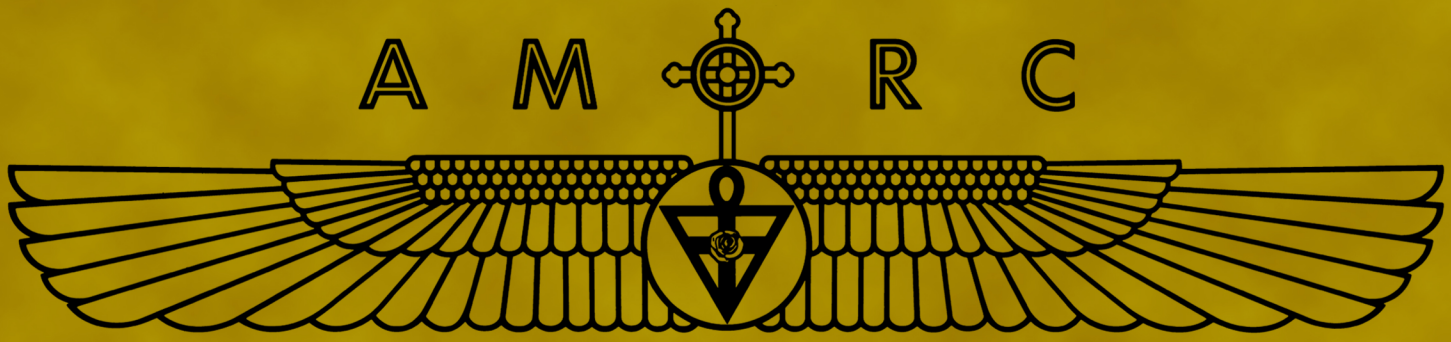

Alchemical Manuscript Series

Volume Seven

Correct Usage

by Anonymous

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Alchemical Manuscript Series

Volume One: **Triumphal Chariot of Antimony,** by Basil Valentine
Triumphal Chariot of Antimony by Basil Valentine is considered to be a masterpiece of chemical literature. The treatise provides important advances in the manufacture and medical action of chemical preparations, such as, metallic antimony, solutions of caustic alkali, the acetates of lead and copper, gold fulminate and other salts. Accounts of practical laboratory operations are clearly presented. Instructions in this book are noteworthy, as they provide weights and proportions, a rarity in alchemical literature.

Volume Two: **Golden Chain of Homer,** by Anton Kirchweger**,** Part 1
Frater Albertus was once asked if he could only have one book on alchemy, which would it be? He answered that it would be the *Golden Chain of Homer*. This collection of books written by several authors and printed in various editions, was first printed in 1723. Concepts of Platonic, Mosaic, and Pythagorean philosophy provide extensive instruction in Cosmic, Cabbalistic, and laboratory Alchemical Philosophy.

Volume Three: **Golden Chain of Homer,** by Anton Kirchweger**,** Part 2
Frater Albertus was once asked if he could only have one book on alchemy, which would it be? He answered that it would be the *Golden Chain of Homer*. This collection of books written by several authors and printed in various editions, was first printed in 1723. Concepts of Platonic, Mosaic, and Pythagorean philosophy provide extensive instruction in Cosmic, Cabbalistic, and laboratory Alchemical Philosophy.

Volume Four: **Complete Alchemical Writings,** by Isaac Hollandus**,** Part 1
Complete Alchemical Writings was written by father and son Dutch adepts, both named Isaac Hollandus. The details of their operations on metals are said to be the most explicit that have ever been presented. Extensive and lucid descriptions of preparations of tinctures, elixirs, vegetable stones, mineral work, and the Philosopher's Stone provide a rich treasure in Alchemical work and medicinal recipes.

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Volume Six: **Compound of Alchemy,** by George Ripley

George Ripley was born in England and studied science, alchemy, and religion. He spent part of his life in Rome, and returned to England with the secret of transmutation. This work was one of the most popular books on Alchemy during the middle ages. It was first printed in London in 1591, having circulated widely in manuscript form for many years. It is said to contain the best on how to make the Philosopher's Stone, the "potable" Gold.

Liber Secretissimus, by George Ripley

The treatise, *Liber Secretissimus*, provides a philosophical description of the Composition of the Philosophical Stone and the Great Elixir. Explanation of the White and Red Work is described in archaic English. A good knowledge of Alchemy is recommended in order to follow the Alchemical Process described in the work.

The Marrow of Alchemy, by George Ripley

The Marrow of Alchemy is translated from Latin by William Salmon (1644-1713), a professor and medical doctor living in London. This treatise by George Ripley sets out to make plain the Secrets of Alchemy and to reveal the Hidden Mysteries of Nature. This discourse on the Philosopher's Mercury provides an important and clear description of tinctures and the process of making vegetable, mineral, and animal stones.

Volume Seven: **Correct Usage**, by Anonymous

Correct Usage is a "how to" book of Alchemy. It contains 73 recipes on how to artificially clear and polish stones such as agate and lapis lazuli; how to make beautiful pearls; and how to make pleasantly scented, glowing candles. The recipes come from an old German Alchemical manuscript which is translated into very readable English. Recipes include how to separate gold or silver from steel or iron; how to make copper like gold; how to make tin which will not crush; how to prepare Sal Ammoniac; how to make oil of Tartar; and purify and refine sulphur.

Volume Eight: **Compendium**, S. Bacstrom, M.D., (Editor)**,** Part 1

Bacstrom's *Compendium*, Part 1, is a collection of extracts of alchemical books that are interpreted by Bacstrom and include notes that provide the alchemical theory and explanation of symbols used in the manuscripts. Bacstrom's comments provide a clear interpretation of the alchemical recipes and processes. He discusses the occult relationship to metal such as gold and antimony and provides procedures to produce tinctures and medical products.

Extracts include:

- The Work with the Butter of Antimony
- Chemical Moonshine
- Alchemical Aphorisms
- Instructions Respecting the Antimonial Labors for the Sophie Mercury
- Aphorisms Concerning the Universal Salt of Nature
- The Tincture of Antimony

- Sir Kenelm Digby's *Sal Enixum* and Abbe Rousseau's *Primum Ens Salis*
- Neuman on Nitre: The Nature and Difference of Salt Petre
- Process for the Lapis with Nitre and Salt
- *Conserva Fontinalis*
- Letter by Joel Langlottus, M.D.
- *Myriam The Prophetess*
- The Epistle of Arnoldus de Villa Nova to the King of Naples
- An Anonymous Letter to Mr. Ford on the Lapis Philosophorum
- The Process of the American Adept - Obtaining the Tincture from Urine
- The Work with Wolfram
- Some thoughts on the Hint Given by Basil Valetine of a Via Sicca Regenerationus Principiorum
- The Work of the Jewish Rabbi
- Three Processes for Obtaining the Tincture from Nitre and Sulphur
- A Thought of Dr. Bacstrom, Saturday Night, 1/2 Past 8, 6th of April 1805
- The Mineral Gluten or The Philosophical Double Mercury

Volume Nine: **Compendium**, S. Bacstrom, M.D. (Editor)**,** Part 2

Extracts include:

- The Short Processes Indicated
- Le Febre's *Philosophical Lamp Furnace*
- Secret of Secrets, or, Magistery of Philosophy
- On Short Processes
- A Second Experiment on the Same Principal
- Baron von Reusenstein's *Chemical Processes*
- Baron von Reusenstein's *Universal and Particular Processes*
- Annotations on the Hermetical Triumph
- Mineral and Metallic Processes
- The Process of Alexis Piemontese
- Lapis de Tribus
- A Thought of Sig. Bacstrom concerning Platina
- Extract from Joh. Becher Explaining the Process of Paracelsus Explaining The Mercury of Venus
- Extract from Isaac Hollandus
- Rhenaus' *True Preparation of Philosophical Mercury*
- Becher: *Animated Mercury of Claveus*
- 79 Wonders of a Certain Subject (Bismuth)
- Discourses on the Philsopher's Stone-John Clerke
- Extract from Henricus Madasthanus
- Extract from Rhenanus
- Preparation of the Alkahest
- Thoughts upon Jugel's Particular Process

- Extracts from Wilson's Complete Chemistry Course
- Extract from Fachsens' *Art of Assaying*
- Extract from Digby's *Chemical Secrets*
- The Science of Alchemy (from an old manuscript)
- The Practice of the Philosophers
- Extract from *Solis e Puleo Emergentis* J. Rhenan
- Extract from *Practice & Work of Brothers of R.C.*
- Conversation with Mr. B. and Mr. Ford April 1805
- Further Notes to Mr. Ford
- Recapitulation of the Whole Process
- Universal Process of the Abbott Clairai
- Various Notes
- Excerpts from Baron von Reusenstein's Processes
- A Process Upon Common Lead

Volume Ten: **Of Antimony Vulgar,** by Alexander Van Suchten

Alexander van Suchten was a chemist who lived in Dantzig from 1546 - 1560 where he wrote extensively on antimony. *Of Antimony Vulgar* provides the alchemical recipe for working with and deriving sulphur, salt, and mercury. This work includes a useful addition from Basil Valentine on how to make and use the salt of antimony for alchemical and medical purposes.

Volume Eleven: **Coelum Philosophorum,** Translated by S. Bacstrom, M.D.

Coelum Philosophorum is an excellent treatise thought to have been written in the 14th century by John Cremer who devoted over 30 years to the study of alchemy. It was translated by Dr. S. Bacstrom, M.D. in 1787 from a German alchemical book published in 1739. Elaborate directions are provided to obtain powerful and safe medicines from each of the seven metals and various minerals. The treatise gives the procedures to obtain tinctures, oils, and elixirs using both the dry and humid way to obtain the Hermetical Treasure.

Volume Twelve: **Theoricus Degree,** by Anonymous R+C

Theoricus Degree, was translated from German and contains a section on the Rosicrucians, their teachings, oaths, laws, customs, prayers, along with philosophical instruction to the Brothers on creation and the four elements. A discussion on metals, plants, man, and medical cures are described. Instructions regarding the operation of the Third Degree (Practicus) on the mineral work are included. The preparation of the mineral stone in the dry way is presented using laboratory techniques.

Volume Thirteen: **Aphorismi Urbigerus,** by Baron Urbigerus

Aphorismi Urbigerus is a recapitulation of the whole alchemical process, written by combining many philosophical works. The first edition appeared in London in 1690. The second edition was published in 1671 in German and then translated into English. The work contains the alchemical rules demonstrating three ways of preparing the Grand Vegetable Elixir of the Philosophers. Urbigerus'

work is considered to be a clear and complete explanation of the Opus Minus and provides the process of the vegetable circulatum.

Volume Fourteen: Last Will and Testament, by Basil Valentine

Last Will and Testament is a compilation of five books and became a "best seller" among the alchemical fraternity in the seventeenth century. Sound chemical information is expressed in clear terms and provides directions for the preparation of oil of vitriol. The description is written in such a way that only one who had actually carried out the practical operations could have written it. A table of Alchemical symbols is provided for the convenience of the reader. In addition, a gematria dictionary provides a convenient reference for those interested in pursuing the possibility of numerical codes in alchemical writings. A practical treatise together with the XII keys of alchemy is included to derive the Great Stone of the Ancient Philosophers.

Volume Fifteen: Acetone, by Johann Becker

Johann Becker (1635-1682) is not only famous in the history of chemistry for his theory of combustion, but also as a technologist, miner and metallurgist. *Acetone* provides an explanation of chemical laboratory practice, including descriptions of the properties of substances used in alchemical work for chemical experiments.

Volume Sixteen: Secret Book (Liber Secretus), by Artephius

Secret Book (Liber Secretus) was written in the Twelfth Century by Artephius, translated into English in 1624 and printed in Amsterdam in 1578. The book provides an explanation of alchemical laboratory processes, including antimony and the process to make a great arcanum.

CORRECT USAGE

AN OLD GERMAN ALCHEMICAL
MANUSCRIPT CONTAINING:
VARIOUS "RECIPES"

TRANSLATED BY: CHRISTINE BANERJI

Correct Usage

Alchemy. Including many useful and amusing skills which were secret until now. Not only for wise alchemists, but for all artists, working both with and without fire. In addition, other skills which can be used in many different ways.

The characters, figurative meanings and names of the metals. Corpus and Spiritus.

An explanation of latinized alchemical terms.

Index on the following page.

The symbols and the names of the metals.

1	is Sol. It means **Gold.**	14	Aqua **Water.**
2	Luna **Silver.**	15	Ignis **Fire.**
3	Mercurius **Quicksilver.**	16	Acetum **Vinegar.**
4	Mars **Iron.**	17	Day.
5	Jupiter **Tin.**	18	Night.
6	Saturnus **Lead.**	19	Antimonium **Antimony.**
7	Venus **Copper**	20	Verdigris (viriole hispanicum)
8	Vitriol.	21	Sal nitri.
9	Alumen **Alum.**	22	Sal armoniac
10	Sulphur **Sulphur.**	23	Sal alkali
11	Salgemme.	24	Refined
12	Arsenicum.	25	Salcommune.
13	Cinnabar.	26	Crocum Martis.

Some latinized alchemical terms.

Calr [is] powder.
Calcinirn means to make into a powder or chalk.
Coagulirn means to make [a metal] malleable.
Corpus [is the word for] every metal or substance.
Solvirn means to dissolve or separate.
Preparirn means to prepare.
Purgirn means to purify.
Reducirn means to reduce.
Recipe or **Rc** means take.

The contents of everything in this book.

24. How to extract the sulphur from ore.

25. Colouring copper with gold. How to separate gold from copper.

26. How to make all metals malleable.

27. How to make gold and silver malleable.

28. How to refine coin on a melting tray.

29. How to test whether silver contains gold.

30. How to silver-plate copper.

31. How to deaden mercury so that it can be wrought.

32. How to give copper a real gold colour, and to make it as malleable as gold.

33. How to extract silver from tin and make goblets.

34. How to silver-plate copper pots and cast copper.

35. Red water of gold to silver.

36. A strong aqua fortis. Water of tartar.

37. How to make white copper.

38. How to treat all metals so that they become malleable and can be cast.

39. How to gold-plate iron.

40. How to separate gold or silver from steel or iron.

41. How to make copper exactly like gold in every way.

42. An oil which makes all things malleable.

43. How to separate gold from copper. How to turn copper into gold.

44. How to make silver from copper. Amalgama.

45. How to turn brass into gold. Turning *Mollen* into gold.

46. Calx lune. How to calcinate Venerem.

47. Crocus veneris.

48. Coagulatio Mercurij.

49. How to calcinate the seven planets.

50. Silver from *Mollen.*

51. Tin which will not crack.

52. How to turn Mercurio into gold. Crocus Martis.

53. How to calcinate tin. How to make it white and hard.

54. Purgatio Veneris. Operatio ad Solem.

55. Operationes ad Lunam.

56. How to make one lot of pure silver from four lots of quicksilver.

57. How to fix mercurium.

58. How to make a constant fire.

59. How to calcinate alum. How to prepare sal conmune.

60. How to prepare Sal armoniac.

61. Sal alkali. How to make Sal Borax.

62. Aqua Mercurij. Aqua Salis armoniaci.

63. Aqua lac virginis.

64. Aqua Salis alkali.

65. A water, Crocus Martis. How to calcinate tartar.

66. Eggshells. How to calcinate Tutia (zinc oxide). Aqua lunaris.

67. Aqua Causata. Aqua Castica.

68. Aqua Auripigmenti. Aqua de sale conmuni.

69. Aqua of egg yolks. Tartar oil.

70. Petroleum. Oleum Benedictu. Oleu sulphuris.

71. How to purify and refine sulphur. Oleum ouorum.

72. Oleum Auripigmenti. Oleum lunare.

73. How to refine Mercurium. How to improve the quality of gold.

1. **How to make clear agate artificially.**

Boil as much turpentine as you wish in a small glazed vessel with a little sap [lit: tree oil]. Stir until it becomes as thick as a strong gum. Then pour it into the dish of your choice and leave it to stand in the sun for one day. In this way it will become pure and hard enough. You can make whatever you like with this: paternoster granules, knife-handles, rc.

Another experiment.

Take sixteen egg yolks. Beat them well with a spoon. Then take four lots[1] of arabian gum, two lots of Gumi cerusarum, and grind them to a powder. Mix this with the egg yolks. Make sure the gum dissolves properly. Then pour it into a strong, glazed wooden bowl. Leave it to harden in the sun for six days. It will become transparent and hard like glass. If it is rubbed, little bubbles will form on it, like other agate stones.

2. **How to make precious stones shine.**

Grind antimony to a powder. Sprinkle it onto a smooth lead tablet. Boil the stone on top of this. It helps it to keep its purity and its shine.

3. **How to make a stone which can be lit with a wet finger or with saliva from the mouth.**

Take a magnet which pulls in one direction and pushes away from the other. Put it in a glazed dish. Add to it one pound of metal and one pound of sulphur. Seal[2] the dish well. Place it in an unlit wind-furnace. Light a gentle fire and let it burn for a day and a night. The next day make the fire stronger. On the third day make a still stronger fire, so that the magnet begins to glow.

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1 Lot: a weight, varying between 16 and 50 grammes.

2 Vlutir or verlutir: to seal, usually with lutum lette. See Grimm, vol. 25, p. 831.

When it has been in the fire for three days and three nights, let it cool down. Now it is ready to produce fire whenever it is needed.

4. **How to soften precious stones so that one can cut them like cheese, and which, when poured or pressed into all moulds, will soon become hard again.**

In August take goose blood and ram's blood.

Dry it out well so that it hardens. Then, if you want to soften crystal or stone, take the dried rams and goose blood -- equal weights of each -- and grind them to a powder. Pour a strong willow and salt solution over this and mix well together in a dish. Mix with this a small bowl-full of strong vinegar. Place the stone which you wish to soften into this. Heat gently. Now you will be able to cut or shape the stone however you wish. When placed in cold water, it will harden again in one hour. Shine it using the method taught above.

5. **How to make beautiful pearls, just like genuine ones.**

In summer take pure white mussels. Scrape them clean with a knife. Add a piece of snail shell, as clean as you can find, and wash them thoroughly together. Grind them as finely as you can in a mortar. Wash them well in the sun on a piece of cloth. Then place them in a clean dish and seal it with luto sapientie. Leave it to dry in the sun. Then put the dish in a chalk-oven and burn it for as long as chalk is burned. Then remove the substance. It will have become a powder, just like snow. Now take egg white, cleaned with a bath sponge, and put it with the powder in a [pretty] beaker. Stir the ingredients together. Wash your hands clean. Make small or large pearls in your hands, according to wish. Prick them with a small brush while they are still soft. Place in a [nice] dish in the sun; the hotter the place, the better. Do not let any rain touch them. Then boil them in red wine. Let them dry. This is how to make beautiful pearls.

6. **How to treat and harden Mercurium so that one can beat it, cast it and work it. Meister[3] Wilhelm von Martin, alchemist to Emperor Friedrich, Duke of Austria. He has made countless pictures of Vienna and of Newenstadt in Austria from this silver.**

Melt Satuorn [Saturn] and pour it into a round dish. While it is still warm, press a small stone into it to make a small well. Cover the well with a small piece of cloth. On this, place Mercuriu in the quantity you wish. Then place this in warm ashes, until the Mercurius hardens. Break the substance hardened in this way into little pieces. Place these in very strong vinegar and boil for a quarter of an hour. Then take the juice of an ox-tongue with a little vinegar and a little oil. Boil the above pieces of Mercurij in this liquid. Only in this way will it become truly deadened; otherwise it will become live again. Then take four lots of sal armoniac, half a measure of vinegar, and add them to the boiled Mercurium in a well covered and well sealed dish. Leave to stand for eight or ten days. In this way, the vinegar will extract the strength from the Mercurio. Then place the Mercurium, in a tightly sealed dish, in a wind-furnace until it glows. Make the fire gradually stronger so that it glows brightly, until you hear a bang. This is a sign that it is ready. Then place the Mercurium in a dish, the bottom of which is covered with a layer of sulphur. Seal the dish tightly. Place in a warm ash or linden [lime] fire so that it heats up slowly, and so that the sulphur smokes over the Mercurium. Repeat this once a day for 30 days. Then remove the Mercurium. It is now hard enough to hammer and cast.

Take ten lots of this Mercurium and twenty lots of Deneris. Melt them together. Now it will prove to be like genuine silver in every respect.

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3 Meister: a master craftsman.

7. **How to make black, pleasant smelling, glowing candles.**

Two lots of Labdanu, one lot of Storax, one lot each of Sadalu and Albusar, one lot of Ireos, six *Pfennig* worth of Lignu aloes and of Cinanomi, four *Pfennig* worth of Jusquiamus and of roses. Grind all the ingredients to a powder and mix them together. Then take willow-wood charcoal, equal in weight to the rest of the ingredients. Mix it with the rest. Then take Gumi tragant in a glass or a dish. Pour red water over it and leave it to stand for a day. The gum will turn to water. Blend this liquid with the above powder and make a dough from it. Make finger-long little candles from the dough. If they do not glow right to the end, add more charcoal.

8. **How to make a pretty green colour.**

Mix verdigris with strong vinegar. Pile it up to dry. Pour vinegar over it again. Do this until it has had enough.

9. **How to make a good copy.**

Temper your apparatus and your hammer with equal amounts of egg white. Or use calcinated egg shells, mixed with egg white.

10. **Casting.**

Melt together lead, tin, white metal[4]. Add brass smeared with fat. If, however, you wish to cast [the metal], add to it a small amount of fat.

11. **How to print from paper onto tin.**

Place the paper or parchment with the design on it on the tin. Wet the paper or parchment completely. Let it dry again. Then peel off the paper again. The design will now be on the tin.

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4 White metal: copper mixed with a lighter metal, usually tin.

12. How to gold-plate beautifully

Boil your silver in tartar. Scrape it clean and return it to the tartar. Then take two parts saltpetre, one part salarmoniac, one part verdigris and two parts copper. Grind finely and beat. Add to the silver in the tartar and stir well. It will acquire a red covering. Now you can gold-plate it.

How to grind gold for gold-plating.

Beat one Quint[5] of fine gold. Add to it two Quints Mercurium, and stir together. Then put a pan in the fire. When it is glowing put the gold and the quicksilver in it. When the Mercurius separates, pour it into a bowl with a little water. Wash it. It is now ground.

13. Gold-plating copper and brass.

Give them a fine layer of lacquer[6]. Combine them. Paint this with ground gold. Place over coals. When it begins to smoke remove it. Separate with a brush. Put back over the coals. Continue doing this until it is dry. Then leave it lying over the coals until it acquires a pure gold colour. Take it off, clean it with a scratching brush and brown it.

How to gold-plate iron.

Pour vinegar over salt and vitriol. Boil the iron in this liquid. If the piece of iron is large, then paint the liquid on it while it is warm until it sticks [lit: until the two combine]. Then do with the ground gold as taught above.

14. How to dissolve gold-plated silver so that the silver remains whole.

Cover the gold-plated silver completely with sulphur. Then take raw Mercurium and heat it in a pan. Add the gold-plated silver to this. It will

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5 Quint or Quinnt: unknown measurement.

6 See Grimm, vol. 9, p. 730. Metals were usually lacquered with lime or chalk to seal the pores.

dissolve. However, if the silver moves [about] a great deal, the Mercurius will take [attract] the gold. Then scratch the silver with a wire brush over the Mercurio which contains the gold. Heat your silver until it glows, and boil it again in water of tartar. It will become beautiful and pure.

But to extract the gold from the Mercurio: pierce a small hole with a needle in a piece of leather. Tie the Mercurio up in it. Pour the Mercurium carefully [through the leather] into a basin. Put whatever remains in the leather back into a pan. Let the Mercurium evaporate over a fire. Then take the remaining gold and purify it in a Capella [a melting bowl]. Now you have extracted a grain of gold from the silver.

15. **How to boil off pure silver from copper coin.**

One lot of verdigris, two lots of white vitriol, two lots of sulphur and one lot of alum. Boil the ingredients together with one [drinking] glass full of sharp vinegar. The silver will remain whole in the glass in which you boiled it. The copper will boil in the steam [perhaps: boil off in the steam].

16. **A powder which will silver-plate whatever it is poured onto.**

Take one pound of wine-yeast, one pound of arsenic, one pound of common salt and one pound of calcis vive. Mix them together with egg white in a small pan. Put it into a sublimir-oven [a refining oven]. When you see a yellow smoke it is ready.

17. **How to solder iron.**

File the chosen iron and make it into a pile. Put it into the fire. Throw venice glass over it. Now it can be soldered.

How to solder brass: file it finely and sprinkle ground borax over it.

How to cast brass: sprinkle borax over the brass you are going to cast.

18. **How to turn copper into brass.**

Take as much copper as you wish, and a third as much Sal mey [perhaps an abbreviation of salmiak or sal ammoniacum?]. Grind it to a powder. Put both substances in a pan. Leave them for an hour to blend together. Then cast the metal.

19. **How to make good casts of all metals.**

When the metal has melted in the fire, pour a quarter of the weight of glass *gal*[7] into it. Now it will cast well. Take crystal, antimony and glass. Melt them on a melting plate[8].

20. **How to make minium [red lead].**

Burn pure lead to a powder. Rub it well. Macerate it in old urine. Then fire it again for two hours. Grind it up finely. Fire it again. Continue to do this for 24 hours, or until it turns a deep red colour. To turn it back into liquid, macerate in urine again.

21. **How to make cinnabar.**

Grind one part sulphur into small pieces. Melt it in a pan. Then stir two parts Mercurium into it. Stir well so that the Mercurius disappears. Leave it to cool. Grind finely. Place in a glass vessel or a glazed jug, with a small hole on top. Place a small piece of metal over this hole. When the tin is no longer damp, seal it with luto sapientie, and burn in furno sublimatorio. Or take two parts quicksilver and a third part of live sulphur. Put the sulphur in a glass dish. Place this over a glowing fire. Let it melt very slowly. Then add the quicksilver to the sulphur and stir them with a wooden spatula until the mixture hardens. Grind it

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7 See Grimm, vol. 17, p. 7682. *Glassgal* is made from the impurities scraped from melted glass, usually natrium sulphate and calcium sulphate.

8 A *dest* or *test* is a flat earthenware melting plate.

to a powder on a [pumice] stone. Put the powder into a glass vessel which has a stem one span[9] in length or longer. The glass should have a lining of the mixture, one finger thick. Now place it on a tripod over glowing coals. Seal it tightly at the top until it begins to get warm after about half a day. Then heat it more and more with glowing coals until the evening, when you will see red smoke coming out of the glass. Now it has burned for long enough. Take it off the heat. Leave it to cool down until morning. Then break open the glass, where you will find cinnabar.

How to make Lapis lazuli[10].

Take one lot of salarmoniac and grind it to a powder. Take two lots of sulphur and grind to a powder. Melt the latter in a glazed pan over coals. When it has melted, add the salarmoniac and four lots of Mercurium. Stir well with a wooden spatula. Leave to cool. Grind it to a powder and place in a glass or glazed dish which has a lining of luto sapientie, two fingers thick. Leave the hole at the top of the vessel open a little. Leave it to dry. Then place it on a tripod. Light a small fire under it with a few coals. Put a piece of metal on top of the hole and watch it all the time. When it is no longer damp, seal the hole with luto sapientie and light a large fire under it for one hour. The make the fire stronger until you see first yellow smoke, and then blue smoke. When you see this, leave it to cool and open it. The good lazuli will be at the bottom.

Or take one part salarmoniac, two parts white sulphur and three parts Mercurium. Mix them together. Burn the mixture in a glass beaker until blue smoke comes out of it.

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9 A span is an old measurement.

10 *Lasur* may also mean a varnish or glaze.

Or grind one lot of salarmoniac to a powder. Grind two lots of sulphur and melt it in a pan. Then add the salarmoniac to it and also four lots of Mercurium. Stir well with a wooden spatula. Leave to cool. Then grind to a powder and burn it in a glass vessel, as for cinnabar.

22. How to make verdigris.

Take ground brass or copper, dampened with old urine and sal armoniac. Put the brass on a board in the sun to dry. Wet it again as before until it turns green. This is how one makes verdigris.

Or paint sheets of copper with thick honey and sprinkle them with burned salt. Then dip them in vinegar and stand them in dung for two weeks.

Another experiment.

Purify sheet copper. Then grind Atrament with urine on a stone and cover the metal with it. Let it dry in the sun. Then put it in a glazed dish and place in hot coals. Heat it well for two hours, then open up the dish. When you see black smoke let it cool and break the dish open. Take out the metal and powder it in your hands. If there is some metal which you cannot break up, repeat the whole process again until it turns to powder. Then wash it with warm water or urine in a basin. Then leave it to settle. The copper will fall to the bottom and the Atrament will float to the top. Pour this off and let the copper dry in the sun. Then take this powder and one pound and four lots of powdered tartar. Grind them together with child's urine and let the mixture dry. Then return it to the first dish and burn as before in a large fire, until you see green smoke. Then leave it to cool down and open up the dish. You will find a beautiful green verdigris.

How to make white lead.

Take the desired amount of lead and scrape off the top layer from both sides. Cut it into strips three fingers wide and one span long, or longer. Make a hole in the top of each one and pull a small length of string through them. Find a measuring[11] vessel or a dish three spans in length, with a clean lid, and place the strips in circles round the pan. Put two measures of good vinegar into the pan and throw in a handful of salt. Mix over a fire until it becomes boiling hot. Cover the pan so that the steam does not escape. Put it in a warm place and leave it there for seven days. Then take the lid off. Take the metal strips out. On each side of each strip you will find a white paint, one finger thick. Take this off with a knife and place it in a clean pan. Then return the strips to their pan and cover, as before. Put the pan back in the warm place and leave it until the tenth day. Remove the white paint. Then put it in a mortar and pour a little water over it. Pound the paint well for half an hour, until it becomes a thick cream. Then, using a spoon, put the substance into one or two pans. Stand it in the sun and leave it to harden. Now it is ready. Do not forget that it will become lead if it is hung [?]. If the vinegar disappears, add more.

23. **How to make goldsmith's borax.**

One part [finest] wheat flour, one part Mastix[12], two parts Euforbij. Grind all the ingredients then boil until the mixture thickens. Then put it in a glass phial and bury it in dung. Leave for four weeks or longer.

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11 See Grimm, vol. 3, p. 80.

12 *Mastix*: a tree.

24. How to extract sulphur from ore.

If the ore contains so much sulphur that you cannot extract any lini [?] from it because of the sulphur, then grind the iron and boil it until it is completely pure. Wash the pile [of ore] clean with a warm salt-solution. You must top up the salt-solution three more times. The sulphur will boil [off] in the salt-solution. Then you will be able to extract what is in the ore.

25. Colouring copper with gold.

Take equal amounts of tartar, bonemeal, Tutia (zinc oxide). Steep them in strong vinegar and leave the mixture to dry. Grind to a powder and lay one lot of this powder stratum super stratum with one lot of copper. In this way it will take on a gold colouring.

How to separate gold from copper.

Make a hole in the front of a geviert [?] oven and fill it with a stopper which can be pulled out. Dig a small hole underneath the oven to catch the King. Take one hundredweight of copper and two hundredweight of lead. Purify it above the hole until it separates[13] and there is no more lead left. Take a fork and scrape off the foam so that the mixture is pure. Now the copper is ready. Take a quarter of common salt, a quarter of sulphur, a quarter of saltpetre and a quarter of Auripigment. Pound the ingredients finely in a mortar and pour this powder over the substance in the liquid. The gold will sink to the bottom. Pull out the stopper. The King will drip into the hole [in the ground below]. Boil this with lead or some antimony until the mixture begins to smoke. Now you will find the gold.

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13 *Plicken*: presumably refers to the separation of a metal, eg. *Plicksilber* means a metal which has separated into lead and silver.

26. How to make all metals and all unforgeable things malleable so that they become soft and can be forged.

Mastix, incense, myrrh, borax, vernisium. Take one lot of all these substances. Grind it all to a powder. Pour a quantity of this powder the size of two or three peas over things which cannot be forged and they will become truly malleable.

27. How to make gold and silver malleable

Take one part oil and one part honey. Dip glowing gold or silver into this mixture three or four times.

28. How to refine coin on a melting-plate.

If it is mixed with tin which you cannot extract, then take finely ground venice glass and add it to the coin on the melting plate. Seal it almost shut. If nothing happens, add antimony the size of a pea to it. But don't sprinkle it over the mixture or it will steal the gold or the silver. Break open the melting-plate. You will succeed, without doubt.

29. How to test whether silver contains gold.

Rub the silver hard on a gold-stone[14]. Then take a Quint of verdigris. Pound it together with salarmoniac in a mortar. Mix with good vinegar so that it all turns the same colour. Paint this mixture over the silver which you rubbed on the gold. If the silver contains gold, the silver which you rubbed on the stone will stay beautiful. But if it contains no gold, the silver will not stay beautiful but will disappear completely. This is called a *kolrib*[15]. If you want it [the test] to be

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14 Gold-stone: used to test for the presence of gold in other metals; see Grimm vol. 8, p. 850.

15 No translation found.

better and more reliable, add aqua fortis instead of vinegar. This will quickly remove the silver [that part rubbed on the stone] if there is gold beneath.

30. **How to silver-plate copper. Hans Durckeymer.**

Take tartar, alum and salt and grind them finely. Then take a silver tablet. Rub it well on a pumice-stone, and mix it in with the other ingredients. Take this powder and put it in a glazed pan. Pour on some water and add some cut up copper. Watch it, so that you know when it has had enough. Clean it with a brush; this is how you know when it has had enough.

31. **How to deaden Mercurium so that it can be wrought.**

Place it in a bell shaped vessel and pour sap [tree oil] over it, or laurel oil. Place it over a gentle fire. Boil it up. Take care that the smoke does not harm you. Pour oil on it frequently, and also very strong vinegar, so that the substance boils and is deadened. Then remove it -- it will be hard and can be wrought.

32. **How to give copper a gold colouring. How to treat it so that it can be wrought just like gold.**

Put the desired amount of copper into a gold-pan over the fire, as if you were going to melt smoke gold, and when the fire is hot enough blow the coals and the dust from it. Take a goldworm [glowworm] and grind it finely. Keep adding the powder until the metal separates. Now it has had enough. Carefully take it off the fire. Take Arthemesia, the spice, and burn it. Rinse the copper with it -- the more gently, the better; do not use too much. This will make it pure and beautiful. It can be cast into pots, beakers, or whatever one wishes.

33. **How to extract silver from tin and make goblets from it.**

Fire pure tin with white metal to clean it of all dust and impurities. Then, when it has been scraped clean of all the scum, return the tin to the fire. If it is *marck* [?], take one lot of Mercurium, or a little more, and when it first begins to

boil in the heat, sprinkle powdered glowworm over it. Add a small lock of woman's hair and burn it. When it has been in the fire long enough to melt everything, add the powder and sprinkle a little water of Arthemesia over it. Remove from the heat and pour it out with the water, gradually, and not too fast. Leave it to cool down slowly.

34. How to lightly silver-plate a copper drinking-cup on the outside and on the inside.

Two parts of Mercurium and a third part of tin. Melt the tin in a glass dish, and then add the Mercurium. Mix them together. Then pour out the mixture and leave it to cool down. Pound it in a mortar to make a fine powder. Then take alum and pound it in a mortar to make a white powder. Take this powder, put it on a pumice-stone and cover it with lime. Place it on a damp plate with a small glass underneath. The alum will turn to liquid on the stone and will run down into the glass. If you want to silver-plate the drinking-cup, take the aforementioned water of alum and paint the cup with it. Leave it to dry. Do this two or three times. Hang it up high to make the lacquer all the better. Then take the powder you made before and rub the metal in it. It will turn silvery-white.

How to make wrought copper silver, inside and out.

One part of *sternfarb*[16], two parts Mercurium, three parts Arsenicum. Blend all the substances together. Melt an equal amount of pork fat in a pan and take the skin from it.

Mix everything together to make a salve. Paint a thick layer of this onto the metal, on the inside and on the outside. Lay it in oak wood which is fresh and hollow, or in fresh oak leaves. Cover it and bury it under the earth in a place

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16 *Sternfarb*: No translation found. Literally: star colour.

where the sun shines a great deal. Leave it there for three months. Then remove and clean with water and a brush. rc

35. **Red water of gold.**

Grind green vitriol[17] finely. Place in a glazed ampoule and close it tightly with a lid. Paint it with lime and leave it to dry thoroughly. Then put it in a burning-oven. Leave it here for three days and three nights; the fire must keep burning all the time. Then remove the ampoule. Let it cool down. Open it. Keep what you find in the ampoule. Then put it in a sublimatorium. Heat it until it boils. After a time, take it off the heat and stir it with an iron spatula. Then put it back over the fire. Leave to boil for awhile, stirring all the time. Do this for three hours. Then take it from the sublimatorium, pound it and put it in an ampoule. Seal it tightly and place it in horse dung. Leave it for eight weeks or more. It will turn to liquid. Burn this same liquid in an alembic, then let this substance flow out. Cover it and leave it to congeal over the fire. Grind it on a stone and put it into a glass receptacle. Seal it well. Place it in horse dung and leave it here for seven days and nights or more. Only now will it become real water. Store this carefully in a glass jar. The water has virtue and is as red as blood, and also as strong. Take strips of copper and heat them until they start glowing. Dip them in the water many times. They will turn the colour of red gold. Do with them what you wish. The aforementioned substance also has the virtue of burning like aqua vite, and if one puts a hard substance into it, it will become as soft as wood -- whether it is iron or whatever it is -- and afterwards it will burn like a candle.

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[17] See Grimm, vol. 4, p. 1179.

36. A strong aqua fortis.

Take one pound of vitriol, two pounds of saltpetre and one pound of alum.

Water of tartar.

Put a handful of salt into a bowl with water and the same amount of tartar. It is used to boil silver white.

Regarding silver.

Rub one lot of arsenici album on a stone and mix it with one lot of saltpetre. Put the mixture in a sealed glass retort and place it in a wind-furnace and heat it, first gently, then more strongly, until you can no longer see any smoke. Then heat it fiercely to make everything glow. Remove it. When it is cool, break it open. You will find a powder in the retort. Grind this again on a pumice stone. Now it is ready. Also take one lot of copper, the same amount of brass, and the same amount of silver. Make them into sheets. Place the first two pieces in the pan and lay them stratum super stratum with the third piece on top of the powder. Cover the pan well with luto sapientie. Place in the fire. Let everything melt and mix together and when you see that it has melted, take a pail with warm water and a clean broom. Pour the liquid through the broom into the water. It will break into small pieces. Then pour off the water and collect the pieces together. Put them into a pan. Melt them again and pour the mixture into a cast smeared with honey. Now you have finished. Take care when melting that you do not inhale the smoke. Similarly, when you rub it on a stone, use human urine. rc

37. How to make white copper.

Take ground salarmoniac and copper sheet. Mix them stratum super stratum in a pan, sealed tightly with luto sapientie. Place over the fire and melt it completely. The salarmoniac will draw the red out of the copper. Wash the

powder from the copper sheet with vinegar, and distill the vinegar from the powder. Now it is ready.

Another experiment.

Melt copper and lead together. Pour it into sap from the *Hauswurtz*[18] plant. It will turn white. rc

38. **How to treat all metals so that they are malleable and can be cast.**

Pour the metal into honey. Now you can cast it.

39. **How to gold-plate steel or iron.**

Take one part tartar, half as much salarmoniac, the same amount of viridis and a little salt. Boil in white wine and paint this onto smooth armour with a brush. Let it dry. Then combine it and gold-plate it with ground gold, just as a goldsmith does.

40. **How to separate gold or silver from steel.**

Heat Mercurium in a pan. Break venice glass into small pieces and put a little over the Mercurium. Stir and paint the mixture onto the gold-plated silver. Heat it over a glowing fire. Then spread it on a dish with a feather. Press the Mercurium through a piece of cloth. The ground gold will remain in the cloth. Reduce it with saltpetre.

41. **How to make copper exactly the same colour as gold so that it keeps [its colour] through two or more fires and is malleable.**

Take one lot of copper, one lot of lapis galminaris and half a lot of zinc oxide. Heat the copper until it is glowing, rinse it three times with urine. Then heat the lapis galminari and rinse it in urine three times too. Do the same to the zinc oxide. When the copper is dissolved, take one lot of copper and two lots of

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18 Semper vivum tectorum.

honey. Boil the copper and the honey together until the honey is black and completely dry, so that it can be ground. Then grind the honey and the lapis galminaris and the zinc oxide. Boil all the substances together until the copper dissolves completely. Pour it into a mould. Now it is ready.

How to soften and heighten unworkable gold. Elizabeth von Drittenhoven.

Take your metal and heat it until it is glowing over coals, then rinse it in salarmoniac water. It will become soft and will take on a deeper colour.

Regarding silver.

One lot of silver, one lot of copper. Melt them together. While the mixture is melted and fluid, take half a lot of verdigris and half a lot of Arsenicum. Grind them to a fine powder. Add to this the silver and the copper. Mix well with an iron spatula or a fork. Then pour it into an iron cast.

42. An oil which makes everything malleable.

If however the silver is not malleable, one should melt it and add to it the following oil: take saltpetre, tartar, salt and verdigris. Boil it with water. Then pour urine over it. Boil it again. An oil is produced. Pour this oil over the above-mentioned silver while it is fluid and it will become malleable.

43. Separating gold from copper.

Melt copper with antimony. When melted one should let it foam up. Then pour it into a stone bowl and quickly pour in an equal amount of quicksilver. Place another bowl over it and shake it well. The powder will draw the gold to itself. When it is cold, break it open and remove the Mercurium. Place it in a different vessel over the fire, and let the Mercurium evaporate. You will find beautiful gold at the bottom of the bowl.

How to turn copper into gold.

Burn the copper with sulphur to a powder. If you turn the powder back into copper again with lead, it will become like gold. Beat this same copper until it is thin, and burn it like sulphur just as you did before. In this way you will get a quarter of gold from one pound of copper. Take an equal amount of real gold; they will go together very well.

How to make gold from copper.

Melt three pounds of copper and pour five pounds of hot lead into it. Mix them together and pour the mixture onto thin sheets of metal. Place the sheets in a steaming-oven. Make a steaming fire under it. The lead will separate from the copper and will act as if it had sucked bees. Burn this. You will find half a pound of good metal. Put this in cement and you will find half a *marck* [worth] of gold. Add to this the same amount of other [real] gold. It can be soldered and will last forever.

44. How to make silver from copper.

Mix sulphur and nut oil together. Paint the copper sheets with this mixture. Cover the bottom of a dish with a layer of salt, one finger thick. Place the painted sheets on top of this, followed by a layer of salt. Repeat this until the dish is full. Seal the dish well and leave it to dry. Then place it in a kiln. Then take the sheets and grind them up finely. Wash this powder with warm water and rinse it thoroughly five or six times until pure water runs out of it and there is no more salt. Then mix the powder with egg white and dry it over a fire. Do this eight or nine times; the more often, the better. Then make little balls [from the mixture]. Lay them stratum super stratum with willow until the dish is full. Seal it well and let it dry. Place it in a kiln. Now take the balls and rub them with egg white, as often as before -- eight or nine times -- and let them dry each time.

Then rub the balls with sal alkali. Put them in a pan and place in a hot fire. Blow it for an hour or longer. Pour them into a greased cast. You have made good silver. Add this to half the amount of natural silver.

Amalgama.

Powder some spring-root[19] and take equal quantities of Mercurium and alum, and make a dough from these substances.

45. How to turn brass into gold.

Melt brass and pour it into pike roe and bull's gall and seed of henbane. Make sure it doesn't bubble [lit: jump or spring]. In three days it will turn into gold.

Catch *Mollen* in this way.[20]

When they are lying in the sun, sleeping, creep up on them with two filters and two large, long gloves. Put them on and quickly take the sleeping creatures before the emit any poison. Put them in a dish containing human blood. The poison is yellow. It may stain the gloves.

Gold from *Mollen*.

Two pounds of ground brass and one quart of goat's milk. Take a broad-bottomed, narrow-necked vessel which has a lid with a hole in the top. Take nine *Mollen* and put them in the vessel with the milk. Bury it in a damp place underground. The lid with the hole in it must remain above the ground so that the *Mollen* can breathe air and do not die. Leave it to stand until the afternoon of the seventh day. Then remove the vessel with the *Mollen*. They will, in their hunger, have eaten up all the brass. Their strong poison will cause the brass to turn into

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19 *Springwurzel*: a root with magic properties; see Grimm vol. 17, p. 122.

20 *Mollen*: a type of poisonous worm. No translation found.

gold. rc. Now take the vessel with the *Mollen* and dig a hole two dwarf's-fingers deep. Place the vessel in this hole, and surround it with glowing coals, so that the vessel glows all over. The bottom should not get as hot as the top. It is for this reason that you should bury it slightly, so that the brass does not melt. When you think that the *Mollen* have been burned to a powder, take the vessel out of the fire. Let it cool completely. Then take a cast, pour in the brass with the powder, and add water. Wash the powder from the brass. Tie the brass in a linen cloth and hang it in the smoke. It is better to also add some salarmoniac. Then wash off the salt and let it dry. Now it is good calx solis. rc

46. Calx Lune.

Make calx lune from sheets of silver using the method I have just taught you. Then you should rub the powdered silver with Tartaro calcinato or with sale comuni preparato, and then wash it off with pure water and dry as before. You will have made calx lune. If, however, you want to prepare some calx and make calcem solis from it, take calx lune and rub it finely with tartaro calcinato and then pour it over a stone into a glass and let it dry again. Then take crocum martis. Let it dry again. Mix the crocum with a little green alum water. Rub the calx with this same croco until it turns as red as cinnabar. Then rub it with aqua salis alkali. Let it dry completely. Heat it until it turns to liquid and cast it. It will now be as red as gold. Truly, from this you can make solem, as I will teach you later. rc

How to calcinate Venerem.

You should calcinate this in the following way: take arsenicum album and grind it to a powder. Rub it well to make an oil. Then take filed copper and rub the oil on it. Lay it stratum super stratum with the copper and sal communi preparato until the pan is full. Seal it with luto sapientie. Place in coals in a

wind-furnace for three hours. Leave it to cool down. Then break it open. Wash the chalk which is inside with warm water or urine until all the salt has been removed. Let it dry. Now it is calx alba. If you want to make it red, make it with croco martis and with aqua salis armoniaci.

Another experiment.

Melt venerem over a fire. Add to it arsenicum albu or sulphur purgatum, and mix together until it no longer smells. Then pour it into another vessel and wash it thoroughly with water. Stir it as before. Do this three times. Store it in an earthenware pot.

Another experiment.

Paint sheet copper with vinegar. The vinegar should contain sal comune preparatum. When the copper has been painted with it, let it dry. Then place it on two pieces of iron in a calcinating oven -- high up, so that the coals do not touch it -- and leave it to stand for three hours. Then take it out. Rinse it with vinegar and salt, and bend the sheet this way and that until the little black specks have all dropped into the vinegar. Then wet the sheets in the vinegar and the salt. Heat it in the oven as before. Do this until the sheet disintegrates. Sieve the vinegar. You will find powder at the bottom. Grind this with borax made with tartar and with oil of tartar, as I have taught you before. Add this to one pound and two lots of borax and one lot of calce saturni. When you have ground it thoroughly, leave it to dry and put it in a pan. Light a fierce fire under it and heat it until it has turned to liquid. Then pour into a lightly greased iron vessel. You will find that it has become white and soft. Then you can make silver from it, as I will teach you later. You should know that this is the best purgation. Use rc

47. How to make Crocum veneris.

Take a large sheet of venerem and one pound of sal conmune. Grind and mix together. Steep the mixture in vinegar. Paint the metal with it and cast it. Rinse it in salted water. Do this so often until there is none left. At the bottom you will find crocum veneris. Now it is ready. rc

48. Coagulatio Mercurij.

Make a dough from one lot of Luna and twelve lots of Mercurij. [First] wash the Mercurium thoroughly with vinegar and sal commune. Then take three lots of Luna and grind it finely. Add to the other Mercurium in the glass. The Mercurius will coagulate hard, and will remain so for ever and ever.

The mother of all waters. This will dissolve all substances.

Take one pound of sal nitri and one pound of vitrioli. Grind them both and mix them in a mortar. Burn the water. Do not add any more water to it. Take one ounce of this water, one ounce of undistilled wine. Pour them both into the same glass. They will burst into flames. You can light a candle from it. It is the mother of all colours.

Also: take three ounces of the aforementioned water, three ounces of Mercurium and a quarter of sulphur vivum. Place them all in a glass to dissolve. When everything is dissolved, distill it. You will find that the Mercurium is fixed red. In this way you can fix all substances. But if you want to make the water really strong, then multiply these quantities up to seven times each: one pound of vitriol and also one pound of saltpetre. Burn them. As often as you burn them, add the mother each time to the glass. The water dissolves iron and all wrought metal.

49. How to calcinate the seven planets, how to purify them and reduce them.

How to calcinate Solem.

Take a vessel with a long narrow neck, as wide as a florin. Melt Saturnum in this. When it has melted, cover the hole at the top of the glass with the best gold that you have and melt the Saturnum [some more]. Light a fierce fire under it and keep turning the gold over, so that the steam from the Saturno goes right through the gold. Do this until it can be powdered easily.

Calx Lune.

Do exactly the same as written above with a silver Turnus.

Calcinatio Solis.

Take the desired amount of gold. Grind finely to a powder. Steep this same powder in strong vinegar for nine days. Then remove. Let it dry in the sun and grind very finely. Add an equal amount of aqua salarmoniaci. Repeat this seven times. The last time let it dry. Now you have good Calx Solis. rc

Another Calx Solis.

Take sheet gold and cut it up into small pieces, the size of peas. Put Mercurium in a pan and heat it over hot coals. Then add the gold and remove the pan from the heat. Stir the mercurium [and the gold] until you can no longer feel any gold in the Mercurio. Replace the pan over the coals. Beat the mixture until you can no longer smell or see the Mercurius. Remove the powder from the pan and grind on a stone with sal communi preparato. Now you have good quality gold. Let a goldsmith polish it up for you.

50. How to make silver from *Mollen*.

Take nine *Mollen*, two pounds of Mercurius and a pot which is narrow at the top and wide at the bottom. Put the ingredients in it and make a small verrem

fire underneath. They will eat all the Mercurium because of the heat. Burn them until they are as white as gold. Not you have good quality silver.

Another experiment.

Take nine *Mollen* and one pound of Mercurium. Have a glazed pot with a cover made. Take the Mercurium and put it into the pan. Pour goat's mild over the Mercurium so that it is covered. Add the worms. Cover the pot. Place it in dung for four weeks. Take it to a wood. Let it burn, but alone -- leave the area yourself for the smoke would kill you. When you think that the smoke will all be gone, break it open. You will find pure silver of good quality.

Nota.

Take at least twenty *Mollen* and put them in a glass receptacle. Add half a pound of Mercurium and some broken brick -- a small amount, ground finely like flour. When they [the worms] have destroyed this, add the same amount again. Do this until they will not destroy any more. Twenty days later put them in a dish or a jug and seal it all over with master lime, so that the steam can escape. Burn them to a powder. Then pour the powder into a melting-plate and add some lead. Now you have materiam infallibilem.

Or put twenty *Mollen* in a dish and add two pound of Mercurium. Seal the dish tightly with luto sapientie. Place in horse dung for four weeks. Then place on an oven. Blow the fire for four hours. Leave to cool. Break it open. Put [the substance] on a melting-plate. Now you have good quality silver.

51. Tin which will not crack.

Take five ounces of strong common salt and the same amount of honey. Dip the tin into this twelve times. Then rub it and it will be purified and will not crack. Put it in a pan. Seal and place in an oven for one day and one night. You will find golden chalk. rc

52. How to turn Mercury into gold. Hugo.

Make a solution of three parts vitriol, two parts saltpetre and one part alumen plumosun. Dissolve one or two pounds of Mercurium crudem in it. Then distill the water from it and pour it back over it. Or put the same amount of water into a glass with a long neck, a little alembic and a receptaculo, sealed well. Place the glass in warm ashes. Then distill the water from the Mercurio over a gentle fire until the Mercurius becomes as red as blood and no longer smokes over the metal. This will happen in three months. Try it through [after?] one, two and three months. Without doubt the Mercurius will be fixed. Quickly reduce it with saltpetre or borax and it will turn into gold.

How to make Crocus Martis.

File the desired amount of Crocus Martis with steel. Wash thoroughly with strong vinegar, twenty times or more. Put it in an oven and let it dry. When it is dry, pour it into vinegar or aqua fort. Keep doing this until it has been standing for four weeks. Put it in a *reueber* [?] oven for four days and nights. Little balls will appear on top. Scrape these off. Put the rest back in the oven until it has produced enough [balls].

How to calcinate Saturnum.

One part lead, one part tin. Put them in a pan and melt them in a wind-furnace with a fierce heat. Stir with an iron spoon. Take out any powder you find in the mixture with a spoon and put it aside. Do this until everything has turned to powder. Put it all into a clean pan and burn it over coals. Stir the powder frequently with the spoon until it is white. Put this aside. If you want to calcinate just tin on its own, you should know that it will not calcinate as quickly as lead. So you must light a fierce fire under it. Keep it burning all the time until the tin turns to powder. Then do with it as taught above for the lead and

the tin together. If you want to return the powder from the lead and the tin to its original form, take a pound of the powder and one lot of borax of tartar. Rub both well with oil of tartar and leave to dry. Then you should melt it in a pan over a fierce fire. If the fire is not hot enough, the tin will turn into white glass and the lead will become yellow glass.

Calcinatio Jovis or Saturni.

Take thin sheet tin and cut it up into small pieces. Take a clean pan. Fill it with alternate layers of live chalk and tin. Seal it with luto sapientie. Place in a furnum calcionationis for a day and a night or longer. Then remove the tin and melt it. Pour it into vinegar. Grind it to ashes. Do this three times and it will become as hard as Luna. If you wish to cast lead you must calcinate it. Rinse it in a solution made of sal communi preparato and ashes. Do this four or five times. Then grind it and let it dry. Place in a well-sealed pan. Put in a baking oven for a day and a night. Remove. You will find that the chalk is green. Soon you will be able to make Solem from this. rc

53. How to make a hard, white powder from tin.

Melt clear tin. Pour it into vinegar. Then rinse it often in aqua Mercurij. It will become as white as Luna. Then make a solution of vine ashes and vinegar and rinse the Jonem in it seven times. Then rinse it twelve times in fresh goat's milk. Add powdered arsenico albo. It will become as white and hard as luna.

How to calcinate Mars.

Take it and beat it until it is thin. Purify it well. Heat it until it is glowing. Then rinse it seven times in linseed oil. The Mars will become soft. When this has happened, take the metal and cut it up into small pieces. Take Mercurius crudum and lay them stratum super stratum in a pan. Seal it well and put the pan in a calcinating oven for half a day. It must be hot so that the metal glows. Let it cool

down. Take out the metal. It will be as white as luna vera. Store this until I teach you more about this. Remember to dampen the Mars first with linseed oil and to lay them both stratum super stratum in a pan, as was taught before. rc

Purgatio Veneris.

Paint the Venus with linseed oil. Then take arsenicum sublimatum and paint this on the Venus. Place it stratum super stratum in a pan. Seal it tightly Place in a wind-furnace and let it stand in liquid for four or five hours. Then let it cool down. Boil it in a globe [globe-shaped vessel]. It will be the most pure copper. rc

Operatio ad Solem.

Take one part calce solis, made as I have already taught you. Then take one part of Mercurio sublimato and alba fixa. Mix them all together with lacte virginis, and let it dry properly in the sun. Then rub with aqua salis armoniaci and let it dry. Do this three times. Then rub it with croco martis de atramento or veneris and let it dry. Repeat this until it turns as red as cinnabar. Then seal the glass with luto sapientie and stand it in dung for fifteen days and nights. Then seal the glass with [more] luto and place it in a baking oven for one day and one night. Take one part of this powder to thirty parts of veneris purgate ad solem. It will turn to gold. rc

Another experiment to make gold.

Calcinate common zinc oxide. Add to it half as much atramento rubeo or vitrioli rubeo or venere rubeo and an amount equal to this of calce lune preparato ad solem. Grind this to a powder and rub with aqua salis armoniaci and stand in dung for three days. Then dry it, rub and leave it to rot. Do this three times. Then add one pound of the powder to one pound of lune or calce veneris. Melt the mixture. Sprinkle a little of each powder on it and mix until the powder is all burned and smells. Then pour it, while still hot, into ground vine ashes. Boil in

water for one hour. Take salarmoniac and verdigris and vitriolium rubeum calcionatum and the same amount of urine. Then burn it in coals. Now it is good sol. rc

Another experiment to make gold.

Take one part calcem lune, as much calcinated egg as you wish. Mix them with aqua auripigmenti as I taught you before. When you have mixed it, let it dry in a distilling oven and mix it once more with auripigmenti. Let it dry again. Do this four times. Then let it dry completely. Mix it with aqua salisarmoniaci and put it in dung until it has all turned to liquid. Then strain it through the linen sack into a glass. Then let it dry again. Mix one part of the powder to forty parts of veneris purgate ad solem. It will be good quality sol. rc

55. **An experiment to make silver.**

Take ten parts tin and four parts live quicksilver and melt them together. When they have melted, stir the mixture with an iron spatula until it is cold. It will become powder. Take equal amounts of arsenici albi and sulphuris albi and sal gemme. Take white gal mey, weighting the same as all the other ingredients put together. Grind everything to a fine powder and put this powder in an alembic. Dissolve for a whole day, from morning until evening. Remove and keep what is in the top[21]. Grind the feces and purify as before. Do this over coals until the feces no longer smell. Then take the powder which remains from the fecibus and grind it with aqua salis armoniaci, then put it in a glass receptacle. Place it in dung until it turns to liquid. Let it dry again. Repeat this until it will flow on a glowing sheet of metal. Then mix one part of the powder to one *marck* [worth] of veneris purgati ad lunam. rc

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21 *Huot*: the top inside of an oven, or a sill in the oven. See Grimm, vol. 10, p. 1982.

If you want to use this experiment to make sol, take the powder which is condensed from the fecibus and grind it with croco martis until it is red. Then place it in dung, as before, until it flows on the metal. Then add one lot of the same substance to one *marck* [worth] of Saturni or veneris purgati ad solem. It will be good quality sol, and is worth as much [as real gold].

Another experiment to make silver.

Take one part calce Lune, two parts Mercurio fixo and sublimato and two parts sulphuris fixi and sublimati. Grind everything with oleo tartari or with aqua mercurij. Let it dry. Do this three times. Then powder it into a glass beaker. Bury it in dung until it turns to liquid. Then dry it in furno sublimationis and grind again with aqua Mercurij or salarmoniaci and return it to the dung, as before. Then let it dry in a baking oven for one day and one night. Powder it and add one lot of this powder to one pound of veneris purgati. It will be luna of good quality.

Another experiment to make silver.

Take two parts probate, four parts veneris purgate ad lunam. Melt both substances together. Take four parts arsenici albi et fixi and grind to a powder. Add this to the first substances. Stir together until the arsenicum has burned and no longer smells. Then add a little powdered borax. Cast it. It will be good quality luna.

Another experiment to make silver.

Powder one part Auripigmenti. Take an equal amount of beef fat. Mix the two together in an iron pan. Then put in a glazed vessel with a long neck. Seal tightly with luto sapientie and place in a fire. Let it boil until the fat has completely disappeared. Then remove from the vessel and place in a new one, the same shape as the first. Make a solution of willow, and pour this same solution

over the powder in the vessel, and boil until the liquid has evaporated. In the vessel you will find a substance as white as snow. Keep this. Then add one part of this same powder to two parts good Luna, three parts veneris purgati ad lunam and one part borax. Cast it. It will be good quality Luna. rc

Another experiment to make silver.

Take equal quantities of arsenicum album fixum, Mercurium sublimatum and fixum and calcinated egg. Grind to a powder. Put the powder in a glass beaker and heat it in dung until it turns to water. Dry it in furno sublimationis. Then rub it with aqua alkali and dampen it. Then let it dry. Mix it as before. Repeat this seven times. Then let it dry completely and make a powder from it. Add one part of this powder to 100 parts of veneris purgati, and it will turn into silver.

Another experiment to make silver.

Take one *marck* [worth] of Luna bona, six parts of salis comunis preparati. Wet it with vinegar. Pour it over the Luna. Tie it in a linen cloth. Seal with luto sapientie. Let it dry in the sun. Then put it in a baking oven for one day and one night. Remove it and pound it in a mortar, then wash it in warm water. Let it dry. Then take two lots of this powder, two lots of sale comuni preparato and grind them together to a powder. Then put three lots of Mercurij vivi in a pan. Place over coals until you can smell it. Then add the other powder and mix them together until the smell has gone. Pour into another pan. Add the first powder and stir as before. Do this four times. Then take Mercurium preparatum. Take the first powder of Luna, which you had left over, and half as much of the second; that is, the venere purgato. Put them in a linen cloth as before, and seal it with luto sapientie. Leave it to dry. Then place it right in the middle of coals, so

that there are coals above and below it. Seal it almost shut. Let it melt. It will become good quality silver.

Another way of making silver.

Grind together three parts salarmoniac, three parts arsenici albi and ten parts Mercurij sublimati et fixi with aqua salarmoniac. Let it dry. Repeat this until the powder turns white. Then rub the powder in double the amount of salarmoniaci and heat it in a glass beaker in dung. Leave to stand for four weeks until it has all turned to liquid. Then let it dry in furno sublimationis, and mix one part of the powder to 100 parts of veneris purgati or rito Jovis purgati. It will turn to silver.

Another way of making silver.

Take Mercurium crudum and the same amount of sal commune preparatum. Pour good vinegar over them and boil for a day. Then take an amount of sulphuris sulbimati et fixi equal to that of the Mercurium and grind the two together. Put the mixture in a glazed dish and seal tightly with luto sapientie. Place it in an oven for one day and one night. Then remove and add half as much, or the same amount, of venere purgato ad luna with a little borax. Melt them together to produce good quality silver.

56. How to make one lot of good quality silver from four lots of quicksilver.

Heat Mercurium vivum and let it cool down again. Grind vitriol to a powder and mix it with warm water until it dissolves. Then add one pound of vitriol to half a measure of water. Add to this half a pound of Mercurium vivum and boil the mixture completely dry. Then remove the Mercurium and put it in a pan. Take the same amount of Saturnum and turn it into liquid. Pour out into a melting-plate and burn it off over a fierce heat. Take two lots of a powder called silermontanus from the pharmacy and, after placing the substance on a melting-

plate, you should sprinkle the powder over it. The Mercurius must not be taken off the heat, and you will have made one lot of silver from four lots.

57. **How to fix Mercurium.**

Grind together one pound of Mercurium, a quarter of sal commune preparatum and four lots of salarmoniaci. Pour a quarter of oleum laterni over it and put it in a glass receptacle. Seal well so that nothing can fall in it, and place it in dung. Leave it to stand for fourteen days until it turns to liquid. Then take it out and place it in furnum coagulationis. make a fire underneath it of oil and fat, and do as follows: Leave to stand for thirteen days and nights. It will coagulate in the receptacle. Place in furnum sublimationis and open the receptacle at the top. Light a strong fire underneath. Leave to stand until the mixture hardens and no longer gives off steam. Remove and break open the receptacle. Take out the Mercurium and grind it on a stone. Mix with aqua alkali and place it in an alembic. Distill the water from it. Do this seven times to fix it. rc

58. **How to make a constant fire.**

A fire which will burn at a constant heat should be made as follows: Take one part resin, two parts of fat and three parts oil. Melt them together and add pork fat or lard, equal in quantity to the fat. Put everything in a pan. Put a wick in it, one finger thick. Light it. When it burns add more. The heat should be constant. Place under a dish. This same fire will fix and congeal all metals very quickly, as I have taught before.

An easy skill to learn.

Take lutum sapientie and roll it into a little ball which is hollow inside. Fill it with Mercurium which has been deadened, as shown above, with salt water. Seal it well with luto. Let it dry and place it in lead or tin so heavy that it hardens and is deadened before the next morning at the third hour. Its quality

will have increased like good quality silver, and it can be cast or wrought. So that not an ounce of it will ever discolour, purify copper and soften it with a good softener and whitener. Its liquid content and anything flammable will be all destroyed and eradicated by the water, because of the common salt, for it destroys all the liquids and all flammable things.

59. **How to calcinate alum.**

Calcinate alum in the following way: Take alum and grind it finely. Half fill a clean dish with it. Seal the top well and place in a calcinating oven for half a day. Let it burn until it is like cotton wool. You can also calcinate vitriol in this way.

How to prepare sal comune.

Prepare sal commune in the following way: Take white salt and pour old urine over it which has been standing for one day on live chalk. Mix them six times a day and leave to settle overnight. Then sieve the urine through a filter, and put whatever is in the filter into a lead pan. Stir until it turns to water. Then boil over coals until it hardens. Then pound it to a powder and put it in two or three ox bladders. Tie them at the top and hang them in warm water in a kettle. Leave them in there until the water turns salty. Then pour it into a lead pan and boil it until it turns back into salt. Do this nine times. The last time, let it heat until it is glowing. Let it cool down. Now it is sal preparatum or sal commune. rc

60. **How to prepare sal armoniac.**

Prepare salarmoniac in the following way: Take ten pounds of sale preparato [made] as I have taught [before]. Pour this over wine and warm urine taken from healthy people, and let the salt dissolve in the urine. Let it settle and pour it through a filter into a kettle. Add to it soot from the tiles in a baker's

house. Boil it. When the salt is dry, pour human urine over it. Do this until seven measures of urine have boiled in ten pounds of salt. Take care that the kettle doesn't overflow when it is boiling. When it has boiled, pour pure water over it and stir (rc) until it is like water. Leave it to stand and pour off the water. Boil again until it is dry. Then take it out, put it in a clean pan or cast, and leave it to dry in the sun. Then you should refine it as follows: Take five pounds of this same mixture and mix with ten pounds of filed iron. Place them in a vessel called a rotunda and seal it tightly with luto sapientie. Place it in a sublimating oven or on a tripod, and burn a strong fire under it for one day until the bottom of the vessel is glowing. Leave it to cool down until the next morning and then open it. On the top of the vessel you will find a white salt. Remove this and add an equal amount of salt comune preparatum, and rub them both dry. Put them in a sublimating vessel and purify for half a summer's day over a gentle flame. Leave to cool and rub again. Purify as before. Do this three times and store it. rc

61. **How to make sal alkali.**

Make sal alkali as follows: Take equal amounts of willow and live chalk. Put them in three hats[22], one above the other, so that that which runs out of the top one flows into the one below. Then pour the liquid into the top hat. Place a glazed dish underneath and keep pouring the solution through the hats until there is no acid left in the ashes. Leave the solutions to stand overnight and boil them the next morning in a glazed dish until the water has evaporated and [the mixture] is hard. Leave to cool. You will find a stone called alkali. Powder it. Half fill a clean dish with it. Do not cover it. Place in a calcinating oven. At first light a

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22 *Huot*; perhaps something similar to the *huot* cited above.

small fire until it bubbles, then a larger fire until it flows like lead. Quickly pour into another dish and let it cool. Now it is sal alkali. Store it in a glass container.

How to make sal borax.

Make sal borax in the following way: Take calcinated tartar and do with it as I instruct. Powder it and pour warm water over it until it dissolves. Stir with a wooden spatula. Pour through a linen cloth and do with it as I instructed previously. Notice that at first the water is cloudy. You must strain it through a sack until it is pure. Repeat this until the bitterness is gone from the fecibus; until the feces no longer taste sharp when placed on the tongue. Then take sal commune and pour water of tartar over it. Mix in an iron pan and boil until thick. Then pour it into a clean dish and let it harden. Remember to stir the contents of the dish now and again. When the mixture almost sticks fast in the dish, let it cool and remove it. Now you have sal borax philosophum, which is as good as genuine borax. rc

Another experiment with borax.

Take one pound of uncalcinated tartar and grind it to a powder in a mortar. Strain through a sieve. Put in a copper pan and add one-sixth of a part of sal commune preparatum. Boil together for half a day until it turns to water. There should be ten times as much water as there was salt at the beginning. Pour it into a basin. On top of the water place a filter which is three fingers wide at the back and which tapers to a point at the front where the liquid will flow out. Pure water will flow out. Keep this and add yeast to it. Boil it as before until it becomes thick and hard. Leave it to cool. Now you have borax which can be used for many things.

62. **How to make Aqua Mercurij.**

Take a quarter of a part of Mercurij sublimati and fixi and the same amount of vitriol. Grind them together on a stone. Then place the powder in a linen sack. Then make a hole in some horse dung and place a wide glass vessel in the hole, which should be wide enough to prevent the glass from being dirtied by the dung. Make two *Gallen* [?], and hang the sack with the Mercurium and the vitriol over the glass and cover it with plenty of dung. Leave it in here for two weeks until the mercurius has flowed through the sack like water. If the liquid is not white enough, then mix it again with more vitriol and do as before. Repeat this until the liquid is good ad lunam faciendam.

How to make Aqua salis armoniaci.

Take as much sal armoniac as you wish, and the same amount of egg white. Stir them together. Add a little vinegar, so that you get a liquid. Hang it above a glass vessel in dung, just as I taught you before with aqua Mercurij. Or, place it on a smooth stone and put it in a damp cellar. Tip the stone slightly at the front and place a glass with a tray in front of it. The water will flow into this glass. Then sieve it through a filter and store it. rc

63. **How to make aquam lac virginis.**

You should make aquam lac virginis as follows: Take Litagirum, that is silver foam. Powder it and put it in a pan with good vinegar. Boil it over a gentle heat. Then place a white filter in the water, just as I instructed before with the borax experiment. Pour anything which runs out back in. Do this until the water is pure and white. Then take glass gal[23] and powder it. Press it through a sieve

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23 See previous reference.

and do with it just as I instructed you to do with the Litagiris. It will turn to liquid, as white as milk. It is called lac virginis.

64. How to make Aquam Salis alkali.

Make aquam salis alkali as follows: Take sal alkali and sal armoniac and calcinated egg. Mix them with good vinegar and do with this mixture exactly as I instructed you to do with the aqua mercurij. rc

65. How to make a liquid called Crocus Martis.

Make a powder from green vitriol. Fill a clean dish with it and seal it tightly. Burn it until it is completely white, as I instructed for alum. When it is as red as minium [red lead], it has been heated enough. Pour good vinegar into an alembic and distill it in furno distillation is over a gentle heat. Do this three times. The pour this over the other substance. There should be equal amounts of liquid and red vitriol. Stir three times a day with an iron spatula for six days. Then pour it into an alembic again, distill as instructed before. If the liquid is not red enough, add more powder, stir and distill again, as before. Keep this -- it is the best Crocus Martis for making gold.

How to calcinate tartar.

Wash tartar from white wine with warm water. Let it dry. Then take a clean dish which will hold one quarter [quart?], and almost fill it with the tartar. Cover it tightly and place it in a calcinating oven. Let it burn until no more smoke is given off. Then let it cool down. Grind the tartar to a powder and place it in a different dish. Seal the dish well with luto sapientie. Then place it in the calcinating oven for three days and nights or longer. Burn with a fierce heat until the tartar turns as white as salt. Store it in a warm, dry place.

66. **How to calcinate egg shells.**

Wash some egg shells in a cold salt solution, let them dry and remove the skins inside. First put the shells in a large dish over coals and burn them to a powder. Stir them for a long time. Then place them in a small dish. Do with them exactly as I instructed for the tartar and burn them until they are as white as chalk. Then they are ready.

How to calcinate zinc oxide.

It is best to use red or yellow zinc oxide. Place it in a pan over hot coals an heat until it is glowing. Then rinse with good vinegar. Repeat nine times. Then grind it to a fine flour on a stone. Keep it.

How to make Aquam lunarem.

Take 100 hen's eggs. Remove the egg yolks and beat the whites until they are stiff. Place in a glass receptacle and seal the top tightly. Place in dung and leave to stand for fourteen days. Each day remove the dung with a piece of wood for an hour to give it some air. Then cover it again. After this time it will have turned into liquid. Pour this into another glass receptacle and let it cool. Remove the film which has formed on top of the water and add calcinated egg, so that they are covered by four fingers of water. Stir and put it back in the glass container. Seal well. Put it back in dung and leave it there for the same length of time as before. Take it out and pour it in a pan. Stir it. Pour it through a white filter, and pour back whatever is distilled from it. Keep doing this until the water is pure. Then throw the feces away. The water is now good ad lunam and ad solem. rc

67. **How to make Aqua Causata.**

Take two pounds of ashes made from burned wine yeast, one pound of nutshell ashes, two pounds of bonstro [?] ashes, one pound of grapevine ashes. Mix

them all together and pour on water. Stir. Add two pounds of calx vivam and stir. Pour on water. There should be two pounds of water per pound of mixture. Boil the mixture until it bubbles. Let it settle and stand for a day and a night. Stir six times during the day. Pour off the pure liquid into a kettle. Take two lots of arsenicum album, two lots of realgar [?], two lots of tartarum calcinatum, and a quarter of salarmoniacum. Grind this all to a powder and add it to the water. Boil it until half of it has evaporated. Leave to cool. Put it into an alembic and distill it as I have taught before. When there is nothing left to evaporate, let it cool. Break open the alembic and pour it back in. Distill five times, and save the water until I teach you what to do with it. You can coagulate Mercuriu in it and fix it, as I will soon teach you. Keep the feces too. They are good for hardening Mercurium. Take Mercuriu and put it in a pan. Heat it and pour in the feces. Stir. The Mercurius will die and become hard and black. When it is cold, it will be as hard as stone. You must refine it as I will instruct de sublimacionibus rc.

How to make Aqua castica.

Take one part sal alkali, one part common alum, one part alum plumbosum, one part salarmoniacum and two parts sal commune preparatu. Grind them all finely on a stone and wet the mixture with vinegar or aqua ardens. Put it in a glass vessel and place it in dung. Leave it here for three weeks, it will turn to liquid. Pour this liquid into a pan and place a filter in it. Distill it in a different pan and keep in a glass receptacle. This is good for making silver, as I will teach you later. The filter through which you distill the liquid must be tapered to a point at the front and wide at the back, as I instructed previously.

68. **How to make Aquam auripigmenti.**

Take four parts auripigmenti, two parts salarmoniac, one part calcinated egg and one part sal commune. Grind finely with a stone and dampen it with vinegar.

Let it flow from the stone in a ladle, just as I instructed before with aqua alkali. Or put it in a glass vessel in dung and leave it until it turns to liquid. Distill it, as for aqua fortis.

Aqua de sale communi preparato.

Take one pound of sal commune and a quarter of alum. Grind on a stone with vinegar and let it flow from the stone as instructed above. Distill per viltrum. Now it is good aqua de sale communi. rc

69. **Aqua from egg yolks.**

Take hard boiled egg yolks. Powder them. Place them in a burning-vessel. At first the water will turn white. Then it will turn red and thick. When it is cold it will be lighter and runnier. Whatever you paint with it will take on a gold colouring. rc

How to make tartar oil

Take tartar which has been calcinated to a white powder. Grind finely on a smooth stone and pour it into a glass vessel, as I taught you to do with aqua salis armoniaci and de croco Martis. When it is in the glass vessel, keep sieving it through a filter until it is pure. Store it carefully in a glass container.

70. **Oleum laterni or petroleum.**

Make this as follows: Take new brick which has never been wet. Heat it. Rub it with nut oil until it will absorb no more. Then grind it finely. Put it in an alembic and distill the oil from it. When there is nothing left to distill, empty the brick, take the new one, heat it and soak it in the oil. Do this three times and you will make oleum laterni or petroleum.

Oleum benedictum.

Make oleum benedictum as follows: Take tree oil instead of nut oil. Then follow the instructions above.

Oleum sulphuris.

Take one pound of sulphur, ground to a fine powder, one pound of linseed oil. Place them in a glazed pan. Boil until there is a red foam on top. Then pour good vinegar over it. The oil will rise to the top. Lift it off and save it. Wash the sulphur and pour nut oil over it. Let it boil in all the same substances as before; and when it is as red as before, pour vinegar over it again, take the oil off the top, and add it to the first lot you took off. Do this until you can no longer smell the sulphur on the glowing coals or on a hot sheet of metal. Wash it well in hot water, let it dry. Then put it in a thick sack. Tie it so that the sulphur can move about. Put four fingers of live chalk in a pan and place the sack with the sulphur in it on top of the pan. Then pour good vinegar over it to a height of one span above the chalk. Let it boil for a day. Then remove the sulphur from the sack. Wash with warm water and sieve off the water. Let it dry. Now the sulphur is well purified and prepared.

Nota.

Take the oil which you collected before. Make a thick paste with live chalk and willow ash. Take twice as much of this paste as there is oil, and boil them together until it starts to foam. Scrape off this foam and put it in a glass beaker. Leave it to stand in dung for ten days. Then grind it and put it in an alembic. Distill it as instructed before. That which remains in the alembic is oleum fixum sulphuris. You can fix all metals with this oil, as I will instruct you later.

71. How to purify Sulphur.

Take sulphur which you find in cream form. Grind finely and press through a fine sieve. Then place it in a glazed dish which has three legs. Pour on good wine vinegar and boil it constantly for a day and a night. Foam it up by stirring with a wooden spoon which has little holes in it. When the vinegar has

been boiling for a day and a night, pour old urine over it, which has been boiled to a foam and filtered. Let the urine boil for a further two days and nights, and let it foam as before. Do this until the water is pure. Then let it dry in the sun. Now it is purified.

How to refine sulphur.

Take sulphur purgatu, made as I have just instructed. Take one pound of whichever oleo sulphuris you wish and one pound which has been calcinated as I taught previously. Take a quarter of drop-stone [stalactite] ground finely and powdered through a sieve. Mix all three well, place in an alembic which has a hole in the top. Place a small piece of metal over the hole and seal the sublimatorium well with salt, so that no smells escape. Put it in a sublimating oven and light a gentle fire under it. Watch the little piece of metal all the time. When it is no longer damp, seal the hole with luto sapientie and make the fire a little stronger. Leave it like this for six hours. Then open it up and scrape off whatever is in the *huot* with a rabbit's foot. Mix it back into the fecibus which remained below. Put it back into the oven and refine it as before. Repeat this three times. The third time scrape off what you find on the *huot* and keep it. Stir the feces alone and refine them alone, as before. Do this until the feces no longer smell over the hot coals. Then take the feces and throw them away. Take one part of the sulphur which was refined from them (the feces) to two parts salis comunis preparati. Mix well together and refine as before. But first put a piece of metal over the hole until it is no longer damp. Then seal the hole as taught before, and when you have done this five times, take the sulphur which you have refined from it and mix it with twice the amount of salis comunis preparati, as I taught before. Refine it again and again until the sulphur becomes as white as snow. Now it is ready. Store it. rc

How to make oleum ouorum.

Remove the skins from inside some egg shells. Put them aside. Take egg yolks. Beat them in a small bowl. Put them in a glass receptacle and place in warm dung for eight days. Then remove them. Now take the shells from which you previously removed the skins. Place them in an alembic. Seal it well. Distill three times. This is called oleum ouorum.

72. **Oleum auripigmenti.**

Take oleum auripigmenti and grind it. Boil it in a glazed dish with oleum lunare. When it is half boiled, place it in an alembic and distill it. Take the feces and grind them on a stone. Return them to the alembic and pour the oil over them again. Distill again as before. Do this three times and keep the substance. It is a good ad fixationem, as you will learn soon.

Oleum Lunare.

Take as much as you wish of the aqua you have just made, which is called lunaris and pour it into an alembic. Distill it until it is dry. Now you have oleum lunare. With this you can fix all types of metal; and Mercury can also be made to congeal with this, as I will teach you after this. If you distill it three times, it is still called oleum lunare. rc

Oleum sulphuris.

Make it as follows: Mix the sulphur with tartar to a paste and put it in hot coals for three days. Then mix with tartarum. Put it into a glass beaker and distill it per alembicum. This is called oleum sulphuris.

73. **How to refine Mercury.**

Take one pound of Mercurium, half a pound of sal armoniac and pour good vinegar over them so that they are nice and wet, and stir. Leave this to stand overnight. In the morning rub with a pumice stone. The mixture must be

powdered before the vinegar is poured over it. Then, when you have ground it so finely that you can no longer see any mercurium, let it dry and mix thoroughly with vinegar. Place it in an alembic and refine it in furno sublimationis, just as I taught you to do with the sulphur. Seal the filter of the alembic well, so as not to let any of the smells escape. At first light a very small fire underneath it for two hours until the dampness has evaporated -- you can see this by watching the piece of metal on top, as I have taught you before. Then seal the hole well and burn a big fire under it for two hours, and finally burn an even bigger fire for four hours. Then let it cool down slowly and open it up. You will find Mercurium like white flour in and around the top[24], and also lying on the fecibus. Brush it off with a feather and mix it with the fecibus with strong vinegar, as before. Let it dry and refine it as before. Do this until the Mercurius has become as white as snow. The sixth time that you do it, keep what is refined from the fecibus, and refine the fecibus alone. Repeat this until the feces no longer smell over the coals. Then take the Mercurium which you have refined and mix it with twice the amount of sal comune. Place in an alembic, as before, and refine exactly as before. Do this three times. Then refine the feces as before, until they no longer smell over the coals. Then throw them away. If the Mercurius is not as white as snow, take different sal preparatum and refine the Mercurius exactly as I have just instructed until it is white. rc

How to improve the quality of gold.[25]

Make an aqua fortis from vitriol, saltpetre, verdigris and alum. Calcinate copper and gold together in this water. The quality of the gold will increase to the

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24 *Huot*: see above.

25 *Gradieren*; see Grimm, vol. 8, p. 1688.

very highest grade. Take the copper which was purified in the water and add it to the silver which has also been purified in aqua fortis. Put them in a pan and melt them. Now you have gold, grade 16.

There are eight results of Alchemy,
Smoke, ashes, many words and unfaithfulness,
Deep sighs and hard work,
You will have poverty and misery.
If you want to be free of these things,
Beware of Alchemy!

The End

MDXXXI

Facsimile edition of the Editio Totius Mundi, Vienna.

Appendix Containing illustrations.

1. The ninth key of Basilii.
2. The elements of the Philosopher's Stone.
3. The procreation.