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CLASS III.  
CHEMICAL PREPARA-  
TIONS OF MINERALS.

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SECTION I.  
PREPARATIONS OF SALTS.

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Spiritus Salis.

*Spirit of Salt.*

**T**AKE of dry'd Sea-salt, a pound ; and three pounds of Brick-dust ; mix them together, and put them into an earthen retort, whereof they may fill but one half ; place the vessel in a reverberating Furnace, and fitting it with a capacious receiver, keep a slow fire at the first : Then throwing away the phlegm that comes over, and luting well the junctures, increase the heat till all the spirit shall, like clouds, be driven into the receiver.

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Spiritus Salis Glauberi.

*Glauber's Spirit of Salt.*

Take of Sea-salt dry'd and reduced to powder, two pounds; of Oil of Vitriol, a pound; and as much Spring-water as will serve to dissolve the Salt; put them into a glass retort, and distil them in a Sand-heat, till they become dry\*.

Sal Mirabile Glauberi.

*Glauber's wonderful Salt.*

Take what remains behind in the distillation of *Glauber's Spirit of Salt*, and dissolve it in a sufficient quantity of Spring-water; filtre the solution, and evaporate it to a pellicle; then set it in a cold place for some days, that the crystals may shoot, which are to be separated from the corrosive liquor and dry'd: but if they prove too sharp, let them again be dissolved in water, and filtre the solution; observing to evaporate it with care, only so

\* For the previous preparation of the Sea-Salt, used in these processes, with the methods of conducting them to the best advantage; the difference of the productions, &c. See *Boerhaave's Chemistry*, pag. 245 — 247.

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far as that the Salt may be reduced to crystals \*.

Spiritus Salis dulcis.

*Sweet Spirit of Salt.*

Take one part of Spirit of Salt, and three parts of rectified Spirit of Wine †; digest them together for some days; then distil them according to art in a Sand-heat; taking care towards the end of the operation that the retort break not with a too violent fire. And repeat the distillation three or four times.

Sal Prunellæ.

*Salt Prunella.*

Take of purified Nitre reduced to powder, two pounds, fuse it in a crucible, and gradually sprinkle thereon an ounce of the Flowers of Sulphur; when the deflagration is

\* *Glauber's* account of this Salt is truly wonderful; but its medicinal virtues are what deservedly gains it a place in this Dispensatory; being one of the quickest cathartics yet known, yet working kindly and without griping. The solution of it in any distill'd water may be very advantageously disguised by the addition of a red, a blue, or yellow Syrup. But for the cautions required in its exhibition, See *Boerhaave's Chemistry*, pag. 248.

† Some, as particularly Mr. *Lemery*, mix them in an equal proportion.

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over, pour out the melted Salt upon a copper plate, first made clean, dry and hot, so as that the Salt may be formed into thin cakes.

Sal Polychrestum.

*Salt of many Virtues.*

Take of powder'd Nitre, and of the Flowers of Sulphur, each a like quantity; mix them well together, and by degrees throw them into an ignited crucible. After the deflagration ceases, keep the crucible in the fire for one hour; then purify the Salt, by dissolving it in hot Water, filtering the Solution and exhaling it till it becomes dry.

Spiritus Nitri.

*Spirit of Nitre.*

This is distill'd from Nitre in the same manner as Spirit of Salt.

Spiritus Nitri dulcis.

*Dulcified Spirit of Nitre.*

This is made with Spirit of Nitre in the same manner as sweet Spirit of Salt\*.

\* For particular directions relating to the four preceding processes, the reader may to advantage consult M. Lemery's and Boerhaave's *Chemistry*.

Aqua



Aqua Fortis simplex.

*Single Aqua Fortis.*

Take two parts of Vitriol calcined till it becomes white, and one part of powder'd Nitre; mix them well together, and put them into an earthen retort, whereof they may fill two thirds; then fitting a very large receiver thereto, distil as was order'd of Spirit of Salt\*.

Aqua Fortis duplex.

*Double Aqua fortis.*

Take of green Vitriol calcined to whiteness, of powder'd Nitre, as also of Clay dry'd and reduc'd to powder, each a like quantity; mix them well together, put them into an earthen retort, whereof they may fill two thirds, and distil as in making single *Aqua Fortis* †.

\* For the particular manner of conducting this process, see *Wilson's* Compleat Course of Chemistry; tho' he varies the proportions of the ingredients from that wherein they here stand.

† This receipt for double *Aqua fortis* is the same with that of *M. Lemery*; whose reasons for preparing it in this manner deserve to be read; tho' *Mr. Wilson* thinks it needless to add any clay; the vitriol containing in itself what is answerable thereto; as *Boerhaave* also judiciously remarks. *Chemistry*, pag. 229.

*Aqua*

*Aqua Regia.*

Take an ounce of Sal-Ammoniac reduced to powder, put it into a large cucurbit, by degrees mix therewith four ounces of Spirit of Nitre or double *Aqua Fortis*; and let them stand together in a Sand-furnace till the Salt is totally dissolved\*.

Vitriolum calcinatum.

*Calcined Vitriol.*

Take any quantity of green Vitriol reduced to powder; put it into an unglazed earthen vessel, and over a gentle fire bring it to appear white; but keep it continually stirring, to prevent its sticking to the sides of the vessel, and growing stony. If it be urged with a vehement fire, it changes into a very red substance, call'd *Colcothar of Vitriol*.

Gilla † Vitrioli.

*Salt of Vitriol.*

Take any quantity of white Vitriol, and dis-

\* The cautions given by M. *Lemery* are very necessary to be observed in this preparation, in order to prevent the danger that might otherwise attend it; for unless the glass made use of be capacious, the rising fumes will be apt to burst it; and the like effect may follow if the vessel be not removed from the sand-heat, as soon as the dissolution begins, when any large quantity is prepared at once.

† The Word *Gilla*, of it self properly signifies a solution of vitriol, made spontaneously; tho' in the sense  
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dissolve it in a proper proportion of hot Spring-water; filtre the solution, and evaporate it till only one third remains behind; then set it in a cold place for three days, that the crystals may shoot to the sides of the vessel, which are afterwards to be dried in the Sun. In the mean time, exhale the remaining liquor again till no more crystals will shoot from it.

Spiritus & Oleum Vitrioli,  
*Spirits and Oil of Vitriol.*

Take any quantity of green Vitriol, calcined till it becomes white, and afterwards reduced to powder; put it into an earthen retort, whereof it may fill one half, and place the vessel in a reverberatory furnace; then having fitted the retort with a very capacious receiver, proceed to distillation. The first thing that ascends is the phlegm, which is to be emptied; then having well luted the junctures, gradually increase the fire to its height, and continue it in that state so long as any vapours come over. Separate the Spirit from the Oil, in a retort placed in a Sand-heat, for the former will ascend with the second and third degree of fire, and leave the Oil behind. What remains in the retort after

it is here taken, it denotes an emetic Salt: but the *Gilla Theophrasti*, signifies a solution of white vitriol made in water, filtered, evaporated and dried again.

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the first distillation, is called by the name of *Colcothar* \*.

Spiritus Vitrioli dulcis.  
*Sweet Spirit of Vitriol.*

This is made with Spirit of Vitriol in the same manner as sweet Spirit of Salt.

Ens Veneris.  
*Flowers of Copper.*

Take of *Colcothar* of blue Vitriol, first welledulcorated with Water, and dry'd; and of *Sal-Ammoniac*, each a like quantity; reduce them separately to powder, then mix them together, and put them into an earthen cucurbit, whereof they may possess two thirds; place the vessel, with a blind glass head, in a naked fire, using only a moderate heat at first, and increasing it, by degrees, as long as the flowers rise of a yellow colour inclined to red; which, when the vessel is cool'd, are to be carefully swept out with a feather †.

Lapis

\* There are some particular cautions requisite to render this process safe; and an odd phenomenon attending it well worth any one's knowing; which the reader may find candidly delivered by the accurate *Boerhaave* in his *New Method of Chemistry*, pag. 299, 300. PRACT.

† Instead of the *colcothar* here ordered, there are those who employ iron, or the Salt of Steel; and think they better the medicine thereby, induced, I suppose, by considering



Lapis Medicamentosus.  
*Medicinal Stone.*

Take of Colcothar of Vitriol, Roch-Alumi, Litharge of gold and Bole-Armeniac, each a like quantity; of the best Vinegar, as much as will float four inches above them; and digest them together, for two days, in a glazed pot; which being afterwards put over the fire, let all the moisture be evaporated, and calcine the remaining mass with an intense heat\*.

Considering colcothar as a dry and useless *caput mortuum*; we may be assured however, that the Sal-ammoniac raises copper enough in the operation to give the production a colour, medicinal virtues, and the name of *Ens Veneris*. See *Boerhaave's Chemistry*, pag. 301, 302. *Wilson's Chemistry*, pag. 45. *Quincy's Dispensatory*, pag. 269. and *Lemery's Chemistry*, pag. 277.

\* This medicine is calculated for a styptic and astringent, to be used, by way of lotion or injection; and seems at least as well contrived to answer the end, as any of the several other forms thereof given by pharmaceutical writers.



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