture of Antimony Oxychloride and Antimony Oxides (Sb_2O_3; Sb_2O_4, Sb_2O_5, SbOCl). In some contexts the term may mean just Antimony Oxychloride (SbOCl).

Mercurius Vitae Antimonii
: Mixture of Antimony Oxychloride and Antimony Oxide (Sb_2O_3; Sb_2O_5, SbOCl).

Mercury
: In astrological and alchemical thought, the seven heavenly bodies known to the ancients were associated with Seven Metals also known in antiquity. Mercury was associated with Mercury (Quicksilver, *hydrargyrum*).

Mercury of Life
: See Mercurius Vitae.

Mesothorium

There were two Mesothoriums produced in Thorium decay. Mesothorium I is an isotope of Radium, namely ^{228}Ra (half-life = 5.8 y); Mesothorium II is an isotope of Actinium, namely ^{228}Ac (half-life = 6 hr). See Table of Isotopes.

Metallic Salt

Compound of a metal and an acid.

Metanil Yellow

The Sodium salt of 4'-Analine Azobenzenesulfonic Acid, $C_{12}H_{10}N_3O_3SNa$, an acid-base indicator that changes from red to yellow as the pH is raised through 1.8.

Methyl, Green

$C_{25}H_{30}N_3Cl$, a Triphyenylmethane dye and acid-base indicator that changes from yellow through blue-green to colorless as the pH is raised.

Methyl, Orange

Sodium *p*-Dimethylaminobenzenesulfonate, $C_{14}H_{14}O_3N_3SNa$, an acid-base indicator that changes from red to yellow as the pH is raised through 3.8.

Methyl, Red

o-Dimethylaminoazobenzenecarboxylic Acid, $C_{15}H_{15}O_2N_3$, an acid-base indicator that changes from yellow to reddish purple as the pH is raised through 4.5.

Methylene Blue

3,9-Bisdimethylaminophenazothionium Chloride Trihydrate, $C_{16}H_{18}N_3SCl \cdot 3H_2O$, a thiazine dye and redox indicator.

Miasma (Miasmata)

A noxious or infectious subtle material (e.g., a vapor or exhalation) thought to be from decaying organic matter. Sometimes used for any unseen poisonous or infectious substance.

Mica

A mixed mineral form composed mostly of Aluminum Silicate but with silicates of other metals. Several complicated minerals are variously, and in combination, referred to as mica; e.g., biotite $K(Mg, Fe)_3AlFeSi_3O_{10}(OH, F)_2$.

Microcosmic Salt

An acid Sodium Ammonium Phosphate ($NaNH_4HPO_4 \cdot 4H_2O$), found in blood and natural waters.

Mild Alkali

Alkalies which produce effervescence with acids; i.e., Carbonates ($-CO_3^{2-}$)

Mild Calcareous Earth

Calcium Carbonate ($CaCO_3$).

Mild Magnesian Earth

Magnesium Carbonate ($MgCO_3$).

Mild Mercury

Mercurous Chloride (Hg_2Cl_2).

Mild Vegetable Alkali

Potassium Carbonate (K_2CO_3).

Milk

Mineral "milks" or magmas are aqueous suspensions.

Milk of Barium

An aqueous suspension of Barium Hydroxide, $Ba(OH)_2$.

Milk of Bismuth

An aqueous suspension of basic Bismuth Nitrates, $Bi(OH)_2NO_3$ and/or $BiOH(NO_3)_2$.

Milk of Lime

An aqueous suspension of Calcium Hydroxide (suspension) ($Ca(OH)_2$). [Scheele] See Lime.

Milk of Magnesia

An aqueous suspension of Magnesium Hydroxide, $Mg(OH)_2$, especially a 7% suspension used as an antacid. See Magnesia.

Milk of Sulphur (lac sulphuris)

Finely divided white colloidal Sulfur (S) in solution. Usually the product of the reaction between a soluble sulfide and an oxidizing acid. Geber made this by adding an acid to thion hudor.

Millon's Base

$(HOHg)_2NH_2OH$, formed from a solution of Mercuric Oxide in Ammonium Chloride; named for A. N. E. Millon.

Minderer's Spirit

A solution of Ammonium Acetate ($NH_4C_2H_3O_2$).

Mineral Alkali

Hydrated Sodium Carbonate (Na_2CO_3). (Fossil Alkali, Marine Alkali, Soda)

Mineral Anodyne of Hoffman (Liquor of Hoffman)

A mixture of Ethanol and Ether (C_2H_5OH), ($CH_3CH_2OCH_2CH_3$).

Mineral Crystal (Sal Prunella)

Potassium Nitrate with a small admixture of Potassium Sulfate (HNO_3; K_2SO_4).

Mineral, Dye

An inorganic pigment.

Mineral Blue

A blue Copper or Tungsten ore, or a mixture of Ferriferrocyanide, $Fe_4[Fe(CN)_6]_3$, with Calcium or Barium Sulfate, $BaSO_4$.

Mineral Green

Copper (II) Carbonate, $CuCO_3$.

Mineral Purple

A reddish Iron Oxide pigment

Mineral White

A natural hydrated Calcium Sulfate

Mineral Yellow, Cassel Yellow

Lead Oxychloride, $PbCl_2 \cdot 2PbO$.

Minim

See Apothecary Measures.

Minium (Red Lead, Paris Red)

Scarlet crystalline powder Lead Tetroxide (Pb_3O_4). Triplumbic Tetroxide. Formed by roasting litharge in air. [Lavoisier, Priestley]. Minium once referred to Cinnabar (Mercuric Sulfide, HgS) as well, but now is used only for its cheif adulterant, red Lead Oxide.

Mixt

A chemical union of two or more true "elements" or "principles." Later, any substance which could be resolved into constituent parts only by chemical means. Although the

term has greater philosophical complexities, it was roughly equivalent to our term "compound," but the latter is not to be considered a synonym.

Mixtura Salina
Saline mixture prepared by saturating Potassium Carbonate with lemon juice and adding syrup of black currants, julep.

Mofette
An exhalation or vapor of a mephitic (noxious or poisonous) gas.

Mohr's Salt
Ferrous Ammonium Sulfate ($FeSO_4((NH_4)_2SO_4 \cdot 6H_2O$), named for Karl Friedrich Mohr.

Molecule
Does not necessarily correspond to the modern conception of two or more atoms chemically bound together. Avogadro, for example, meant something like "ultimate particle of a substance"; his elementary molecule corresponds to a modern atom and his composite molecule to a modern molecule. (See Atom.).

Molybdaena
Native Molybdenum Sulfide (MoS_2).

Monsel Salt
An Iron Sub-Sulfate, $Fe_4(SO_4)_5O$.

Monthier Blue
A blue pigment, $FeNH_4[Fe(CN)_6]$.

Moon (Luna)
In astrological and alchemical thought, the seven heavenly bodies known to the ancients were associated with Seven Metals also known in antiquity. The moon was associated with Silver (*argentum*). See Lapis Lunaris, Lunar Caustic.

Mordant
Any substance which fixes or holds a colorant in the material to be dyed.

Mortify
To change or destroy the normal, external form or appearance of a substance.

Mosaic Gold
Golden-yellow glistening scales of crystalline Stannic Sulfide (SnS_2), made by heating a mixture of Tin filings, Sulphur and Sal Ammoniac. Tin (IV) Sulfide, SnS_2, a pigment.

Mucilagenous Matter
Any semisolid material that was soft, moist, and viscous.

Mundic (Mundick)
Iron Pyrites (FeS_2). Sometimes used for other pyrites or as a general term for pyrites.

Muriates
Chlorides ($-Cl^-$); see Muriatic Acid. [Avogadro, Gay-Lussac, Thenard, T. Thomson]

Muriate of Mercury
Mercuric Chloride.

Muriatic Acid (Acidum Salis)
Hydrochloric Acid (HCl) (Marine Acid, Spirit of Salt); Muriatic Gas is gaseous HCl. [Black, Gay-Lussac, Prout, Scheele, Thenard, *et al.*]

Muriatic Ether
Probably impure Ethyl Chloride (CH_3CH_2Cl).

Mustard Gas
Di(chloroethyl)sulfide, $(ClCH_2CH_2)_2S$, used as a chemical weapon in World War I.

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Naples Yellow or Cassel Yellow
: Lead Antimoniate ($Pb_3(SbO_4)_2$). Also: An Oxychloride of Lead, made by heating litharge with Sal Ammoniac.

Naptha
: Any highly inflammable, volatile, naturally occurring mixture of hydrocarbons. Also could be obtained as the "lightest" fraction in the distillation of asphalts, bitumens, and petroleum.

Napthalene Yellow
: Dinitro-1-naphthol, $C_{10}H_5(NO_2)_2OH$.

Naples Yellow
: Lead Antimoniate, $Pb_3(SbO_4)_2$, used as a yellow pigment.

Natrium
: Latin for Sodium, hence the symbol Na.

Natron (Natrum)
: Sodium Sesquicarbonate, a naturally occurring combination of Sodium Carbonate (Na_2CO_3) and Sodium Bicarbonate ($NaHCO_3$) in the ratio 1:1 ($Na_2CO_3 \cdot NaHCO_3 \cdot 2H_2O$).

Neutral Arsenical Salt of Macquer
: Potassium Dihydrogen Arsenate (KH_2AsO_4).

Neutral Red
: Dimethyldiaminotoluphenazine Hydrochloride, also known as Toluylene Red; an acid-base indicator that changes from blue to magenta as the pH is raised through 7.5 and then to orange-yellow as pH is raised through 8.

Neutral Salts
: Salts resulting from the reaction of an acid and a base (hydroxide) but having no characteristics of either acid or base.

Nickel
: Named by the copper miners of Westphalia the 'kupfer-nickel' or false copper.

Nihil Album (sometimes just Nihil)
: Flowers of Zinc, Zinc Oxide (ZnO).

Nile Blue
: $C_{20}H_{19}ON_3$, an analine dye and acid-base indicator that changes from yellow through blue to magenta as the pH is raised.

Niton
: The element Radon, Rn, or one of its isotopes, ^{222}Rn (half life = 3.8 d). See Emanation and Table of Isotopes.

Nitrated Earths, Metals, etc.
: Nitrates ($-NO_3$).

Nitre (Common Nitre or Niter)
: Potassium Nitrate (KNO_3). (Saltpeter). Black gunpowder was made from Nitre, Charcoal, and Sulfur. [Cavendish, Mayow, Priestley, Rayleigh, Watt, *et al.*].

Nitre, Chile
: Sodium Nitrate, $NaNO_3$.

Nitre, Mercurial
: Mercuric Nitrate, $Hg(NO_3)_2$ [Scheele].

Nitre, Norwegian
: Calcium Nitrate, $Ca(NO_3)_2$.

Nitre, Rough
: Magnesium Chloride, $MgCl_2$.

Nitre, Spirt of
: See Spirit.

Nitre Fixed by Tartar
: A mixture of nitre and tartar left after reaction between the two.

Nitre with an earthy base
: Usually Calcium Nitrate ($Ca(NO_3)_2$).

Nitreum (Bergman)
: Nitrous Acid (HNO_2).

Nitric Acid
: Nitric Acid HNO_3, formerly referred to Nitrogen Dioxide, NO_2 [Avogadro, Dalton, Gay-Lussac, Lavoisier *et al*.] or Nitrogen Pentoxide, N_2O_5 [Prout].

Nitro-Aerial Spirit
: The hypothetical subtle substance which was though by some to be responsible for the ability to nitre to support combustion and to be a key component of detonations

Nitrous Acid
: Nitrous Acid (HNO_2), formerly referred to Nitric Acid, HNO_3 (Aqua Fortis, Spirit of Nitre) [Lavoisier], or Nitrous Acid, HNO_2, or a mixture of these acids; or one or more of the Nitrogen Oxides N_2O_3, NO_2, N_2O_4, N_2O_5 [Avogadro, Dalton].

Nitrous Acid Vapor (Priestly)
: Nitrogen Dioxide (NO_2).

Nitrous Air (Priestly)
: Nitric Oxide (NO)

Nitrous Ether
: Ethyl Nitrite ($CH_3CH_2NO_2$).

Nitrous Gas (Lavoisier)
: Specifically Nitric Oxide (NO) (Nitrous Air) [Avogadro, Dalton, Gay-Lussac, T. Thomson, *et al*.]; or a mixture of Nitrogen Oxides such as that produced by the action of Nitric Acid on a metal in the presence of air

Nitrum Aegypticum
: Sodium Carbonate (Na_2CO_3).

Nitrum Antimoniatum
: Product containg Potassium Nitrate, Nitrite, and Antimonate.

Nitrum Commun
: See commom Nitre

Nitrum Cubic
: See Cubic Nitre

Nitrum Fixatum (Nitrum Fixum, Fixed Nitre)
: An ofter impure preparation of Potassium Carbonate (K_2CO_3).

Nitrum Flammans
: Ammonium Nitrate (NH_4NO_3). Made by Glauber.

Nitrum Regeneratum
Potassium Nitrate (KNO_3).

Nitrum Saturni
Lead Nitrate ($Pb(NO_3)_2$).

Nitrum Stibnatum
Probably Anitmony Nitrate ($2Sb_2O_3{\cdot}N_20_5$).

Nitrum Sulphure Purgatum
Mixture of Potassium Nitrate (KNO_3) and Potassium Sulfate (K_2SO_4).

Nitrum Vitriolatum
Mixture of Potassium Nitrate (KNO_3) and Potassium Bisulfate ($KHSO_4$).

Non Metals
A term used by William Cullen and his students for the following group of substances; Zinc (Zn), Anitmony (Sb), Bismuth (Bi). Arsenic (As), Platinum (Pt), Cobalt (Co), Nickel (Ni).

Nordhausen Acid (Oleum)
Fuming Sulfuric Acid. (H_2SO_4), *i.e.* a solution of Sulfur Trioxide, SO_3, in concentrated (about 98%) Sulfuric Acid.

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Ochre (Ocher)
A class of mineral solids which, in powdered form, were commonly used as pigments. Their colors varied from yellow to brown, including reddish hues. Chemically, the ocheres are Iron Oxides, or mixtures of Iron Oxides, in varying states of hydration. For example red ochre is primarily Fe_2O_3. Silicates, Carbonates, Sulfates, etc. also were commonly present with these Oxides.

Ochre, Antimony
Stibiconite, an Antimony mineral, $Sb_2O_3(OH)_2$.

Ochre, Bismuth
Bismite, $Bi_2O_3{\cdot}3H_2O$.

Ochre, Brown
Bogore or Bog Iron Ore, $2Fe_2O_3{\cdot}3H_2O$.

Ochre, Molybdic
Molybdite, yellow Molybdenum (VI) Oxide, MoO_3.

Ochre, Nickel (Nickel Bloom)
Annabergite, $Ni_3As_2O_2{\cdot}8H_2O$, a green mineral.

Ochre, Plumbic
Brown Lead (IV) Oxide, PbO_2.

Ochre, Red
Hematite, Fe_2O_3.

Ochre, Telluric
Yellow Tellurium (IV) Oxide, TeO_2.

Ochre, Tungstic
Yellow Tungsten (VI) Oxide, WO_3.

Ochre, Yellow

A mixture of powdered Iron Oxide and clay.

Ochroite

Cerium Oxide (CeO_2).

Offa Helmonth

Potassium Carbonate (K_2CO_3).

Oil

Any relatively insoluble, inflammable, somewhat viscous liquid.

Oil Gas

Mixture of Methane, Carbon Monoxide, and Butlylene (CH_4, CO, C_4H_8).

Oil of Ants

Furfural, $C_5H_4O_2$.

Oil of Apples

n-Pentyl Pentanoate, $C_5H_9CO2C_5H_{11}$ (amyl valerate). Today it belongs to a group known as Esters.

Oil of Arsenic

Arsenic Trichloride ($AsCl_3$)

Oil of Banana (Oil of Pear)

n-Pentyl Acetate, $CH_3CO_2C_5H_{11}$.

Oil of Chalk

Calcium Chloride solution ($CaCl_2$).

Oil of Cloves

An oily substance extracted from the buds and flower stalks of the clove tree *Caryophyllus aromaticus*. Used as medicinal.

Oil of Cognac (Enanthic Ether)

Ethyl Hexyl Ether, $C_6H_{13}OC_2H_5$.

Oil of Dippel

The insoluble, viscous fraction from decomposed animal matter that has gone through repeated distillations.

Oil of Garlic

Allyl Sulfide, $(C_3H_5)_2S$

Oil of Glonoin

Nitrogylcerin, $C_3H_5N_3O_9$.

Oil of Hartshorn

A crude animal oil obtained from the destructive distillation of bones

Oil of Lime

A solution of Calcium Chloride ($CaCl_2$).

Oil of Mars

Deliquescent Anydrous Ferric Chloride.

Oil of Mirbane

Nitrobenzene, $C_6H_5NO_2$.

Oil of Mustard

Allyl Isothiocyanate, C_3H_5NCS.

Oil of Pear (Oil of Banana)

n-Pentyl Acetate, $CH_3CO_2C_5H_{11}$.

Oil of Pineapple

Ethyl Butyrate, $C_3H_7COOC_2H_5$.

Oil of Rue
: The oil extracted from evergreens of the genus *Ruta*. Used as Medicinal

Oil Sulphur
: Concentrated sulfuric acid. Sometimes the term was used for Alkaline Sulphide of Ammonia $(NH_4)_2S$).

Oil of Tartar
: Concentrated Potassium Carbonate solution (K_2CO_3).

Oil of Tartar per Deliquium
: Potassuim Carbonate, which is hydroscopic, dissolved in the water which its extracts from the air.

Oil of Venus
: Concentrated solution of Copper Nitrate ($Cu(NO_3)_2$.

Oil of Vitriol (Oil of Sulfur, Per Campanum)
: Sulfuric Acid (H_2SO_4). Made by distilling Green Vitriol. Vitriolic Acid

Oil of Wine
: A hypothetical component of Alcohol thought to give it its odor and inflammability

Olea Terebinthine
: Terpentine

Olefiant Gas
: Ethylene (C_2H_2). Also referenced as Ethene, C_2H_4 [Dalton, Prout, Thenard, T. Thomson, *et al*.]. See Dutch Oil.

Oleum
: Latin for oil. Also, fuming Sulfuric Acid (Nordhausen Acid).

Oleum Dulce
: See Oil of Wine

Oleum Suphuris per Campanum
: Sufuric Acid (H_2SO_4) prepared by burning Sulfur under a bell jar and later concentrating and purifying the product by heating to drive off water and sulfur dioxide.

Oleum Succini
: Concentrated Succinic Acid($HOOCCH_2CH_2COOH$).

Oleum Tartar per Demiquium
: See Oil of Tartar per Deliquium

Oleum Vitriol
: Oil of Vitriol

Orpiment, Red (Realgar, Red Arsenic)
: Arsenic (II) Sulfide, As_2S_2.

Orpiment, Yellow (Auri-Pigmentum, Yellow Arsenic, King's Yellow)
: Yellow ore of Arsenic. Arsenic Trisulfide (As_2S_3), Arsenic (III) Sulfide, As_2S_3.

Ounce
: Unit of mass in late 18th. century France; see Livre. [Lavoisier].

Oxycarburetted Hydrogen
: Water gas mixture or Hydrogen (H_2), Carbon Monoxide, (CO), and Carbon Dioxide (CO_2).

Oxymuriatic Acid (Oxygenated Muriatic Acid)
: Chlorine (Cl_2). (Dephlogisticated Marine Acid); named on the belief that it was a compound of Oxygen and HCl (Muriatic Acid). [Avogadro, Berzelius, Davy, Thenard]

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Panacea
Potassium Sulfate (K_2SO_4).

Pan-Stone
Calcium Sulfate ($CuSO_4$).

Paris Blue
Ferric Ferrocyanide, $Fe_4[Fe(CN)_6]_3$.

Paris Green
Copper (II) Acetoarsenite, $Cu(C_2H_3O_2)_2 \cdot 3Cu(AsO_2)_2$.

Paris, Plaster of
Hemihydrated Calcium Sulfate, $2CaSO_4 \cdot H_2O$.

Paris Red
Colcothar or Minium

Paris Yellow (Leipzig Yellow)
Chrome Yellow.

Parting
The operation by which Gold and Silver are separated from each other.

Patent Yellow
Lead Oxychloride, $PbO \cdot PbCl_2$.

Pearl Ash
The whitest impure calcined Potassium Carbonate (K_2CO_3) extracted from calcined plants. In a sense pearl ash is purified potash.

Pearl White
Basic Nitrate of Bismuth, Bismuth Oxychloride [BiOCl], used by Lemery as a cosmetic.

Pelican
A special distillation apparatus. The condensing head had two curved tubes emerging on opposite sides. These tubes led down and entered the lower section or body of the vessel; thus, the condensed liquid ran back to the heated section where it was revaporized, giving a cyclic action. The pelican was especially effective for reactions that took place in the vapor phase.

Péligot's Salt
Potassium Chlorochromate, $KCrO_3Cl$, named for Eugène Péligot.

Pellicle
Any thin saline crust that forms on a solution.

Per Campanum
Any process carried out under a solution.

Per Deliquium
A hygroscopic salt was said to "run per deliquium" when it changed from solid to liquid by extracting water from the air.

Perkin's Mauve (Violet)
See Aniline Purple.

Perlate Salt
Sodim Phosphate (Na_3PO_4).

Perspiration

Spontaneous evaporation or (less often) vaporization through heating. Also used to indicate condensation of moisture on a relatively cool body.

Perspirative

A medcinal which promoted perspiration.

Petrolia

Liquid bitumens.

Petunise

A white mineral solid used in the manufacture of porcelain.

Pewter

An alloy of Tin. Originally with up to one-fifth Lead, but later Bismuth and Copper were substituted for lead.

Phenol Red

Phenolsulfonphthalein, $C_{19}H_{14}O_5S$, an acid-base indicator that changes from yellow to red as the pH passes through 8.

Philosopher's Wool or nix alba (white snow)

Zinc Oxide (ZnO). Made by burning Zinc in air. Called Zinc White and used as a pigment.

Philosophical Flowers of Vitriol

Boric Acid (H_3BO_3).

Philosophical Foliated Earth

Potassium Acetate ($KC_2H_3O_2$).

Philosophical Mercury

An alchemical term signifying the property-bearing principle of chemical activity.

Philosophical Sal Ammoniac

Ammonium Sulfate ($(NH_4)_2SO_4$).

Philosphical Spirit of Nitre

Nitric Acid prepared by distilling saltpeter with Oil of Vitriol (HNO_3).

Philosophical Spirit of Tartar

Potassium Hydrogen Tartrate ($KHC_4H_4O_6$) distilled with wine.

Philosophical Spirit of Vitriol

Hydrochloric Acid (HCl).

Philosophical Spirit of Wine.

Spirit of wine (Alcohol) concentrated by freezing (CH_2CH_3OH).

Philosophical Water (Aqua Regia)

A solution of Hydrochloric and Nitric Acids, usually in ratios from 2:1 to 4:1 (HCl to HNO_3).

Phlegm

A general term for any aqueous fraction of a distillation.

Phlogisticated Acid of Nitre

Nitrous Acid (HNO_2).

Phlogisticated Acid of Vitriol

Sulphurous Acid (H_2SO_3).

Phlogisticated Air

Nitrogen (N_2).

Phlogisticated Alkali

Potassium Ferrocyanide ($K_4Fe(CN)_6 \cdot 3H_2O$).

Phlogisticated Calx of Iron
Ferrous Oxide (FeO).
Phlogisticated Earth of Molybdaena
The solid reduction of Molybdic Acid.
Phlogisticated Manganese
Manganous Carbonate ($MnCO_3$).
Phlogisticated Nitre
Impure Potassium Nitrite (KNO_2).
Phlogisticated Nitrous Acid
Nitrous Acid (HNO_2).
Phlogisticated Vitriolic Acid
Sulfurous Acid (H_2SO_3).
Phlogiston
A hypothetical substance originally used to account for the property of inflammability. It later was made to carry many more properties and formed a central point for the theoretical beliefs of a central point for the theoretical beliefs of a number of 18th. century chemists. Also referenced as a hypothetical Elastic Fluid which was seen as a metalizing and combustible principle. Metals were seen as the result of combining calces with phlogiston; smelting expelled the phlogiston. In combustion, phlogiston leaves the combustible body to combine with air or saturate air. The theory of phlogiston is associated with Stahl. [Cavendish, Priestley, Scheele, Watt *et al*.]
Phlogiston Elasticum
Hydrogen (H_2).
Phosphorated Iron
Ferric Phosphate ($FePO_4$).
Phosphorated Mercury
Mercuric Phosphate ($Hg_3(PO_4)_2$).
Phosphorated Vegetable Alkali
Potassium Phosphate (K_3PO_4).
Phosphorous
Sometimes used for any phosphorescent substance.
Phosphorous of Baldwin
Calcium Nitrate ($Ca(NO_3)_2$).
Phosphorous of Homberg
Calcium Chloride ($CaCl_2$).
Phosphorous of Urine
As the name implies, a form of Phosphorous (P) extracted from urine.
Phosphuretted Hydrogen
phosphine, PH_3 [Dalton].
Pied
A Unit of length in late 18th. century France: 1 *pied* (Paris foot) = 12 ***pouces***; 1 *pouce* (Paris inch) = 12 ***lignes***. In modern units, the *pied* is equivalent to 0.325 meters or about 1.07 feet in the "English" system still commonly used in the United States. [Lavoisier].
Pierre Infernale
Fused Silver Nitrate, $AgNO_3$.[Not to be confused with "Infernal Stone."]
Pinch Beck

A gold colored alloy of about five parts Cooper (Cu) to one part Zinc (Zn).

Pinguious (Pinguinous)
Fatty, oily

Pinte
A volume unit in late 18th. century France, equal to 2.01508 English pints, 58.145 cubic inches, or 0.953 liters. [Lavoisier]

Plaster
Any semisolid plastic mixture that could be applied to a a surface and then spontaneously cured or hardened. One of the oldest plasters is a mixture of Slaked Lime ($Ca(OH)_2$), sand, and hair. The term also was used to refer to impure Lead Oleate ($Pb(C_{18}H_{33}O_2)_2$).

Plaster of Paris
Calcium Sulfate Monohydrate ($(CaSO_4)_2 \cdot H_2O$).

Platina
Platinum (Pt.), or sometimes the usually impure form of Platinum found in nature that is alloyed with other exotic metals.

Plessy's Green (Arnaudon's Green)
Chromium (III) Phosphate, $CrPO_4$, a green pigment.

Plimmer's Salt
Sodium Antimony Tartrate, $Na(SbO)C_4H_4O_6$.

Plumbago
A lead ore, including Lead Oxide (Litharge) or Lead Sulfide (Galena); or Graphite an allotrope of Carbon (C) (Black Lead). [Lavoisier, Priestley, Thenard]

Plumbum
Latin for lead, hence the symbol Pb.

Plumbum Album
Basic Lead Carbonate ($2PbCO_3 \cdot Pb(OH)_2$). Sometimes the term was applied to basic Lead Acetate ($Pb(C_2H_3O_2) \cdot Pb(OH)_2 \cdot H_2O$).

Plumbum Cinereum
Bismuth (Bi).

Plumbum Corneum (Horn Lead)
Lead Chloride ($PbCl_2$).

Plumbum Stridens
Tin (Sn)

Pneumatic
Pertaining to subtle, rarified, or vaporous substances such as air. In modern terms, gaseous.

Pneumatic Trough
An apparatus developed over the 18th. century from John Mayow (1641-1679) through Stephen Hales (1677-1761) to Antoine Lavoisier (1743-1794). The trough was any large pan or vat in which inverted bottles full of water could be supported. Glass tubes conducted the gases from the vessels in which they were generated outside the trough to the inverted bottle in the trough, where the gases were trapped and held.

Point of Saturation
The instant when the exact proportions of the two "saline principles" (one from an acid, the other from a base) unite to form a perfectly neutral salt.

Pomphlix

Flowers of Zinc (ZnO).

Pompholix
Crude Zinc Oxide, ZnO (Flowers of Zinc). [Lavoisier].

Ponderous Spar
Barium Sulfate ($BaSO_4$).

Pot Ash (Potash)
Crude or purified Potassium Carbonate (K_2CO_3). (Vegetable Alkali, Pearl Ash) or crude Sodium Carbonate Na_2CO_3 leached from the ashes of plant material; or Potassium Hydroxide, KOH (Lye), or even Potassium Oxide, K_2O. [Dalton, Rayleigh, T. Thomson *et al*.]

Pouce
Unit of length in late 18th. century France; See Pied.

Powder of Algaroth
A white powder of Antimonious Oxychloride (SbOCl), made by precipitation when a solution of Butter of Antimony in spirit of salt is poured into water.

Praecipitate Per Se
Mercuric Oxide (HgO).

Praecipitatus Albus
Mercurous Chloride (Hg_2Cl_2).

Praecipitatus Vigonis
Mercuric Oxide (HgO).

Precipitant
A substance serving as intermediary to separate two other substances from each other.

Precipitate, Black
$Hg_2O{\cdot}Hg_2NH_2NO_3$, also known as Hahnemann's mercury, a black powder used as an antisyphilitic.

Precipitate, Red
See Mercurius Calcinatus Per Se.

Precipitate, White (Sal Sapientiae, Sal Alembroth
$HgNH_2Cl$; an insoluble white powder used in medicine as an antiparasitic.

Precipitate, Yellow
Yellow Mercury (II) Oxide, HgO.

Precipitate of Sulfur
Precipitated Milk of Sulfur (S).

Precipitation
The phenomenon in which a solid is formed within a solution and falls to the bottom of the vessel in which the solution was contained.

Primus Metal
See Prince Rupert's Metal

Prince Rupert's Metal (Bath Metal, Primus Metal, Princes Metal)
A Brass metal alloy in which the ratios of Copper (Cu) to Zinc (Zn) are approximately 4 to 1.

Prince's Metal
See Prince Rupert's Metal

Principle

One of the simplest forms of matter, from which other substances are formed through combinations with other principles or other combinations of principles. Although there are similarities to the modern term "element", the two are not truly synonymous.

Proximate Principles

Components obtained through the chemical analysis which themselves are compounds but presumed to be simpler than the original substance.

Prussian Blue

Ferric Ferrocyanide ($Fe_4[Fe(Cn)_6]_3$). Complex salts used in inks and dyes resulting from the oxidation of the white precipitate of a solution of Iron (II) Sulfate, $FeSO_4$, and Potassium Ferrocyanide, $K_4Fe(CN)_6$.

Prussian Acid, or Prussic Acid

Hydrocyanic Acid (HCN). [Prout].

Prussiate

A Cyanide, CN^-, Ferricyanide, $Fe(CN)_6^{3-}$, or Ferrocyanide, $Fe(CN)_6^{4-}$.

Prussiate, Red

Potassium Ferricyanide, $K_3Fe(CN)_6$.

Prussiate, Yellow

Potassium Ferrocyanide, $K_4Fe(CN)_6 \cdot 3H_2O$.

Pulvis Algarothi

Antimonious Oxychloride (SbOCl).

Pulvis Fulminans

An explosive mixture made from Potassium Nitrate, Potasium Carbonate, and sulfur.

Pumice

A light porous stone of mixed Silicates.

Pure Clay

Alumina. Aluminum Oxide (Al_2O_3).

Pure Ponderous Earth

Baryta. Barium Oxide. (BaO)

Purfication

Any process in which one substance is rendered free, or relatively free, of other substance. Common methods included distillation, crystallization, and precipitation.

Purple of Cassius

Made by Andreas Cassius in 1685 by precipitating a mixture of Gold, Stannous and Stannic Chlorides, with alkali. Used for colouring glass.

Purple Crystals

Potassium Permanganate.

Pyrites

Mineral form of Iron Disulphide. Stable in air.Originally, any mineral which could strike sparks from steel. The term was often used to reference Iron Pyrites (FeS_2). Originally any "fire-stone" from which sparks could be struck; eventually an Iron Sulfide or Iron-Copper Sulfide. [T. Thomson]

Pyroligneous Acid

Crude Acetic Acid distillate from wood ($HC_2H_3O_2$). Containing Acetic Acid (CH_3COOH), Methanol (CH_3OH), and Acetone (CH_3COCH_3).

Pyroligneous Spirit

Methyl Alcohol (CH_3OH).

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Quadrangular Nitre
Sodium Nitrate ($NaNO_3$).

Quartation
The process of combining Gold (Au) and Silver (Ag) in the ratio 1:3. When the combination is dissolved in Nitric Acid, the Silver is dissolved and the Gold is separated, free from impurities.

Quartz
A mineral whose primary component is Silicon Dioxide (SiO_2). Its color and other aspects of its appearance depended on the impurities present.

Quicklime
Calcium Oxide (CaO).

Quicksilver
Mercury (Hg). Liquid Mercury metal. [Boyle, Cavendish, Priestley, Torricelli]

Quicksilver Calcined Per Se
Mercuric Oxide (HgO).

Quintessence
A mixture of an essential oil and alcohol.

Quintessence of Lead
Acetone (CH_3COCH_3).

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Rabel's Water
The liquid obtained by macerating poppy flowers in a mixture of Sulphuric Acid and alcohol for some days and then filtering.

Racemic Acid
An optically inactive form of Tartaric Acid consisting of equal quantities of optical isomers. Racemic originally referred to the origin of the acid (grapes), but now (in chemistry) refers to an optically inactive mixture of optically active isomers. [Pasteur].

Ramous
(1) Individual (fundamental) particles of viscous or rigid bodies; (2) branching or filiment-like parts of a liquid mixture.

Rankine Scale
Absolute Temperature Scale (*i.e.*, one in which absolute zero is assigned the value zero) named after the 19th. century Scottish engineer William Rankine and denoted by °R. One Rankine degree is the same size as a Fahrenheit degree, so absolute zero (-460°F) is 0°R, the normal freezing point of water (32°F) is 492°R and the normal boiling point (212°F) is 672°R. (See Celsius Scale, Fahrenheit Scale, Kelvin Scale.).

Realgar (Red Orpiment, Red Arsenic, Ruby Arsenic, Ruby Sulfur)
Red or of Arsenic, Arsenic Disulfide (As_2S_2). A native red or orange Arsenic (II) Sulfide, As_2S_2.

Réaumur Scale

Temperature scale devised in 1731 by R. A. F. Réaumur and denoted by °R. The normal freezing point of water is 0°R and the normal boiling point of water is 80°R. (See Celsius Scale, Fahrenheit Scale, Kelvin Scale.) [Lavoisier].

Receiver

The vessel attached to the condensing part of a distillation apparatus in order to receive the condensed products from the distillation.

Recrement

Solid waste or refuse from a chemical operation, e.g., scoria.

Rectification

The purifying or refining of a substance by one or (usually) more distillations.

Red Arsenic (Realgar)

Native Arsenic Disulphide (As_2S_2).

Red Bole

A red clay that contained Silicates of Iron and Aluminum. Used as a red pigment and as a base for gilding.

Red Flowers of Antimony

Probably Antimony Sulfide (Sb_2S_5).

Red Ochre

A mineral solid approximately 95 percent red Iron Oxide (Fe_2O_3). An old and important pigment.

Red Precipitate

See Red Precipitate of Mercury.

Red Precipitate of Mercury

Impure Mercuric Oxide (HgO).

Red Prussiate of Potash

Potassium Ferricyanide.

Red Saunders (Red Sanders)

The wood from the tree *Pterocarpus santalinus*, commonly called red sandlewood. Used in dyeing.

Reduction

The returning of a substance to a previous or original condition; e.g., the restoring of a metal to the metallic state from its Oxide.

Refractory Earths

Mineral substances that do not fuse under the action of fire.

Refrigoratory

A vessel at the top or head of some stills that is surrounded by or filled with cold water to condense any vapors in tubes or vessels within it.

Regenerated Marine Salt

Potassium Chloride (KCl).

Regenerated Sea Salt

Potassium Chloride (KCl).

Regenerated Tartar

Potassium Acetate ($KC_2H_3O_2$). In this form, the compound was made from distilled vinegar and salt of tartar.

Reguline Caustic

Potassium Carbonate (K_2CO_3).

Regulus

The pure form of a metal, e.g., regulus of Antimony. A metal was formerly called the regulus of the ore from which it was reduced [Scheele]; "Regulus" (without further specification) meant Regulus of Antimony (*i.e.*, antimony in modern nomenclature). [Lavoisier]

Reinecke's Acid

Ttetrathiocyanodiammonochromic Acid, $HCr(NH_3)_2(SCN)_4$.

Reinecke's Salt

An Ammonium Salt of Reinecke's acid, $NH_4[Cr(NH_3)_2(SCN)_4]\cdot H_2O$.

Resin of Copper

Cuprous Chloride. Made by Robert Boyle in 1664 by heating Copper with corrosive sublimate.

Retort

A vessel with a long tubular neck bent down at the point where it joins the body of the vessel. Especially suited for the distillation of substances under low heat. Used by chemists and alchemists for distillation and the like. [Black, Cavendish, Lavoisier, Scheele]

Reverberatory Furnace

A furnace constructed so that a sample placed within it is heated from above as well as from the fire beneath it. For example, the furnace may have a top which reflects heat on the sample from the fire below it. [Black, Lavoisier].

Revivification

The restoration of a metal to the metallic state from one of its compounds. Similar to, but broader in scope, than "reduction."

Risigallum

See Rock Alum.

Rochelle Salt (Seignette Salt)

Potassium Sodium Tartrate ($KNaC_4H_4O_6 \cdot 4H_2O$), named for the French seaport La Rochelle, where the compound was prepared; also known as Seignette's salt, after the apothecary who first prepared it.

Rock Alum

Usually larger crystals or formations of Potassium Aluminum Sulfate ($KAl(SO_4)_2 \cdot 12H_2O$). Alum of this quality often was imported from Italy.

Rock-Crystal

Pure, colorless, transparent, crystalline quartz occurring naturally in large prismatic crystals. Silicon Dioxide (SiO_2).

Rog

Concentrated native vegetable acid. From the usual preparations, it would be primarily Citric Acid ($C_6H_8O_7$).

Roman Vitriol

Copper Sulfate ($CuSO_4$). In Britain this terms was sometimes used for Ferrous Sulfate ($FeSO_4$).

Röntgen Rays

X-rays, named after their discoverer, Wilhelm Röntgen.

Rouge, Crocus, Colcothar

Red varieties of Ferric Oxide are formed by burning Green Vitriol in air.

Ruby
: Red Corundum, Al_2O_3.

Ruby, Blend
: Red Sphalerite, Zinc Sulfide, ZnS

Ruby, Copper
: Cuprite, Copper (I) Oxide, Cu_2O.

Russian Pot Ash
: Potassium Carbonate (K_2CO_3).

Rust of Copper
: See Verdigris.

S-H

Saccharated Lime
: Calcium Oxalate (CaC_2O_4).

Saccharum Saturni
: Lead Acetate ($Pb(C_2H_3O_2)_2$). Sugar of Lead; See also Saturn.

Saffron
: A range of orange-yellow colors. The color called saffron comes from the dye of the same name, which is an extract of the plant *Crocus sativus*.

Saffron of Gold.
: See Aurum Fulminans.

Saffron of Iron.
: See Saffron of Mars.

Saffron of Mars
: Any yellowish Iron compound, e.g., hydrated Ferroso Ferric Oxide ($Fe_3O_4 \cdot xH_2O$) or Ferric Sulfide (Fe_2S_3).

Saffron of Metal
: A mixture of Antimony Sulfide (Sb_2S_3), Nitre (KNO_3), and Antimony Sulfate ($Sb_2(SO_4)_3$).

Sal Absinthi (Salt of Wormwood)
: Mostly Potassium Carbonate (K_2CO_3).

Sal Acetosella
: See Sorrel Salt.

Sal Aeratus (Saleratus)
: Literally aerated salt, Potassium Hydrogen Carbonate, $KHCO_3$.

Sal Albus
: Borax (Sodium Tetraborate) ($Na_2B_4O_7 \cdot 10H_2O$).

Sal Alembroth
: A mixture of equal parts of corrosive sublimate (Mercuric Chloride, $HgCl_2$) and Sal Ammoniac (NH_4Cl). Used as a flux for metals.

Sal Alkali Vitriolatum

Potassium Sulfate (K_2SO_4).

Sal Alkanus Vegetablis
Potassium Carbonate (K_2CO_3).

Sal Amarum
Magnesium Sulfate ($MgSO_4$).

Sal Ammoniac (Sal Armoniac, Sal Armoniack)
Ammonium Chloride (NH_4Cl). Sometimes used for other ammonium salts. Described by Geber. [Black, Fahrenheit, Scheele, Wurtz, *et al*.]; also **sal armoniack** [Helmont]

Sal Ammoniacum Fixum
Calcium Chloride ($CaCl_2$)

Sal Ammoniacum Volatilis
A term variously used for any salt solution that gave off the odor of Ammonia. When referring to solid salts the term meant Ammonium Carbonate ($(NH_4)_2CO_3$).

Sal Anglicum (Epsom Salt)
Magnesium Sulfate ($MgSO_4$).

Sal Catharticum
Magnesium Sulfate ($MgSO_4$).

Sal Catharticum Amarum
Magnesium Sulfate ($MgSO_4$).

Sal Catholicum
Potassium Sulfate (K_2SO_4).

Sal Commune (Sal Fossile, Sal Marinum
Common salt, *i.e.*, Sodium Chloride, NaCl [Scheele]

Sal de Duobus
Potassium Sulfate (K_2SO_4). (Vitriolated Tartar).

Sal de Seignette (Sal de Soinette)
See Seignetteís Salt.

Sal Digestiv
Potassium Chloride (KCl).

Sal di Modena
Magnesium Sulfate ($MgSO_4$).

Sal Diureticus
Potassium Acetate ($KC_2H_3O_2$).

Sal Duplicatum
Potassium Sulphate (K_2SO_4).

Sal Enixum
Potassium Sulfate (K_2SO_4). Also referenced as Potassium Hydrogen Sulfate ($KHSO_4$).

Sal Epsom (Epsom Salt)
Magnesium Sulfate ($MgSO_4$).

Sal Gemme (Sal Gem)
Sodium Chloride (NaCl).

Sal Gentianae
Mostly Potassium Carbonate (K_2CO_3).

Sal Glauber (Glauberís salt, Sal Mirabilis)
Sodium Sulfate (Na_2SO_4). Glauber's Salt.

Sal Guaiaci ex Ligno

Mostly Potassium Carbonate (K_2CO_3).

Saline Bodies (Cullen)
Substances which are (a) sapid, (b) miscible with water, and (c) nonflammable.

Salited Earths, Metals, etc.
Chlorides (Cl^-).

Sal Juniperi
Mostly Potassium Carbonate (K_2CO_3).

Sal Kali (Sodium Carbonate)
Soda (Na_2CO_3).

Sal Marinus
Sea Salt; mostly Sodium Chloride (NaCl).

Sal Marinus Fontan
Sodium Chloride (NaCl) as found in or near landlocked bodies of water.

Sal Marinus Regeneratus
Potassium Chloride (KCl).

Sal Martis
Ferrous Sulfate ($FeSO_4$).

Sal Medium (Sal Salsum) (Sales Medii)
Any neutral salt that would not precipitate solutions made with acid or alkaline salts and would not change the color of Syrup of Violets.

Salmiac
See Salt Ammoniac.

Sal Mirabile (Glauber's salt)
Sodium Sulphate (Na_2SO_4).

Sal Nitriforme Inflammable
Probably Ammonium Nitrate ($(NH_4)NO_3$).

Sal Nitrii (Sal Nitri, Sal Nitrum)
Potassium Nitrate (KNO_3). Nitre. [Mayow]

Sal Perlatum
Sodium Phosphate (Na_2PO_4).

Sal Polychrestrum
Potassium Sulphate (K_2SO_4).

Sal Polychrestrum Anglorum (Sal Polychrestrum Glaseri)
Potassium Sulphate (K_2SO_4).

Sal Polychrestrum de Rochelle
See Sal Polychrestrum de Seignette.

Sal Polychrestrum de Seignette
Potassium Sodium Tartrate ($NaKC_4H_4O_6$).

Sal Polychrestrum e Nitro et Sulphure
Potassium Sulfate (K_2SO_4).

Sal Polychrestrum Glaseri
Potassium Sulfate (K_2SO_4).

Sal Prunellae
A mixutre of Potassium Nitrate and Potassium Sulfate (KNO_3; K_2SO_4).

Sal Rupellensis (Rochelle Salt)
Hydrated Potassium Sodium Tartrate ($KNaC_4H_4O_6 \cdot 4H_2O$).

Sal Salsam
: Any neutral combination of anacid with alkali. (see also Neutral Salts, Sal Medium, or Salts.)

Sal Sapientiae
: Potassium Sulfate (K_2SO_4). Also referenced as Mercury (II) Ammonium Chloride, $HgNH_2Cl$; literally, "salt of the wise".

Sal Saturni
: Lead Acetate ($PbC_2H_3O_2$).

Sal Sedivatus (Sedative Salt)
: Boric acid, (H_3BO_3).

Sal Sennerti
: Potassium Acetate ($KC_2H_3O_2$).

Sal Soda (Salt Soda, Soda)
: Sodium Carbonate (Na_2CO_3).

Sal Succini (Salt of Amber)
: Succinic Acid ($HO_2CCH_2CH_2CO_2H$).

Salt
: In the 16th and 17th centuries this term denoted a group of solid soluble, nonflammable substances with characteristic tastes. In the 18th century salts gradually became to be thought of in terms of process, as, for example, the product of the reaction between acids and bases, acids and other salts, or between two salts, etc. Some chemists regarded acids and bases themselves as salts or at least some saline substances. In general, salts were increasingly recognized as the largest and most important class of substances as the eighteenth century progressed.

Sal Tartari
: Potassium Carbonate (K_2CO_3). It usually was produced by strongly heating tartar.

Salt Ash
: Magnesium Chloride ($MgCl_2$).

Salt of Amber
: Succinic Acid ($C_4H_6O_4$).

Salt of Art
: See Salt Alembroth.

Salt of Benzoin
: Benzoic Acid (C_6H_5COOH).

Salt of Centaury
: Solid residues obtained from the calcination of any of the plant species of the genus *Centaurea*.

Salt of Chalk
: Calcium Acetate ($Ca(C_2H_3O_2)_2$).

Salt of Colcothar
: Probably impure Ferric Hydroxide($Fe(OH)_3$).

Salt of Coral
: Calcium Acetate ($Ca(C_2H_3O_2)_2$).

Salt of Crab's Eye
: Calcium Acetate ($Ca(C_2H_3O_2)_2$).

Salt of England

Ammonium Carbonate ($(NH_4)_2CO_3$).

Salt of Epsom

See Epsom Salt.

Salt of Gall-Nuts

Tannic Acid ($C_{76}H_{52}O_{46}$).

Salt of Glass

A mixture of the various salts found in raw materials used in glassmaking. These included Fixed Alkali (Potassium Carbonate, K_2CO_3); Common Salt (Sodium Chloride, NaCl); Glauber's Salt (Sodium Sulfate, Na_2SO_4); Vitriolate Tartar (Potassium Sulfate, K_2SO_4); etc.

Salt of Hartshorn

Ammonium Carbonate ($(NH_4)_2CO_3$). See also Spirit of Hartshorn.

Salt of Human Blood

A mixture if ammonium salts, including Ammonium Hydroxide (NH_4OH), and various organic solids.

Salt of Lead (Sugar of Lead) (Sal Saturn)

Lead Acetate ($Pb(C_2H_3O_2)_2$).

Salt of Lemon, (Salts of Sorrel)

Potassium Acid Oxalate, 5% solution.: See Sorrel Salt.

Salt of Lime

Calcium Carbonate ($CaCO_3$) precipitated from limewater (Calcium Hydroxide solution, $Ca(OH)_2$) by a Carbonate compound.

Salt of Mars

Most often used for Ferrous Sulfate ($FeSO_4$). Occasionally used as a general term for any Iron salt and as a specific name for Ferrous Acetate ($Fe(C_2H_3O_2)_2$).

Salt of Milk

Probably Calcium Lactate ($Ca(C_3H_5O_3)_2$).

Salt of Oxbone

Impure Ammonium Salts from bone extracts of cattle (NH_4OH).

Salt of Science

See Salt Alembroth.

Salt of Sedlitz

See Sedlitz Salt. (Sometimes sedlitz salt was confused with Glauber's salt.)

Salt of Soda

See Soda.

Salt of Sorrel

Acid Potassium Oxylate (KHC_2O_4).

Salt of Steel

Loosely applied to various Iron salts. Most commonly applied to Martial Vitriol. (Ferrous Sulfate; $FeSO_4$).

Salt of Sulphur

Impure Potassium Sulfate (K_2SO_4).

Salt of Sylvius (Febrifugal Salt of Sylvius)

Potassium Chloride (KCl).

Salt of Tachenius

Impure Potassium and Sodium Carbonates (K_2CO_3, Na_2CO_3) obtained from the incomplete combustion of plant products. These salts contained organic impurities.

Salt of Tartar
Potassium Carbonate (K_2CO_3).

Salt of Tin
Tin (II) Chloride, $SnCl_2$.

Salt of Urine
Impure Ammonium Salts extracted from urine.

Salt of Vinegar
Impure Potassium Sulfate, K_2SO_4. Probably mixed with acetates and citrates.

Salt of Vitriol
Zinc Sulfate.

Salt of Wisdom
See Salt Alembroth.

Salt of Wormwood
Mostly Potassium Carbonate (K_2CO_3)

Saltpeter (Saltpetre)
Potassium Nitrate, KNO_3 (Nitre). [Bacon, Helmont, T. Thomson].

Sal Volatile, Spirt of Hartshorn
Volatile alkali. Ammonium Carbonate $(NH_4)_2CO_3$ made from distilling bones, horns, etc.

Sal Vitrioli
Ferrous Sulfate ($FeSO_4$).

Sal Volatile Fixatum
Ammonium Sulfate ($(NH_4)_2SO_4$).

Sal Volatile Oleosi
Any solid extracted from animals or vegetable matter containing Ammonium Salts, e.g., salts of hartshorn, etc.

Sandarach
(1) See Realgar; (2) a resin from the tree Callitris quadrivalvis.

Sadniver (Glass Gall)
A solution containing a mixture of salts found on the surface of glass after vitrification.

Saphire
See Sapphire.

Sapid
To have a decided, yet pleasant taste.

Saponaceous
To be soapy, slippery, sometimes foaming.

Sapphire
A clear blue gem material which is like ruby, a crystalline form of Alumina. (Al_2O_3

Sarcocolla
A gum resin imported form the Middle East.

Sarsparilla
The roots of plants of the family *Smilaceae* from which gummy and resious extracts are obtained.

Sassafras

A term applied both to the reee Sassafras officinale and to its bark when dried and prepared.

Saturation

The action by which a "perfect" union between an acid and an alkali is accomplished. Its product is a neutral salt.

Saturn (of Saturn)

Used in referring to Lead or to compounds containing Lead. In astrological and alchemical thought, the seven heavenly bodies known to the ancients were associated with Seven Metals also known in antiquity. Saturn was associated with lead (*plumbum*).

Saunders

See Red Saunders.

Scammony

A gummy, resinous juice from the root of the plant *Convolvulvus scammonia*.

Scheele's Green

Cupric Hydrogen Arsenite ($CuHAsO_3$). An Acidic Copper (II) Arsenite, $CuHAsO_3$.

Schlippe's Salt

Sodium Sulfantimonate, $Na_3SbS_4 \cdot 9H_2O$, named for Carl Friedrich von Schlippe.

Schorl

A black mineral. Now known as a variety of tourmaline.

Schšllkopf's Acid

Apparently, Schšllkopf had three. 1-Naphthol-4,8-Disulfonic acid, 1-Naphthylamine-4,8-Disulfonic Acid, and 1-Naphthylamine-8-Sulfonic acid. (See Structures.)

Schwartz Blei Weiss (Black White-Lead)

Plumago (graphite) (C_N).

Scordium

The plant *Teucrium scordium* from which gummy and resious extracts are obtained. It has an odor of garlic.

Scoria

The undesirable solid residues or slag which remain after a metal has been separated from an ore.

Scorification

Any process which produces scoria or slag. Sometimes used for processes which yield metal or semimetals. Scorifiation usually involved the addition of other substances to the ore, then heating.

Scruple

See Apothecary Measures.

Secret Fixed Sulphur of the Philosophers

Calcined residue when Sulphur is distilled with linseed oil.

Secret Sal Ammoniac (Glauber's Secret Sal Ammoniac)

Ammonium Sulfate ($(NH_4)_2SO_4$)).

Sedative Salt

Usually Boric Acid, but sometimes Sodium Tetraborate ($Na_2B_4O_7$).

Sedative Spar

Calcium Borate (CaB_4O_7).

Sedlitz Salt (Epsom Salt)

Magnesium Sulphate ($MgSO_4$).

Seignette's Salt (Rochelle Salt)

Sodium
Potassium Tartrate, ($NaKC_4H_4O_6$). See Rochelle Salt.

Selenite

The various minerals forms of Calcium Sulphate ($CaSO_4$).

Selenitic Spar

Any mineral assigned to the family of "spars" that could be calcined like gypsum ($CaSO_4 \cdot 2H_2O$).

Semi-Metals

Substances which have the properties characteristic of metals except for ductility and which sublime. Different chemists had different lists, but most included Antimony (Sb), Arsenic (As); Bismuth (Bi), Cobalt (Co), and Zinc (Zn). Some included Mercury (Hg) and, later in the century, Nickel (Ni).

Sena (Senna)

Several similar plants of the genus *Cassia* from the leaves of which gummy and resinous extracts were obtained.

Senegal

A gum extract from the root of the North American species *Polygala senega*.

Senna

See Sena.

Separating-Glass

A vessel narrow at the top, then bellying out in the center, and narrowing again to a hollow tube or stem. Shaped somewhat like the modern separatory funnel and often used for similiar purposes.

Serpentine

A steatite, usually green.

Seven Planets, Seven Metals

In astrological and alchemical thought, the seven heavenly bodies known to the ancients were associated with seven metals also known in antiquity. The associations were:

Sun (*Sol*)	Gold (*aurum*)
Mercury	Mercury (quicksilver, *hydrargyrum*)
Venus	Copper (*cuprum*)
Moon (*Luna*)	Silver (*argentum*)
Mars	Iron (*ferrum*)
Jupiter	Tin (*stannum*)
Saturn	Lead (*plumbum*)

Shoot

When crystals appeared, especially suddenly in a saturated solution, they were said to "shoot".

Siderum

Iron Phosphide (Fe_3P).

Silex

Silicon Dioxide (SiO_2).

Silicious Earth (Silcia)
Silicon Dioxide (SiO_2). [Lavoisier, Scheele].

Silver Black
Stephanite, a native Silver Antimony Sulfide, $5Ag_2S{\cdot}Sb_2S/$

Silver Fulminating
Silver Nitride, Ag_3N, an explosive solid; distinct from Silver Fulminate, $Ag_2C_2N_2O_2$, which is also explosive.

Silver Glance
Argentite, Silver Sulfide, Ag_2S. (See Glance.).

Silver, Horn (Argentum Cornu)
A native Silver Chloride, AgC.

Silver Ruby
Proustite, Ag_3AsS_3.

Similor
A Copper-Zinc alloy with a color approximating that of real Gold.

Slaked Lime
Calcium Hydroxide ($Ca(OH)_2$).

Smalt
A blue, glassy substance used as a pigment. The blue comes from Cobaltous Oxide (CuO). Smalt also contains silica (SiO_2).

Smelting
The process opf extracting a metal from its ore.

Smoking Spirit of Libavius
Primarily Stannous Chloride ($SnCl_2$) but with chlorides of mercury mixed in.

Smoking Spirit of Nitre
Concentrated Nitric Acid (HNO_3).

Snow of Antimony
See Flowers of Antimony.

Soap
In general, any chemical combination of acids, bases, or salts with oils that exhibit detergent action. Common soap was the product of sodium hydroxide with an oil or fat.

Soap of Glass
Manganese Dioxide (MnO_2) in its role of agent to remove color bodies from glass while the glass is molten.

Soap-Rock
See Steatites.

Soapstone
See Steatite

Soda (Washing Soda)
Sodium Carbonate (Na_2CO_3).

Soda Ash
Sodium Carbonate formed by burning plants growing on the sea shore.

Soda, Baking
Sodium hydrogen carbonate, $NaHCO_3$ [Dalton, Lavoisier, Prout, Rayleigh].

Soda Baryllia (Spanish)

Sodium Carbonate (Na_2CO_3)

Soda, Caustic

Sodium Hydroxide, NaOH. [Mendeleev]. See also Fossil Alkali, Marine Alkali, Common Mineral Alkali.

Soda Hispanica (Washing Soda)

Sodium Carbonate (Na_2CO_3)

Solder

Any fusible metal alloy used for joining two pieces of metal. Most types were alloys of Tin and Lead.

Soluble Tartar

Normal Potassium Tartrate. Probably ($K_2C_4H_4O_6$)

Solution

Any liquid in which one component called the "solute" is dispersed in a second component called the "solvent."

Solvend (Cullen)

Solute

Soot

Carbon and Hydrocarbon deposits from incomplete combustion of fuels.

Sorrel

Various plants of the genus Rumex from which an acid salt (Acid Potassium Acetate) was extracted.

Sorrel Salt (Sal Acetosella, Salt of Lemon)

Potassium Hydrogen Oxalate, KHC_2O_4.

Spanish Earth

Vitriols (mixture) ($CuSO_4$; $FeSO_4$).

Spanish Green

Basic Copper Carbonate ($2CuCO_3 \cdot Cu(OH)_2$).

Spanish White

Bismuth Oxychloride (BiOCl) or Bismuth Oxynitrate) ($BiONO_3$).

Spar

A class of compounds characterized by a crystalline form that features shiny reflective plate surfaces.

Spath (Spat) Stone

A naturally occurring mineral solid containing mostly Calcium Sulfate ($CaSO_4$).

Spathic Iron Ore

Ferrous Carbonate ($FeCO_3$)

Specificum Purgans Paracelsi

Potassium Sulfate (K_2SO_4)

Spencer's Acid

3g. Silver Nitrate + 3g. Nitric Acid + 3g. Mercurous Nitrate + 100cc of water.

Spermaceti

The white fatty substance obtained from the head of the sperm whale. Used in pharmaceuticals and candles.

Sphacelated

Gangerenous

Spikenard

The aromatic extract from the Indian plant *Nardostachys jalamansi*. The term was also used for the plant itself.

Spirit (Spiritus)
(1) Any liquor, essence or extract obtained from another substance by distillation; (2) later, any subtle substance dissolved in another substance. The concept gradually veered toward what we now call the gaseous state. If not specified, spirits refer to alcohol (ethanol).

Sp. Ammon. Cum Calce Viva
Ammonium Carbonate ($(NH_4)_2CO_3$).

Spirit Ammon. Sal. Vol.
Mostly Ammonium Carbonate ($(NH_4)_2CO_3$).

Spirit of Alum
Sulfuric Acid (H_2SO_4) obtained from the destructive distillation of Alum ($KAl(SO_4)_2 \cdot 12H_2O$).

Spirit of Hartshorn
Strong solution of Ammonia (Ammonium Hydroxide (NH_4OH)) produced by the distillation of Hartshorn (NH_4O_4). Also referenced as Ammonia, NH_3, or its aqueous solution (formerly prepared from animal horns or hooves); see also Salt of Hartshorn. See Alkaline Air, Volatile Alkali. [Black]

Spirit of Libavius
Stannic Cholride ($SnCl_4$).

Spirit of Mindererus
Ammonium Acetate solution ($NH_4(C_2H_3O_2)$).

Spirit of Nitre
Nitric Acid, HNO_3 (Aqua Fortis, Nitrous Acid) [Cavendish, Fahrenheit, Mayow, Priestley] or Ethyl Nitrite, $C_2H_5NO_2$, also known as the *sweet spirit of nitre* or Nitrous Ether. See Nitre.

Spirit of Salt (Spiritus Salis)
Hydrochloric Acid, HCl (Marine Acid, Muriatic Acid). [Black, Scheele].

Spirit of Vitriol (Spiritus Vitrioli)
See Vitriolic Acid.

Spirit of Wine (Spiritus Vini)
Concentrated Aqueous Ethanol or Ethyl Alcohol, C_2H_5OH, typically prepared by distilling wine; see Aqua Vitae. [Fahrenheit, Helmont, Mayow, Scheele, *et al.*]

Spirit of Wood (Pyroligneous, Pyroxylic, Colonial, Columbian)
Methanol (CH_3OH).

Spiritus Aceti
The Acetic Acid ($HC_2H_3O_2$) obtained from distilling any fermented material which produces this acid, e.g., vinegar.

Spiritus Beguini
Ammonium Polysulfide (fuming liquor of Boyle) ($(NH_4)_2S$).

Spiritus CC
Ammonium Carbonate ($(NH_4)_2CO_3$).

Spiritus Fumans
Stannic Chloride, discovered by Libavius in 1605, through distilling tin with corrosive sublimate.

Spiritus Nitri Coagulatus
Potassium Nitrate (KNO_3).
Spiritus Nitri Dulcis (Sweet spirit of Nitre)
Ethyl Nitrite ($C_2H_5NO_2$).
Spiritus Sal Ammoniacum
See Spirit of Sal Ammoniac.
Spiritus Salis (Spirit of Salt)
Hydrochloric Acid, HCl (Marine Acid, Muriatic Acid). [Black, Scheele].
Spiritus Salis Ammoniaci Cum Sale Alkali Parata
Ammonium Carbonate ($(NH_4)_2CO_3$).
Spiritus Salis Coagulatus
Potassium Chloride (KCl).
Spiritus Sulphuris
See Spirit of Vitriol or Spirit of Sulphur
Spiritus Sulphuris Volatilus Beguinii
Ammonium Polysulphide ($(NH_4)_2S$).
Spiritus Veneris
Sulphuric Acid (H_2SO_4).
Spiritus Vitrioli
See Spirit of Vitriol. See Vitriolic Acid.
Spiritus Vitrioli Coagulatus
Potassium Sulfate (K_2SO_4).
Sp. Mind.
See Spirit of mindererus
Spout
Any hollow projection from a vessel that is used to direct the liquid flow while pouring. This term was most commonly applied to the spout on an alembic.
Spuma Lupi
The mineral from which Tungsten was extracted.
Stagnant Gas (Marsh Gas)
Methane (CH_4).
Stamping
Crushing of ores.
Stannum Anglici
Tin (Sn) from England.
Stannum Glaciale
Bismuth (Bi)
Starkey's Soap
Saponaceous substance from the reaction between Potassium Carbonate and essential Oil of Turpentine.
Steatite
A mineral substance composed mostly of various forms of Magnesium Silicate, e.g., ($Mg_3Si_4O_{11} \cdot H_2O$).
Steel
Regarded as a form of Iron which (a) contained a larger portion of the inflammable principle and (b) had fewer chemical impurities.

Stibiated Tarter
Potassium Antimonyl Tartrate ($KSbC_4H_4O_7$).
Stibium
Antimony Sulfide (Sb_2S_3).
Stibnite
Antimony Trisulphide. Grey mineral ore of Antimony.
Stick Laque
See Lac.
Stinking Sulphureous Air
Hydrogen Sulphide (H_2S).
Stone of Bologna
A variety of Barium Sulfate ($BaSO_4$) that became phosphorescent when calcined.
Spirit of Niter "Besiardique"
Nitric Acid added to "Butter of Antimony" and the mixture distilled to get a liquor which holds the "Regulus of Antimony" in solution.
Spirit of Nitre
Dilute Nitric Acid (HNO_3).
Spirit of Ammoniac
Ammonia (NH_3), or Ammonium Hydroxide solution (NH_4OH).
Spirit of Salt
Hydrochloric Acid (HCl).
Spirit of Saturn
Impure Acetone made from Lead Acetate (CH_3COCH_3).
Spirit of Sea-Salt
Hydrochloric Acid (HCl).
Spirit of Sulfer
Mixture of Sulfuric and Sulfurous Acids (H_2SO_4; H_2SO_3).
Spirit of Tatar
Potassium Hydrogen Tartrate ($KHC_4H_4O_6$). Product of the dry distillation of crude tartar.
Spirit of Urine
Ammonium Carbonate ($(NH_4)_2CO_3$). Derived from an impure solution of ammonia obtained by the distillation of urine.
Spirit of Venus
Concentrated and relatively pure Acetic Acid ($HC_2H_3O_2$).
Spirit of Verdigris
Acetic Acid ($HC_2H_3O_2$).
Spirit of Vinegar
Impure Acetic Acid obtained by distilling Vinegar ($HC_2H_3O_2$).
Spirit of Vitriol
Dilute Sulfuric Acid (H_2SO_4) and/ or Sulfurous Acid (H_2SO_3).
Strontia
Strontium Oxide (SrO).
Sublimate
Solid or concrete products of sublimation. Not powder.
Sublimation

A property possessed by some substances enabling their going directly from the solid to the gaseous state without passing through the liquid phase.

Subsatnia Ferrea Vitrioli

Ferric Oxide (Fe_2O_3).

Succinum

Amber.

Sudorific

Any medicinal substance which promoted, or was believed to promote, sweating.

Sugar of (A Subtance)

Usually signifying an Acetate ($C_2H_3O_2$).

Sugar of Lead (Saccharum Saturni)

Lead Acetate ($Pb(C_2H_3O_2)_2 \cdot 3H_2O$). Made by dissolving Lead Oxide in vinegar.

Sulphovinic Acid

Ethyl Hydrogen Sulfate, $C_2H_5HSO_4$, the product of the reaction of Sulfuric Acid, H_2SO_4 with Ethyl Alcohol, CH_3CH_2OH.

Sulphur

(a) As a "principle," in the 17th. and early 18th. centuries the substantive causes of the properties of inflammablility, color, and odor; (b) in the doctrined of phlogiston, a compound composed of vitriolic (Sulfuric) Acid and the inflammable principle, "phlogiston."

Sulphur Album Fixum

Potassium Nitrate (KNO_3).

Sulphurated Iron

Ferrous Sulphide (FeS).

Sulphur Minerale

Solid mineral Sulphur (S).

Sulphur Of Antimony (Golden Sulphur of Antimony)

The orange Sulfide of Antimony, usually a mixture of the Trisulfide (Sb_2S_3) with some of the Pentasulfide (Sb_2S_5).

Sulphureous Salt of Stahl

Impure Potassium Sulfite (K_2SO_3).

Sulphureous Acid

Sulfurous Acid (H_2SO_4).

Sulphurets

Sulfides (S). (Hepar). [Berzelius, Dalton, T. Thomson].

Sulphuretted

Combined with or impregnated with Sulfur (S). [Frankland].

Sulphuretted Hydrogen

Hydrogen Sulfide, H_2S (Hepatic Air). [Dalton, Gay-Lussac, Prout, T. Thomson *et al.*].

Sulphureum (Bergman)

Sulfurous Acid (H_2SO_3).

Sulphuric Acid

H_2SO_4, Formerly meant Sulfur Trioxide, SO_3. [Dalton, Gay-Lussac, Lavoisier, Prout, T. Thomson *et al.*].

Sulphurous Acid (Pre-Lavoisier)

(H_2SO_3). Also referenced as Sulphurous Gas, Formerly meant Sulfur Dioxide, SO_2. [Avogadro, Gay-Lussac, Lavoisier, Prout, T. Thomson, *et al*.]

Sulphur Vivum
Naturally occurring Sulphur (S).

Sun (Sol)
In astrological and alchemical thought, the seven heavenly bodies known to the ancients were associated with Seven Metals also known in antiquity. The sun was associated with Gold (*aurum*).

Superolefiant Gas (Dalton)
Butylene (C_4H_8).

Swedish Acid
Hydrofluoric Acid (HF).

Sweetened Spirit of Salt
Ethyl Chloride (C_2H_5Cl).

Sweet Mercury (Mercureous Dulis)
Mercurous Chloride (Hg_2Cl_2).

Sweet Principle from oils and fats
Glycerol ($HOCH_2CHOHCH_2OH$).

Sweet Salt
Sodium Chlorite, $NaClO_2$. (An explosive, white, mildly hygroscopic, water-soluble powder; decomposes at 175O C; used as an analytical reagent and oxidizing agent.

Sweet Sublimate
Mercurous Chloride (Hg_2Cl_2).

Sympathetic Ink
Any solution that is colorless but becomes dark (and thus visible) by heating, by addition of other chemicals, etc.

Syrup of Violets
A water extract of the petals of violets.

Syrupus Violatum
See Syrup of Violets.

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Tabasheer (Tabachir)
A white powder formed at the joints of bamboo shoots. Imported from the Orient and used as a medicinal.

Talc
A mixture of Magnesium Metasilicilate ($Mg_3H_2(SiO_4)_3$) with Magnesium Silicate ($Mg_3Si_4O_{11} \cdot H_2O$).

Talky Earths
(a) fibrous earths; (b) earths that suffer no change from the action of acids or fire; (c) earths that do not become viscid or hard when made into aqueous paste, e.g., asbestos.

Tannin
Any astringent vegetable substance that can react with animal hyde and convert it to leather. The most common tannin was tannic acid extracted from oak-galls.

Tar
: The dense, black, inflammable liquid or semisolid obtained from the distillation of various woods or coal. A complex mixture of hydrocarbons and organic compounds.

Tartar
: Potassium Hydrogen Tartrate ($K_4HC_4H_4O_6$).

Tartarated Alkali of Tartar
: Potassium Tartrate ($K_2C_4H_4O_6$).

Tartar Emetic (Stibiated Tartar)
: potassium Antimonyl Tartrate ($KSbC_4H_4O_7$), also written as $KSbOC_4H_4O_6 \cdot 1/2H_2O$.

Tartarified Iron
: see Chalybs Tartar.

Tartarified Tincture of Iron
: Ferrous Tartrate solution ($FeC_4H_4O_6$).

Tartarin
: A term occasionally used for Potassium Carbonate (K_2CO_3).

Tartarized Tartar
: Potassium Tartrate ($K_2C_4H_4O_6$).

Tartarized Tincture of Mars
: Not a true Alcohol solution, this medicinal was dubbed a tincture largely because of its deep color. Probably Iron Tartrate ($FeC_4H_4O_6$).

Tartar, Cream of (Cremor Tartari)
: Potassium Hydrogen Tartrate ($K_4HC_4H_4O_6$) purified into small white crystals.

Tartar of Wine
: Potassium Hydrogen Tartrate, $KHC_4H_4O_6$ [Stahl].

Tartar, Oil of
: A saturated solution of potassium Carbonate, K_2CO_3 [Lavoisier].

Tartar, Salt of
: Solid Potassium Carbonate, K_2CO_3. [Black, Cavendish, Rey, Stahl].

Tartarum Regeneratum (Regenerated Tartar)
: Potassium Acetate ($KC_2H_3O_3$) for the most part, but also used for assorted potassium salts. Not very well defined.

Tartarum Solubus (Soluble Salt of Tartar)
: Potassium Tartrate ($K_2C_4H_4O_6$).

Tartarum Tartisatum
: Potassium Tartrate ($K_2C_4H_4O_6$).

Tartarum Vitriolatum (Vitriolated Tartar, Vitriolate of Tarter, Vitriolated Tarter, Sal de Duobus)
: Potassium Sulfate (K_2SO_4). [Priestley, Scheele].

Tartarus Citratus
: Potassium Citrate ($K_3C_6H_5O_7 \cdot H_2O$).

Tartarus Nitratus
: Potassium Nitrate (KNO_3.

Tartarus Tartarisatus
: Potassium Tartrate ($K_2C_4H_4O_6$).

Tartarus Vitriolatus
: Potassium Sulfate (K_2SO_4).

Tartre Stybie (Tartar Emetic)
Potassium Antimonyl Tartrate ($KSbC_4H_4O_7$).

Tar Water
A solution of the water-soluble components of tar. Mostly alcohols and polar organic materials.

Tectum Argenti
Bismuth (Bi).

Terebinth
The resin from the terebinth tree *Pistacia terebinthuis*.

Terebinthaceous
Impregnated with turpentine, having turpentine as a component, or just similar to turpentine.

Terebinthine
The refined portion or the "spirit" of the resin from the terebinth and other trees having similar resins. Very similar to what we now call turpentine.

Terra
Earth

Terra Anglica Rubra
Ferric Oxide (Fe_2O_3).

Terra Foliata Nitri
Potassium Acetate ($KC_2H_3O_2$).

Terra Foliata Tartari
See Regenerated Tartar.

Terra Foliata Tartari Crystallisabilis
Sodium Acetate ($NaC_2H_3O_2$).

Terra Foliata Secretissima
Solid Potassium Acetate $(KC_2H_3O_2)_2$.

Terra Francisca
Assorted Sulfates (e.g., $FeSO_4$, $CuSO_4$)

Terra Molybdaenea
Molybdic Acid ($H_2MoO_4(H_2)$.

Terra Ponderosa
Barium Sulfate ($BaSO_4$). Also referenced as ("heavy earth"), Barium Oxide, BaO.

Terra Ponderosa Acetate
Barium Acetate $(Ba(C_2H_3O_2)_2)$.

Terra Ponderosa Aerata (Aerated Heavy Earth)
Barium Carbonate ($BaCO_3$).

Terra Ponderosa Molybdaenata
Barium Molybdate ($BaMoO_4$).

Terra Foliee Animale
Ammonium Acetate ($NH_4C_2H_3O_2$).

Terra Foliee Crystallisee
Sodium Acetate ($NaC_2H_3O_2$).

Test
A large cupel used for refining substantial quantities of Gold and Silver by means of Lead.

Testaceous Earths
: Mineral solids that came from or were chemically similar to shells. Thus, "testaceous powders" were prepared from shells.

Testing
: The operation of refining Gold and Silver by means of Lead.

Thénard's Blue
: Blue Cobalt Aluminate, $Co(AlO_2)_2$, named for Louis-Jacques Thénard.

Theriac
: A general term for an antidote for the poison of a venomous snake.

Thion Hudor
: Zosimus refers to this as the 'divine water' or "the bile of the serpent". A deep reddish-yellow liquid made by boiling flowers of sulphur with slaked lime.

Thorium
: See Table of Isotopes.

Thorium A
: An isotope of polonium produced in thorium decay, namely ^{216}Po (half-life = 0.15 s).[Soddy].

Thorium C
: The names of two radioisotopes, both produced in Thorium decay, included Thorium C. Simple Thorium C was an isotope of Bismuth, namely ^{212}Bi (half-life = 61 min); **Thorium C'** was an isotope of Polonium, namely ^{212}Po (half-life = 0.3 μs) [Rutherford, Soddy].

Thorium D
: An Isotope of Thallium produced in Thorium decay, namely ^{208}Tl (half-life = 3 min).

Thorium X
: An isotope of Radium produced in Thorium decay, namely ^{224}Ra (half-life = 3.6 d). [Rutherford, Soddy].

Thymol Blue
: Thymolsulphonphthalein, $C_{27}H_{30}O_5S$, an acid-base indicator that changes from pink to yellow as the pH is raised through 2.2 and then to blue as the pH is raised through 8.8.

Tincal (Tinkal)
: Crude borax imported from India.

Tinct. Tartari
: Solution of Potassium Hydroxide (KOH) in Alcohol.

Tinctura Antimonii
: See Tincture of Antimony.

Tincture
: A solution in which Ethanol (CH_3CH_2OH) is the primary solvent. The term was applied most often to colored solutions.

Tincture of Antimony
: A medicinal prepared from Antimony metal and Liver of Sulphur (Potassium Polysulfides).

Tincture of Coral
: Crude Acetone (CH_3COCH_3).

Tincture of Mars

A general term for various medicinal preparations involving Iron Salts. Common components included Ferrous Hydroxide $Fe(OH)_2$ and mixed Tartrates and Oxides.

Tincture of Mars of Mynsight

An Alcohol solution in which the solute is primarily Ferric Chloride ($FeCl_3$).

Tin-Glass

Bismuth (Bi).

Tinging

When one substance tinges or slightly colors another.

Tin Salt

Hydrated Stannous Chloride.

Torrefaction

Roasting of ores in the hope of removing impurities.

Tourmaline (Tourmalin, Ash-Stone)

A mineral solid consisting of various forms of silicoborate, including the black mineral "Schorl."

Tournsole

See Turnsol.

Triplesalts

Salts which seemed to have three components rather than the usual two, e.g., Alum ($KAl(SO_4)_2 \cdot 12H_2O$).

Tripoli (Infusoria Earth, Rotten-Stone)

A finely divided mineral solid used for polishing. Obtained from the shells of diatoms.

Tritorium

A vessel used for the separation of immisicible liquids. It was often shaped somewhat like two modern separatory funnels cut near their tops and fused together. Basically the same as a separating glass.

Trituration

Mechanical breakdown or division of solid substances through grinding; e.g., with mortar and pestle, in a mill, etc.

Triture

See Trituration.

Trona

Naturally occurring Sodium Carbonate (Na_2CO_3). It usually had some Bicarbonate ($NaHCO_3 \cdot 2H_2O$) in it as well.

Tubulated Retort

A retort which had a sealable opening in the top to allow addition or removal of material without changing the position of the retort.

Tung Spat

See Heavy Spar.

Tunsgten (Scheelite)

Native Calcium Tungstate ($CaWO_4$)

Turmaric

A powder made from the root of the imported East Indian plant *Curcuna Longa*.

Turbull's Blue

Ferroferricyanide, $Fe_3[Fe(CN)_6]_2$, also known as insoluble Prussian Blue.

Turners Yellow

Yellow Lead Oxychloride ($PbCl_2 \cdot 3PbO$).

Turnsol

The bluish purple substance from the plant lichen *Crozophora tinctoria*. Used as an indicator. Synonymous with litmus.

Turpentine

A resinous liquid extracted from various trees. Originally the extract of the terebinith tree *Distacia terebinthus*.

Turpeth Mineral (Turbeth Mineral)

A hydrolysed form of Basic Mercuric Sulphate ($HgSO_4 \cdot 2HgO$). Yellow crystalline powder, described by Basil Valentine. [Cavendish, Lavoisier, Priestley].

Tutenag (Chinese Copper)

A term occasionally applied to Zinc (Zn). Also used for a white metal alloy (Chinese copper) which consisted primarily of Copper (Cu), Zinc (Zn), and Nickel (Ni). Used to alloy Silver in coins and jewelry items.

Tutia

See Tutty.

Tyrian Purple

6,6'-Dibromoindigotin, $C_{16}H_8N_2O_2Br_2$, an important dye of the ancient Mediterranean.

Tutty

Zinc Oxide (ZnO).

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Uliginous

Any water, oozing matter like that in a swamp.

Ulmin

A mucilagenous substance from the inner bark of the elm.

Ultramarine

A blue pigment made from the gem mineral Lapis Lazuli. The relative composition of ultramarine is not fixed, but the largest component is a Sodium Aluminum Silicate combined with Sulphur.

Umber

A mineral solid which exists in a range of brown hues. Chemically, umber is mostly a mixture of Hydrous Ferric Oxide ($Fe_2O \cdot xH_2O$) and Manganese Dioxide (MnO_2). It was believed by many in the 18th. century to be a fossil wood originally found in Umbria near Spoleto in Italy.

Unctuous

Oily; i.e., viscous, adherent and lubricating.

Unctuous Oils

Oils that have little or no taste or odor but are relatively "oily"; i.e., are viscous, adherent, and lubricating.

Uranium

See Table of Isotopes.

Uranium I

The most abundant isotope of Uranium, ^{238}U.

Uranium II
An isotope of Uranium produced in Uranium decay, namely ^{234}U (half-life = $2.5x10_5$ y).
Uranium X
There were two Uranium X produced in Uranium decay. Uranium X_1 (simply Uranium X before the discovery of Uranium X_2) was an isotope of Thorium, namely ^{234}Th (half-life = 24 d); Uranium X_2 was an isotope of Protactinium ^{234}Pa. Rutherford; Soddy].
Uranium Yellow
Sodium Uranate, Na_2UO_4, a pigment used in glass and ceramics.
Urinou Salts
Usually any Ammonium Salt. Somethimes any of the Alkali Carbonates.
Ustulation
The loss of volatile components of a substance without loss of texture or body. Cf. Calcination.

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Vague Acid of Mines
An aeriform fluid which was probably largely Sulphur Dioxide (SO_2).
Vapour
Rather loosely applied to any aeriform substance or phase. Perhaps the best 18th. century definition was any aeriform substance that could be liquefied by cold.
Vapour of Arsenic
Aresenious Oxide (As_2O_3)
Varnish
A resin in solution. "Spirit" varnishes were resins dissolved in turpentine or alcohol. "Oil" varnishes were resins dissolved in linseed and/or other oils.
Vegetable Acid
Any acidic substance extracted from whole or fermented vegetable matter. Thus, the term was applied to Acetic (CH_3COOH), Citric ($C_6H_8O_7$), and Tartaric ($C_4H_6O_6$) Acids, etc.
Vegetable Acid, Fermentative
Primarily Acetic Acid from Vinegar ($HC_2H_3O_2$).
Vegetative Acid, Native
Citric Acid ($C_6H_8O_7$)
Vegetable Alkali, **Caustic**
Potassium Hydroxide, KOH. [Davy].
Vegetable Alkali (Potash, Pearl Ash)
Potassium Carbonate (K_2CO_3). Sometimes specified as *mild vegetable alkali* or *fixed vegetable alkali.*
Vegetable Ammoniacal Salt
Solid Ammonium Acetate ($NH_4C_2H_3O_2$)
Vegetable Salt
See Tartarified Tartar or Soluble Tartar.
Venetian White
Mixture of equal parts of White Lead ($Pb(CO_3)_2 \cdot Pb(OH)_2$) and Barium Sulphate ($BaSO_4$).

Venus (of Venus)
: Usually suggested either Copper or a compound of Copper. Sometimes it simply indicated an Acetate ($C_2H_3O_2^-$). In astrological and alchemical thought, the seven heavenly bodies known to the ancients were associated with Seven Metals also known in antiquity. Venus was associated with Copper (*cuprum*).

Verdigris (Verdigrise)
: A basic Copper Acetate ($Cu(C_2H_3O_2)_2 \cdot 2Cu(OH)_2$). Long used as a green pigment. Also Cupric Carbonate.

Verdigris, Blue
: Copper (II) Acetate, $Cu(C_2H_3O_2)_2 \cdot H_2O$.

Verditer (Blue Verditer; Blue Bice)
: A blue pigment made from a basic Copper Carbonate ($2CuCO_3 \cdot Cu(OH)_2$) which is chemically the same as azurite.

Vermillion (Cinnabar)
: The red pigment made from Cinnabar (Mercuric Sulfide, HgS or Mercury (II) Sulfide, HgS). See Cinnabar. (See Minium.)

Vine Black
: A preparation of carbon from the twigs and wood of vines. Used as a black pigment.

Vinegar of Lead
: Primarily Lead Acetate ($Pb(C_2H_3O_2)_2$).

Virginium (Vi, Vm)
: A name proposed for element 87 (Francium) in a report of detection of the element whose validity was ultimately not recognized.
rgy. The law of conservation of energy was originally phrased in terms of *vis viva* [Clausius, Joule, Kelvin, Mayer].

Vital Air
: Oxygen (O_2)

Vitamin (Vitamine)
: Sometimes vitamine, from "vital amine" [Funk]): an organic substance essential in small quantities to the normal health of an animal. Vitamins must typically be supplied to the animal through diet.

Vitamin A
: Retinol, $C_{20}H_{30}O$, a fat-soluble vitamin derived from carotenes.

Vitamin B
: A group of water-soluble, heat labile compounds that typically serve as co-enzymes. They include many examples that contain amine groups (as in "vital amine").

Vitamin B_1
: Thiamin (or Thiamine), $C_{12}H_{17}N_4OSCl$.

Vitamin B_2
: Riboflavin (or Riboflavine), $C_{17}H_{20}N_4O_6$.

Vitamin B_3
: Niacin (or Nicotinic Acid), $C_6H_5NO_2$.

Vitamin B_6
: Pyridoxin (or Pyridoxine), $C_8H_{11}NO_3$.

Vitamin B_{12}
: Cyanocobalamin (or Cyanocobalamine), $C_{63}H_{90}CoN_{14}O_{14}P$.

Vitamin B_c
: Folic Acid, $C_{19}H_{19}N_7O_6$.

Vitamin C
: Ascorbic Acid, $C_6H_8O_6$, a water-soluble vitamin found in many fruits and green vegetables.

Vitamin D
: This fat-soluble vitamin consists of steroid derivatives including Ergocalciferol, $C_{28}H_{44}O$, and Cholecalciferol, $C_{27}H_{44}O$.

Vitamin E
: This vitamin occurs in four naturally occuring forms, called α-, β-, γ-, and δ-tocopherol. The α form, $C_{29}H_{50}O_2$, has the greatest activity; the β- and γ- forms have one fewer methyl group, and the δ- form two fewer.

Vitiated Air
: Air from which Oxygen (O_2) has been removed, therefore mainly Nitrogen (N_2).

Vitresant (Vitrifiable)
: Any solid that could be made into "glass".

Vitrifiable Earths (Vitreous Earths)
: Mineral substances which fuse under the action of fire.

Vitrification
: The chemical part of the process of making glass or of any high-temperature process which produced a glass-like substance.

Vitriol
: Used mainly for Ferrous Sulfate ($FeSO_4$), but a generic term for Sulfates. As with many old terms, the usage varied; e.g., some used the term for Mitrates of Silver and Copper. See Copperas.

Vitriol, Blue (Roman Vitriol)
: Copper Sulfate ($CuSO_4 \cdot 5H_2O$).

Vitriol, Green
: Ferrous Sulfate or Iron (II) Sulfate, $FeSO_4 \cdot 7H_2O$.

Vitriol, Red (Rose)
: Cobalt (II) Sulfate, $CoSO_4 \cdot 7H_2O$.

Vitriol, White (Salt of Vitriol)
: Zinc Sulfate, $ZnSO_4 \cdot 7H_2O$. [Scheele].

Vitriol (or Vitriolic) Acid
: Sulphuric Acid (H_2SO_4)

Vitriolated Earths, Metals, etc.
: Sulphates.

Vitriolated Ether
: Diethyl Ether ($C_4H_{10}O$) or ($CH_3CH_2OCH_2CH_3$)

Vitriolated Tartar
: Potassium Sulfate (K_2SO_4)

Vitriolic Acid (Oil of Sulfur, Oil of vitriol, Spirit of Vitriol, Spiritus Vitrioli)
: Sulfuric Acid, H_2SO_4 [Black, Cavendish, Lavoisier, Priestley], also known as *Oil of Sulfur* and *Oil of Vitriol* [Black, Lavoisier, Scheele, Stahl], and *Spirit of Vitriol* (*Spiritus Vitrioli*) [Black, Scheele].

Vitriolic Acid Air

Sulfur Dioxide, SO_2, Sometimes *Vitriolic Acid*; also known as *Sulphurous Acid* or *Sulphurous Gas.*

Vitriolic Ether

Diethyl Ether ($C_4H_{10}O$) or ($CH_3CH_2OCH_2CH_3$)

Vitriol of Goslar (White Vitriol)

Zinc Sulfate ($ZnSO_4$)

Vitriol of Jove

Stannous Sulfate ($SnSO_4$)

Vitriol of Jupiter

Stannous Acetate ($Sn(C_2H_3O_2)_2$)

Vitriol of Mars (Green Vitriol)

Ferrous Sulfate ($FeSO_4$)

Vitriol of Quick Silver

Mercuric Nitrate ($Hg(NO_3)_2$)

Vitriol of Saturn

Lead Acetate ($Pb(C_2H_3O_2)$)

Vitriol of Silver

Occasionally, early in the 18th. century, Silver Nitrate ($AgNO_3$). As the century progressed, the term was more reasonably applied to Silver Sulfate (Ag_2SO_4)

Vitriol of Venus

Cupric Sulfate ($CuSO_4$)

Vitriolum Album

See White Vitriol.

Vitriolum Ammonium

Ammonium Sulfate ($(NH_4)_2SO_4$)

Vitriolum Anglicum

Ferrous Sulfate ($FeSO_4$)

Vitriolum Veneris cum Alkali Fixo Praecipitatum

Basic Copper Acetate ($Cu(C_2H_3O_2)_2 \cdot CuO \cdot 6\ H_2O$)

Vitrium Antimonii (Glass of Antimony)

Fused Antimony Oxide (Sb_2O_3)

Vivifying Spirit

A hypothetical principle in the air which, according to some early 18th. century chemists, was the active agent in combustion and respiration.

Volatile

An adjective usually used to indicate not only that a substance naturally gave off some aeriform component (as indicated by an odor) but also that it decomposed easily and gave off one or more aeriform components to the air on heating.

Volatile Acid of Nitre

Nitrous Acid (HNO_2)

Volatile Acid of Sulfur (Phlogisticated Vitriolic Acid)

Sulfurous Acid (H_2SO_3)

Volatile Alkali

A term most commonly used for solutions of Aqueous Ammonia, NH_3; e.g., Ammonium Hydroxide, NH_4OH. See Alkaline Air, Spirit of Hartshorn.

Volatile Alkali, Concrete

Ammonium Carbonate $(NH_4)_2CO_3$. [Black, Cavendish, Lavoisier, Scheele, *et al*.]

Volatile Liver of Sulfur
: Volatile product from heating Sulfur (S) with Quicklime (Calcium Oxide, CaO) and Ammonium Chloride (NH_4Cl).

Volatile Sal Ammoniac
: Ammonium Hydroxide (NH_4OH) solution.

Volatile Salt
: Ammonium Carbonate ($(NH_4)_2CO_3$)

Volatile Salt of Amber
: See Salt of Amber

Volatile Salt of Hartshorn
: Ammonium Carbonate (NH_4CO_3)

Volatile Spirit of Sal Ammoniac
: Ammonium Hydroxide (NH_4OH) obtained from Quicklime (Calcium Oxide, CaO) and Sal Ammoniac (Ammonium Chloride, NH_4Cl).

Volatile Spirit of Sulfur
: The aeriform product from burning sulfur; mostly Sulfur Dioxide (SO_2).

Volatile Vitriol of Venus
: Copper Acetate $Cu(C_2H_3O_2)_2$

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Wash
: Any fermented mixture which, after distillation, would produce distilled spirits (Ethanol CH_3CH_2OH, with impurities).

Water gas
: Mixture of Hydrogen (H_2) and Carbon Monoxide (CO)

Water glass (Soluble Glass)
: A hydrated Sodium Silicate, $Na_2Si_4O_9{\cdot}xH_2O$, either an amorphous solid or in thick aqueous solution, used as a binder or adhesive.

Water of Minderus
: A solution of Ammonium Acetate ($NH_4C_2H_3O_2$).

Water of Rabel
: A solution of Ethyl Ether ($CH_3CH_2OCH_2CH_3$) in Ethanol (CH_3CH_2OH)

Wax
: A term referring to beeswax only, as the Hydrocarbon waxes were not available in the18th. century.

Whey
: The liquid which remains after milk is curdled, usually in the process of cheese-making

White Arsenic
: Arsenious Oxide (As_2O_3) Made from Arsenical soot from the roasting ovens, purified by sublimation.

White Calx of Antimony
: Mixture of Antimony Oxide (Sb_2O_3) and Potassium Oxide (K_2O).

White Copper

An alloy of Arsenic (As), Copper (Cu), and Zinc (Zn).

White Copperas
Zinc Sulphate ($ZnSO_4$)

White Lead
Basic Lead Carbonate ($Pb(CO_3)_2 \cdot Pb(OH)_2$). Used as a pigment.

White Manganese
Manganous Carbonate ($MnCO_3$)

White Precipitated Mercury (Precipitate of Sublimate of Mercury)
Mercurammonium Chloride ($HgNH_2Cl$)

White Vitriol
Zinc Sulphate ($ZnSO_4$) Described by Basil Valentine. Made by lixiviating roasted zinc blende (Zinc Sulphide).

Wind Furnace
A reverberating furnace.

Wine
Often used more broadly by 18th. century chemists to include any potable liquid which had become "spiritous" through fermentation; e.g., beer, cider, and mead.

Wismuth
Bismuth.

Witherite
Barium Carbonate ($BaCO_3$).

Woad
A blue dye prepared from the leaves of the plant *Isatis tinctoria*.

Wolfram
A name of Germanic origin originally applied to a native Iron Manganese Tungstate and later to the element Tungsten, hence the symbol W. Also referenced as a mineral substance Spumi lupi that was under investigation in the 18th century.

Wood Ash or Potash
Potassum Carbonate (K_2CO_3). Made from the ashes of burnt wood.

Worm
A long, coiled tube, usually of copper, attached to the head of a distillation apparatus for the purpose of increasing condensation. A worm commonly was used in distilling spirits.

Wormwood
The plant *Artemisia absinthium*, the leaves of which were used to make an extract by distillation. Used as a medicinal.

Wort
An infusion of grain, usually malt, which was fermented to produce beer.

Woulfe Bottle
A bottle with two or more necked orifices that was used in distillation.

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Xylenol Blue

1,4-Dimethyl-5-Hydroxybenzenesulfonphthalein, an acid-base indicator that changes from red to yellow as the pH is raised through 2 and then to blue as the pH is raised through 8.8.

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Yellow
A yellow coloring agent produced by treating indigo with dilute nitric acid. This substance proved to be unstable and seldom was used as dye.

Yellow Aqua Fortis
Concentrated Nitric Acid (HNO_3).

Yellow Arsenic
Arsenious Sulphide (As_2S_3).

Yellow Ochre
Hydrated Ferric Oxide ($Fe_2O_3 \cdot H_2O$).

Yttria
A mixture of rare earth elements from the mineral Gadolinite. Primarily the Trioxide of Yttrium (Y_2O_3).

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Zaffre (Saffre)
A gray or reddish powder composed mostly of Cobalt Oxide (CaO). Also known to be impure Cobalt Arsenate, left after roasting cobalt ore.

Zeolites
A group of mineral solids which are various hydrated silicates, primarily of Aluminum, Calcium, Potassium, and Sodium. Although not really related, they share the property of swelling and "boiling" under the heat of the blowpipe.

Zinc (Zinco, Zinetum)
Regarded in the 18th. century as a semi-metal because of its relative brittleness.
