

BOOK the Third, of the Third Volume.

OF MINERALS.

The PREFACE.

By Mineral, in its general Signification, is understood, whatsoever partakes of the Mines, or is increas'd in, or has pass'd thro' them. But as it is the Subject of this Book, it is taken in a more particular Sense; in which it is by some, said to be a fix'd and solid Body, produc'd by Exhalations and Vapours, inclos'd in the Bowels of the Earth, as Meteors are form'd in the Regions of the Air; or as others will have it, that 'tis form'd of a tender Substance, produc'd in the Earth by Coagulation, and encreas'd by the external Addition of Sensible Particles, which oftentimes is the Matter that in Process of Time commences Metal; so that I shall comprehend, under the Name of Minerals, every Thing that is of a Metallick Nature, and which differs only from Metals, in not being malleable, or that is not capable of Fusion as the Loadstone, &c. We shall begin therefore with Antimony, which comes nearest the Nature of Metals, and differs from it only in not being ductil.

I. Of Antimony.

MR. Furetiere says, *Antimony* is a Mineral that comes very near the Nature of Metals; and that some are of Opinion it contains all the Principles of them, for that it is found near all Sorts of metallick Mines, more especially near those of Silver and Lead; that it contains a double Mineral Sulphur, the one Metallick, approaching the Purity and Colour of Gold, the other earthy and combustible, not

unlike common Sulphur; a fuliginous, sooty, ill digested Mercury, partaking of the Nature of Lead; and somewhat of a terrene fix'd Salt. The same Author observes also, that the Use of *Antimony*, unless in the Composition of Fucus, or Cosmeticks, was wholly unknown, 'till about the twelfth Age; but then a certain Monk, *Basilius Valentinus* by Name, publish'd a Book intitled, *Currus Antimonii Triumphalis*, wherein he undertakes to affirm, that it was a Remedy against all Sorts of Diseases. Three hundred Years after *Paracelsus* brought it into Vogue; but then in the

the Year 1566 the Use of it was condemn'd by Act of Parliament; and accordingly one *Besnier*, a Physician, in 1609, transgressing it was excluded the Faculty. In the Year 1637 *Antimony* was again receiv'd by publick Authority amongst the Number of purging Remedies; and in 1650 the Act of State made in 1566 was repeal'd. Anno 1637, the Faculty caus'd it to be insert'd in their *Antidotarium*, printed that Year; herein following the Opinion of *Marebriolus*: And in short, on the 29th of March, 1668, gave it the Sanction of publick Authority, by which *Graduates* had a Liberty of making use of it, but with a Prohibition to all others, unless by their Advice: It acquir'd the Name of *Antimony*, according to the Opinion of some, from a German Monk, the afore-said *Valentin*, who, in his Search after the Philosophers-Stone was wont to make much Use of it for the more ready Fluxing his Metals, and throwing a Parcel of it to some Swine, he observ'd that they had eaten it, and were thereby purg'd very violently, but afterwards grew the fatter upon it; which made him harbour an Opinion, that the same Sort of Cathartick, exhibited to those of his own Fraternity, might do them much Service; but his Experiment succeeded so ill, that every one that took of it died: This therefore was the Reason of this Mineral, being call'd *Antimony*, as being destructive of the Monks.

Of Natural or Mineral Antimony.

Antimony is taken from the Mine in little Stones of different Bigness, resembling Lead-Oar, with this Difference, that it is both lighter and harder; and by Reason of this Similitude, some call it Black Lead, or Marcasite of Lead; others Saturn, or the Philosophers Wolf, because it devours and consumes all Metals whatever, Gold only excepted: It is also call'd *Proteus*, from the Diversity of Colours it assumes by Means of the Fire; but its more ordinary Appellation is Mineral Antimony, and it is call'd by the more understanding, *Crude Antimony*, as never having sustain'd the Fire.

Heretofore Hungary was the only Place for Mines of *Antimony*, but now we have none from thence, since the Discovery of

those in France. The best Mines are those of *Poitou* and *Bretagne*.

Mineral Antimony is sometimes met with pure, and sometimes attended with a Sort of Stone, which the Mineralists call *Spar*; there is some full of *Striae*, like so many Needles; others also all over of an odd sooty Black: This *Antimony* is of very little Use in Medicine, unless it be purified by melting, as will be seen hereafter: The Chymists use it, indeed, for their particular Preparations.

The purest *Mineral Antimony* is to be chosen, that is, as free as possible from all Sorts of Stone or *Spar*: It matters not from whence it comes, provided it be good, though there are those that pretend the *Antimony* of *Auvergne* to abound most with Sulphur.

Some Gentlemen of the Retinue of the Ambassadors of *Siam* have brought Home considerable Quantities of *Mineral Antimony*, but no Experiments have yet been made of it. This *Antimony* is white, and full of small Needles; and as far as I can understand, altogether proper for the same Purposes as the *Mineral Antimony* of France. As for that of Hungary, I can say nothing of it, never yet having seen any of it.

Of cast or melted Antimony.

Melted *Antimony* is what we improperly call *Crude Antimony*, because it has undergone the Fire to reduce it into Cakes and Needles, after the Manner as we see. To melt *Mineral Antimony*, the Mineralists take two Earthen Pots, one whereof they fill with the Mineral in Powder, the other they place empty in the Midst of a strong Fire, laying a Sort of an Iron Skimmer upon it, upon which they put the Pot of Powder turn'd Upside down; then encompassing both the Pots with Fire, the *Antimony* will melt and pass through the Holes of the Iron Plate, and fall into the empty Pot underneath, and form itself into a Cake as it is sent to us.

The Iron Plate with Holes, put between the two Pots, serves to keep back the Stone or *Spar* that's found commonly with the *Mineral Antimony*. When the *Antimony* is melted, take the Pot off the Fire, and when cold, break it and take out the *Antimony*, which

which then may be conveniently sent whither you please.

Formerly was to be met with in *France*, the *Hungarian Antimony* in Cakes or Loaves of three or four Pounds Weight, interwoven with small Needles running a-cross each other, of a golden yellowish Colour, and at Bottom white inclining towards that of Silver. This *Antimony* was found in the Mines of the Mountains belonging to *Presburg*, the Capital of the lower *Hungary*, where it was melted and made into the Figure we find it. But this is now so scarce, that it's next to an Impossibility to find out any of it. Those that have work'd upon this Sort of *Antimony* have assur'd me, that 'twas much fitter to yield whatever uses to be obtain'd from *Antimony* than that of *France*; and withal, that from every Pound of it they cou'd obtain two Ounces of better Mercury than that of *Spain*.

In *France* we have several Sorts of *Antimony*, which differ only according as it is better or worse cur'd: And the next best to that of *Hungary* is what we have brought from *Sannur* in *Anjou*, whither it is sent purified from *Poitou*.

The *Antimony* of *Poitou* appears with fine beautiful Sort of Needles, long, large, white, sparkling, light, and easily broken, and with as little half-melted *Antimony* as may be, which resembles the Dross of Iron, which is commonly found at the Bottom of the Loaf in *Scoria*, and is call'd the Bottom or Top of *Antimony*. This Defect, however, is seldom found in the *Antimony* of *Poitou*, by Reason they are well vers'd in Refining or Melting it; and this is the Sort of *Antimony* that should be us'd in all the following Operations, because it abounds less with Sulphur, and affords more of the *Regulus*. We have had, for some Time past, an *Antimony* from *Bretagne* in small Needles very pure, and perfectly fit for the same Purposes as that of *Poitou*. A third Sort is that we have from *Auvergne*, which in one Word is good for nothing, being very hard, full of Dross, and in small Needles of a tawny Blue, which makes it evident that 'tis not half purified, nor divested of its fetid and malign Sulphur, which gives Abundance of Trouble and Difficulty to those that work upon it.

Besides the great Number of chymical

Medicines which are made of, or drawn from *Antimony*, Abundance of Artificers use it both to promote the Melting of Metals, and also to make the *Regulus*, especially in *England*, whither we send a great Part to put in their Pewter to make it the harder, whiter, and more sounding: But I observe, nevertheless, that of late Years the *English* don't make so much use of it, because instead of the *Regulus* of *Antimony* they use Tin-glafs. The Letter Founders for Printing use *Antimony*, to render their Lead the more durable and hard. *Antimony* melted, and boil'd in a Pilsan with *Salsaparilla*, *Guaiacum*, &c. is a certain Cure for the secret Disease. And how much soever this Drugg has been condemn'd and out of Use in Times past, it is altogether as much in Vogue now. When you make use of it break it in small Pieces, or reduce it into a gross Powder, and put it into a Linnen Rag to be boil'd with other Things. Some give the Powder instead of the Liver of *Antimony* to their Horses, and say it has the same Effect.

I shall not lose Time here to enter into a Disquisition, whether there be Male and Female *Antimony*, as most Authors affirm, and that the Male is the coarser, more sandy, scaly and light, and consequently less efficacious than the Female, which is more ponderous, bright colour'd, and more brittle; for I have dealt a great deal in *Antimony*, and never knew any other Difference, but that of its Purification. And when it is good it may serve alike to all Purposes, so that I don't see how there can be two Sorts.

Antimonium, sive Stibium, or *Antimony*, is a Mineral approaching very near to a Metal. It is heavy, shining, and in Chrystals, shooting like Needles, of a blackish Colour, which is found near the Mines of Metals in several Parts of Europe, as *Hungary*, *Transilvania*, *Britany*, *Poitou* and *Auvergne*; they get it in Pieces bigger or less, full of little hard Stones or Pebbles, which the Workmen call *Gangue*: They take the clearest, or that which has least of the *Gangue* in it when they make use of it, for several prefer the Mineral *Antimony* before that which is cast and purified.

To purifie or refine *Antimony*, they melt it over the Fire in Pots or Crucibles, in order to separate the Gangue or Dross; which Cooling, they cast it into Cakes, as it appears when brought to us, which we usually, tho' improperly, call *Crude Antimony*, notwithstanding it has past the Fire. *Hungarian Antimony* was formerly brought into France in little Cakes, full of small Shoots like Needles, sticking interchangeably one with the other, that shine, and are inclinable to white, like Silver Oar; but since this Mineral has been discover'd in France, we have none comes from Hungary, whence it is become very scarce. The *Antimony* we ordinarily use is brought from *Poitou*, which you ought to chuse neat, in fine, long, brilliant Shoots, easie to break; it is naturally compos'd of a great deal of Sulphur, like common Sulphur, and of a Kind of a *Regulus*, like a Metal. [But you have a further Account of it in Mr. Lemery's Book of Chymistry, to which I refer you.]

Of the Regulus of Antimony.

The ordinary or common *Regulus of Antimony*, without Mars or Iron, is made of Antimony, Saltpeter, and Tartar, melted together, and cast into a small Mortar, greas'd, and so by the Knock of a Hammer the *Regulus* is made to fall to the Bottom, which if it be good ought to be white, in beautiful Scales, and just like Tin-glass. If the *Regulus* shou'd not prove good at the first Operation, it may be melted and purified again with a little Saltpeter; the oftner it is melted the more will it decrease, but the better will it also be.

Of this *Regulus* are made the Cups and Pills, and other chymical Operations, as shall be seen hereafter.

Of Regulus of Antimony with Mars.

The *Regulus of Antimony with Mars* is made of Antimony, Saltpeter, and Points of Horse Nails, or small Nails melted together; which by Means of the Fire, and proceeding much after the Manner as in the preceding Operation, is reduced into a *Regulus*.

This *Regulus*, if good, is much like the other, but withal ought to have a Sort of

Star upon the Top. I shall not think it worth my While to recount the many fabulous Stories of the Ancients concerning this Star, and the Cause of it, but shall only take Notice, that it appears more or less, according to the Degree of Fire the *Regulus* has undergone.

Of this *Regulus* is prepar'd the purging, or rather the emetick Wine; and here you ought to be caution'd to throw away the three or four first Wines you make with the Cups, least it shou'd produce some ill Accident.

Whereas most People that have Occasion for the Goblets or Cups of the *Regulus*, find Difficulty to come by them, let them apply to a Founder and they may have what Sorts and Sizes they will, at a cheap Rate, without troubling themselves with Moulds, as several have done to their Labour and Cost, who have at last been oblig'd to give over the Attempt, not being able to make one Cup without a Hole or some other Defect. You may also get these same Founders to make you the perpetual Pills, or you may easily make 'em yourself with a Musket-Ball Mould.

The Pills serve for those that have the Twisting of the Guts, or *Miserere Mei*, so call'd. When they are return'd from out of the Body, 'tis but washing and cleaning of 'em again, and they'll serve as oft as you please, which gives them the Name of *Perpetual*. They may also be infus'd, as well as the *Regulus* in Wine, cold, for the Space of twelve Hours, which is said to be a good Medicine for strong Constitutions.

Of Glass of Antimony.

The *Glass*, or *Vitrum of Antimony*, is an Antimony separated from its Sulphurs, which are a deadly Poison, and for that Reason ought the Operation to be perform'd in a Chimney to avoid the Exhalations; then it is to be melted in a Crucible, and cast upon a hot Marble to make it in the Manner we behold it, and as it comes to us from *Holland*.

'Tis an Operation I cannot advise any one to undertake, not only upon Account of the great Difficulty and Hazard attending it, but also because we cannot make it turn to that Advantage as the *Dutch* do.

Choose

Choose the *Glass* of *Antimony* that is flat, of a bright Red, and transparent, having as few small, thick, black and grey Pieces in it as possible. I am told the *Hollanders* mix half broken *Glass* in melting it, to discharge its black Colour the better, and to make it so fine colour'd as we see it, but the Truth of the Fact I know not. Instead of throwing it upon *Marble*, one may put it in a *Founder's Mould*, and so make the *Goblets* or *Cups*; but this is a Work only for the Curious, there being no Demand for them.

This *Vitrum* of *Antimony* serves for a *Vomit*, taken from two to six Grains. *Apothecaries* make a *Syrup* and the *emetick Wine* with it.

Of the Liver of Antimony.

The *Liver of Antimony*, improperly call'd *Crocus Metallorum*, is made of *Antimony* and common *Saltpeter*, mix'd and incorporated well together, and by Means of lighted *Charcoal* reduc'd into a *Stone*, after the Manner as we have it.

This *Liver of Antimony* ought to be chosen in fine shining Pieces, starr'd, smooth, brittle, and when bruis'd or pulveris'd, of a reddish *Saffron* Colour, which is the Reason of its being call'd the *Crocus* or *Saffron* of Metals; but in Pieces it ought to be *Liver-colour'd*, from whence also comes the Name of *Hepar*, or *Liver of Antimony*.

This *Liver* is a Sort of *Catholicon* for *Horses*; more especially to purge and put them in Case, if taken from one Ounce to two in wet Bran, as Mr. *Sydes* directs, in his Book call'd *The Compleat Farrier*: 'Tis of some Use in Medicine, but so little it is hardly worth speaking of; but on the contrary 'tis much us'd for *Horses*, as well under the Names above, as under that of *Imperial Powder*.

This Operation, which seems the easiest in the World, is notwithstanding very difficult to be perform'd with Success, more especially if one has not good *Antimony* and *Saltpeter*, or if it be fill'd with Salt, which but too frequently happens: Those therefore that undertake this Operation must dry the *Saltpeter* and make Choice of the *Antimony* of *Poitou*, not of that of *Auvergne*, as well because

it is very full of *Sulphur*, as because it is not so well cleans'd as the Former; and after it has been expos'd some Time, being mix'd together, to the open Air, put a sufficient Quantity thereof into a *Mortar*, or *Iron Per*, plac'd in a *Chimney*; and upon Application of the Fire, a great Noise, which the *Chymists* call a *Detonation*, will happen; and when that is over, and the Vessel cold, it must be separated from its *Dross* or *Scum* which is white, and the Bottom will be a *Stone*, such as I have describ'd. Note, You had not best make use of a cast *Mortar* for fear of breaking, which sometimes happens, or be apprehensive of the Fire thereupon. On the contrary, this Operation is the best Thing imaginable for Sweeping a *Chimney*; but observe to put a Cloth before the *Chimney*, and to get far enough off for fear of the Vapours, and that you don't perform it in any publick Place. It is an Operation of a very capricious and uncertain Nature; for I have seen a great Quantity of *Saltpeter* and *Antimony* mix'd and prepar'd together, that has made a very charming Composition: And again, when one has proceeded after the same Manner, in all Particulars, the Result has been less beautiful, and sometimes it has altogether miscarried. Those therefore that have Occasion for it in Powder will take Care that it be of a fine Red, not such as sticks to the Top or Sides of the Vessel, which is in small, thin, brown Scales, or such as has been spoilt, which is the Reason some sell it so much cheaper than others, which must be taken Notice of.

Those that wou'd have a *Saffron* of Metals, or the *Crocus Metallorum*, fit to be taken inwardly, must make it with equal Parts of *Antimony*, and refin'd *Saltpeter*, and then reduce it to a subtil Powder, which is to be wash'd often in warm Water, as well to free it from any remaining *Saltpeter*, as to make it a little more *emetick*. The more *emetick* you'd have it, the more *Saltpeter* must be us'd; but it considerably diminishes the Quantity, and makes it a great deal the dearer, tho' this ought to be no Consideration, since, in such small Quantities it is sold at such a Rate that it amply rewards the Labour and Expence.

One may give what Colour he pleases to the Imperial Powder, or *Liver of Antimony*, according to the Preparation, or according to the Saltpeter that is made use of; which if it be of the ordinary Sort will make it a little darker, or upon the *Liver Colour*, more than if it was of the best and finest Saltpeter; and if you add decrepitated Salt, that is, such as has been dry'd and half calcin'd, 'till it has done Crackling, 'twill be a good Red enough, inclining to that of Opal, and therefore it has obtain'd the Name of *Magnesia Opalina*, or the Ruby of *Antimony*.

Some make use of the white Dross, as well for Horses as to draw from it a Salt or fix'd Saltpeter with Water, which is a very good Medicine for Horses, and to which the Name of *Polychrestum*, or general Remedy is therefore given; both wash'd, and other *Crocus Metallorum*, is us'd in making the emetick Wine, which is done by putting the *Crocus* or *Liver of Antimony* in white Wine, and Infusing of it for twenty-four Hours.

Of Diaphoretick Antimony.

Antimony Diaphoretick, or the *Calx of Antimony*, is the *Antimony of Poitou*, and finest Saltpeter incorporated together, made into a Powder by the Means of Fire and warm Water; which before it is quite dry is form'd into small Troches, and so dry'd by Degrees and kept for Use. This Medicine is sometimes us'd in Malign Fevers, wherefore some prescribe it in the Plague and other contagious Diseases, it being a Sudorifick, and an Expeller of the Virus; tho' there are others very dissident of its Qualities, supposing it to have no Manner of Virtue, being only a Sort of Chalk, which I will not pretend to judge of, but leave it to the Physicians to do it; who since they substitute for it such Things as Men wou'd hardly believe, such as *Ceruse*, and the like, which ought carefully to be avoided, and may make one careful to buy it only of faithful honest Men; for I know no certain Proof of it, unless it be that genuine *Diaphoretick Antimony*, ought to be extremely white, soft, brittle, and wholly void of all Taste or Smell, being perfectly insipid. Some ingenious Men have assur'd me, that the Quality of this Medicine is quite alter'd by keeping: For where-

as, when newly made, it is diaphoretick, it becomes emetick when old, but this is what I have not experienc'd; and be it how it will, the New ought always to be prefer'd.

Two Sorts of Salt may be drawn from Lotions made of it; but considering the small Quantity that's to be obtain'd, I cannot advise any one to trouble himself about it.

Of the Flowers of Antimony.

The *Flowers of Antimony* are made in Pots put upon one another, call'd *Aludels*, being a Vapour rais'd by the Force of Fire, and found in the Top of them in white Powder, which may be gather'd with a Feather. Note, If you make use of an Earthen Retort instead of *Aludels*, you'll have the *Flowers* red.

The *Flowers of Antimony* are esteem'd good against the Epilepsy and Intermitting Fevers, the Dose is from two to six Grains; and of the Red, being more emetick from two to four, taken with any Sort of Conserve, or Lozenges, or in Broth. And I cannot but observe, by the By, that a Man ought not to deal in chymical Medicines, without Advice of a faithful and experienc'd Physician; Empericks killing more than the Sword. How effectual soever a chymical Preparation may be, aptly and duly taken, it may be altogether as pernicious unseasonably prescribed.

Of the Butter and Cinnabar of Antimony.

The *Butter and Cinnabar of Antimony* arise from the same Matter, the Degrees of Fire only making the Difference: The Matter then is a Mixture of *Antimony* and corrosive Sublimate put into a Retort. That which comes over first is a transparent Oil, next an Oil as thick as Wax, which being well wrought 'tis like white Sugar-Candy; and the third Sort produc'd by the Violence and Force of the Fire, is a reddish Matter in small Needles, pretty much resembling *Mineral Cinnabar*, from whence it has its Name.

This *Butter of Antimony* is a strong Caustick, but its principal Use is to make the Angelick Powder, as will be seen hereafter; the

the *Cinnabar* is sudorifick, wherefore 'tis made use of sometimes in the Small Pox, from six to fifteen Grains.

The best *Butter* of *Antimony* is very white, and perfectly like to white Sugar-Candy; it ought to be as dry as possible, and for that Reason kept in a Bottle well stop'd.

The *Cinnabar* ought to be chosen in little Pieces, red, and as full as possible with those *Striae*, or little Needles; that which is blackish is to be rejected.

Of the Powder of Algarot, or Mercurius Vitæ.

The *Powder* of *Algarot*, or the *Emetick* or *Angelick Powder*, so call'd, is a white Powder made with *Butter* of *Antimony* dissolv'd and thrown into warm Water, and several Times wash'd, and then dry'd, and so kept in a Glass Vial for Use.

This Powder is a very good Purge; the Dose from two to eight Grains in Broth, or any other Liquor. This Powder ought to be very white, and made with the coagulated Oil or *Butter* of *Antimony*; that is to say, with that which was made of the *Regulus*, as we shall see hereafter; for when the *Emetick Powder* is made with the *Butter*, which was made of *Crude Antimony*, it is by no Means so white as when with that which was made of the *Regulus*.

Of Bezoar Mineral.

Bezoar Mineral is made of *Butter* of *Antimony*, prepar'd with Spirit of Nitre, and by this Means reduc'd into a white Powder, to which are attributed the same Virtues as to the Diaphoretick *Antimony*, which therefore is by many us'd for it, but ought to be avoided. Its Dose is from six to twenty Grains.

Of the coagulated Oil of Antimony.

The coagulated Oil, or *Butter* of *Antimony*, is made of the *Regulus* of *Antimony*, and Sublimate Corrosive; which, by Means of the Fire, are reduc'd into an Oil, and of the Consistence of that we spoke of before. Note, When the Oil is come over, if you encrease the Fire, and take away the Recipient,

and put another in its Place with cold Water, you'll have a very good and beautiful running Mercury.

This Oil is very corrosive, and serves to consume fungous Flesh; 'tis of this Oil you ought to make the Powder of *Algarot* and *Bezoar Mineral*.

Of the Caustick Oil of Antimony.

The Corrosive Oil of *Antimony* is made of Powder of *Antimony*, Spirit of Salt, and corrosive Oil of Vitriol; out of all which, by the Means of Fire, is drawn a whitish Liquor, to be kept for Occasion; it is of use in carious Bones, being a strong Escharotick; also for Gangrenes, and to deterge old Ulcers.

This Liquor is not, properly speaking, an Oil, not being at all fat. One may also draw another Liquor from *Antimony*, with *Antimony* and Sugar-Candy.

Of the Tincture of Antimony.

The Tincture of *Antimony* is made of Salt of Tartar and *Antimony*, dissolv'd or melted together; from which, with Spirit of Wine, is drawn a red Liquor, esteem'd a very good Antiscorbutick; as also to be good against hysterick Vapours in Women, as well as the scorbutick Itch. Dose from four to twenty Drops.

Of the Magistery and Precipitate of Antimony.

This Precipitate is made of a very fine Powder of *Antimony* and *Aqua Regia* mix'd together, and afterwards thrown into an Earthen Pan of Water, and the Powder found at the Bottom, is to be dulcified by Washing, and is properly the Sulphur of *Antimony*, being inflammable, like common Sulphur: Its Use is in Apoplectick and Paralytick Cases. Dose from two to twelve Grains in some convenient Vehicle. Besides this Sulphur of *Antimony*, there is moreover another call'd the Golden Sulphur of *Antimony*, which is made of the *Scoria*, or Dross of the common *Regulus* of *Antimony*, without Mars; from which, being boil'd in Water, filtrated and precipitated with Vinegar, you will have at Bottom a red Powder,

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which

which when dry'd serves to provoke to vomit. The Dose whereof is from four to six Grains in Broth or Pills. Let it not seem strange that I enlarge not more upon the Chymical Process, since it's hardly to be allow'd Merchants so to do; and seeing *Messieurs Charas, Glacer, and Lemery*, have so amply done it already.

2. Of the Load-Stone.

Pomet. **T**HE Load-Stone, according to some Authors, is a black Mineral Stone, and is endu'd with surprising Qualities; such as Directing its Poles towards the North and South, its Attracting Iron or Steel, and the Communicating its Virtue to it by the Touch. It is found in almost all Sorts of Mines, more especially in those of Copper and Iron, of whose Nature it participates. A good Load-Stone is very solid, not porous, nor very heavy, and of an homogeneous Substance, of the Colour of Water, or a shining Black, and sometimes of a Grey or obscure Blue, inclining to Red. Observe that the Virtue which the Load-Stone communicates to Steel is lost when the Figure of it is alter'd, whether it be with a Hammer or one's Fingers, as may be seen with a straight or crooked Needle, after it has been touch'd, as *Father Grimaldi* takes Notice of in his Physicks. The Load-Stone that attracts Iron very forcibly, is call'd a generous or noble Stone. The Way of keeping it is in a dry Place, wrap'd in scarlet Cloth, or rather to preserve its Virtue, to hang it up by its Equator, with a Cat's Gut, that it may have its free Tendency to the South. If it chance to fall it loses something of its Strength for a While: Its Poles are found by applying to it a common Needle; for the Pointing of the two Ends shews the Places of them. It is said this Stone taken inwardly intoxicates and renders stupid; and that its Antidote, or Counter-Poison, is Gold or Emral'd Stone. *Matthioli* tells you, that red Brass melted with some of this Stone becomes as white as Silver, after the same Manner as Copper does of a golden Colour, with *Lapis Calaminaris*. *Pliny* says *Dinocrates* the *Alexandrian* began to vault the Temple of *Alsinoe* with Load-Stone, in order to have his own Statue, which

was made all of Iron, suspended in the Air: The same Thing, and with the like Truth, has been affirm'd of *Mahomet's* Temple: It is call'd in Latin *Magnes*, from a Shepherd nam'd *Magnes*, that happen'd to discover it upon Mount *Ida*, by hitting upon it with the Iron of his Sheep-crook, according to *Nicander*: It is also call'd *Lapis Lydius*, or *Heraclius*, because found in *Heraclia* a City of *Magnesia*, which belongs to *Lydia*: In French it has the Name of *L'Aimant*, from its Love or Attraction of Iron. It is besides call'd *Lapis Herculis*, because it directs to find out the Ways, over which *Hercules*, by Antiquity, was said to be the presiding Divinity: And, lastly *Sideritis*, from its Adhesion to Iron, which the *Greeks* call *Syderos*.

Besides the fore-mentioned Sort of Load-Stone, the *Abbot de Vallemont*, in his Treatise, tells us of another, which he found upon the Top of *Chartres* Steeple in the Year 1691, and which he had experienc'd to attract Iron, and to direct its Poles North and South, and to have the same Declination as the ordinary Load-Stone. It were to be wish'd therefore, that it could be oftner met with and sought after amongst the Ruins of old Buildings, it certainly being of a very extraordinary Nature. *Mr. de Vallemont* has shewn me one of 'em of a surprising Excellency and Force, in attracting Iron of a great Weight. I wou'd willingly enlarge upon this Sort of Load Stone were it more common, but it is very scarce; and since the King has had one presented to him, it is sought after with great Diligence, therewithal to adorn the Cabinets of the *Virtuosos*: However, I refer the Curious to *Mr. Vallemont's* aforesaid Treatise, who has oblig'd the Publick with the Description of this Load-Stone, and explain'd how it was form'd by Nature in the foresaid Place. There is a third Sort, but very rare also, which is what we call *White Calamin*, or the *White Load Stone*. There is moreover a fourth Sort, very frequent and common amongst us, being no better than a Sort of Dross of Iron, but what is commonly sold, as well because the true black *Ethiopick* one by Reason of its great Excellency, is so scarce, as that we cannot shift without it, especially those that go to Sea, because it always tends towards the North, and shews the

the Pilots where they are. The *White Magnet* also, being of great Virtue, is much sought after, but seldom met with; and in its Place is sold a worthless Sort of Marle, or white Earth, found sticking to the common *Load-Stone*, but easily distinguish'd from the true White, which is of a Sort of greyish White, ponderous, and attracts Iron as forcibly as that of *Ethiopia*, which that which is sold for it cannot do; besides, the Cheapness sufficiently argues its being spurious; we therefore are oblig'd to content ourselves with such as are brought from divers Places, particularly from *Auvergne*, which we can hardly get ten Groats a Pound for; much less could we be able to sell 'em at the Price of genuine Stones, which some have exchange'd for their Weight in Gold; but tho' we find much Fault with what we sell 'em, it does not follow but there are some good, though in Truth you'll scarcely meet with above ten amongst a Thousand. However, those of ours that can raise small Needles, or make the Filings of Iron move upon a Plate, by only passing the Stone along underneath, without Touching it, or has Force enough to make Steel-Dust stick to, when thrown upon it, may very well serve for any medicinal Use, and for the *Emplastrum Divinum*, which is its chief Use therein.

Magnes Lapis Heraclius, Lapis Lemery. Syderitis, Lapis Nauticus, or the *Load-Stone*, is a Compact, hard Mineral Stone, pretty heavy, and of a black or brown Colour, or obscure Blue, which is found in Iron or Copper Mines. The best is found in *India* and *Ethiopia*; but it is likewise brought from *Italy*, *Sweden*, and *Germany*; it has a great many excellent Properties, both for Travellers and Artists, which are too tedious to relate. The most valuable *Magnet* is that which attracts the greatest Weight of Iron. I have seen several Times a *Load Stone* no bigger than a common Apple that wou'd attract and suspend a Bar of Iron that weigh'd twenty-two Pounds: This Stone was sold for a hundred Pistols.

They make the *Load-Stone* one of the Ingredients in the Composition of Plaisters appropriated to Wounds that are made with a Sword, where they think some Pieces may be left behind; for they believe that the *Load-Stone* which is in the Plaister, attracts and

draws the Iron out of the Wound, tho' all the Virtue in the *Load-Stone* cou'd never produce this Effect: For first of all, being powder'd finely, as it ought to be, it loses all its Force of Attraction: And, secondly, being mix'd in the Plaister, tho' its Virtue shou'd remain, it wou'd not have Power to act, being confin'd by the Viscidity of the Gums and Rosins. There is a white *Load-Stone*, but it is very scarce; it ought to be of a greyish White, heavy and attractive. All these Stones are astringent, and stop Blood, outwardly apply'd.

3. Of Natural Cadmia, or Calaminare Stone.

Cadmia, or *Calamine Stone*, or *Lapis Calaminaris*, is a Mineral, where-
of there are two Sorts, grey and red. Pomer.

The First is not unlike grey Bole, only 'tis harder; it is found in *Germany* and *England*, near the Lead Mines, and also near *Liege*.

The second Sort is also a Stone of a reddish Colour, interlac'd with white, hard, heavy Veins, full of round hard Grains, the Bigness of Pepper: These Stones are found in great Plenty in *Berry*, near *Bourge* and *Saumur*, where there are whole Quarries of them, and are of so little Value, that one may have what Quantity he will for the Digging: They may be had also in many other Places; but since those of *Berry* aforesaid are as good as any, 'tis not worth While to have them brought from more distant Places.

This Stone is of some small Use in Medicine, in some galenical Compositions, for which it ought to be prepar'd upon a Porphyry, and made into Troches, with Rose-Water, and is what the Apothecaries call *Lapis Calaminaris*.

As for the first Sort, how genuine soever, it is of very small Use in Physick; its chiefest being to turn red Copper into yellow, which is call'd *Leton*, or *Yellow Brasi*.

Cadmia, in *Arabick*, *Clinia*, or *Chilimia*, in *English*, *Cadmy*, *Lemery*, is a Mineral Substance, whereof there are two general Kinds, one natural, and the other artificial; the Natural is metallic

tallick as *Cobalt*, or not metallick as *Lapis Calaminaris*: The Artificial is a Kind of *Scoria*, which is separated from the Metals in the Founders Works, when they make *Leton*, *Pompholyx*, or *Tutty*.

4. Of the Hematidis, or Blood Stone.

Pomet. **T**HE *Lapis Hematidis*, or *Blood Stone*, is a Mineral of a reddish Colour, hard, ponderous, with long pointed Needles, very dangerous to such as are prick'd by them.

This Stone is brought us from many Places, there not being any Iron Mines wherein they are not found.

Choose as near as you can those Stones that are of the highest Colour, with fine *Striae* or Needles, as much like *Cinnabar* as may be.

This Mineral has little Use in Medicine. *Mr. Charas* observes in his *Pharmacopœa chymica*, Page 823, that if you drive it over the *Helm*, in a Retort, with *Sal Armoniack*, you may draw Flowers of the Colour and Smell of *Saffron*, which is what they call the *Flores Aromatici Philosophorum*: And moreover you may make with it a *chalibeat acid Spirit*, and with Spirit of Wine a *Tincture* and Flowers; both which have great Virtues, according to the afore-mention'd Author, to whom I refer you.

'Tis said this Stone has a Sovereign Virtue to stop Blood, from whence it derives its Name of *Lapis Hematidis*, or the *Blood Stone*.

This Stone being powder'd, as is said of the *Lead-Stone*, enters the Composition of some *galenick Medicines*: Also those that work in Metals, or in quest of the *Philosophers Stone*, make use of this.

Goldsmiths, and those that gild in Gold, use it too, to polish their Work, whether it be in Silver, Copper, Iron, Wood, or the like.

There is also another Sort of *Blood Stones*, call'd *Red Pencil*, us'd by such as design and draw Sketches, and like to those of Spain, with this Difference, that they don't appear so sparkling with Needles, but dull and unpolish'd, like Earth.

These Crayons are brought us from Eng-

land, and are of two different Sorts; the one good, which is pretty tender, soft and easie to saw or cut into Crayons; but the other not worth any Thing, is hard and gravelly, and will not admit of cutting.

Hematidis, *Lapis Sanguineus*, or the *Blood Stone*, is a hard, solid, *Lemery*, heavy Stone, participating of Iron, dispos'd like Needles, of a reddish brown Colour, but becoming red as Blood, according as it is reduc'd to Powder; they take it from the Iron Mines. The best and most esteem'd is that of *Spain*, which is clear, heavy, hard and solid, in fine Shoots of a reddish brown Colour, with Streaks that are blackish without, and resembling *Cinnabar* within; it is very astringent and drying, stops Blood, and is given internally, as well as externally, in fine Powder: The Dose from fifteen Grains to a Dram. There is another Sort of *Blood Stone* brought from *England*, call'd the *Bastard Hematidis*; it differs from the former in that it neither shoots into Needles, nor is so hard: Chuse such as is of a brownish Red, weighty, solid, and smooth; it is astringent, and is call'd *Hematidis* from *αἷμα*, Blood, because being powder'd it is of the Colour of Blood, and stops Bleeding.

5. Of Spanish Emery.

Pomet. **E**MERY of Spain is a *Marcasite* or stony Mineral, with small Veins of Gold running through it, which is found in the Mines of *Pernu*, and elsewhere: 'Tis of much Account amongst those that seek the *Philosophers Stone*, because of these golden Veins that adorn it; and 'tis at this Day so valuable and scarce, that those that have any of it may sell it for its Weight in Gold; and therefore the King of Spain has forbidden the Exportation of it out of his Kingdom, which is the Reason 'tis so very scarce to be found. This same Emery is of little or no Use in Physick, tho' *Mr. Demeure* says it is of a corrosive and caustick Quality.

There are, besides this, two other Sorts of Emery, one whereof is reddish, and found in Copper Mines, as well in *Sweden* as other Places, and is what some sell for *Emery*.

mercy of Spain, but easily distinguishable from it, being more rough, solid, and hard, of a fine red Colour, but not vein'd with Gold.

The third Sort is that which is commonly used, especially by Armourers, Cutlers, and in short by all those that work upon Iron or Steel, there being nothing that polishes like to pounded *Emery*. It also is us'd in polishing Steel looking Glasses, several Sorts of Stones, and upon a great many other Occasions in the Mechanick Way.

The common *Emery* is brought to us from several Countries where there are Iron Mines, and likewise from *England*; and there are none but the *English* that trouble themselves about grinding or pounding of it in Mills, which serve only for this Purpose, or to grind Stones of a like Nature; for this ordinary or common *Emery* is so hard, that whoever wou'd pretend to powder, or beat it in a Mortar, wou'd be apt to make Holes with the Pestle in the Mortar: And as this Mineral is made much use of, especially in Powder, that ought to be chosen which is like Pepper, pure and clean; if in Stone let it be as bright colour'd, and as free as you can from Spar.

Emery cuts Glass as the Diamond does, but makes no Impression upon Diamonds as it does upon other precious Stones. It is said, if melted with Lead and Iron it encreases their Weight, and hardens and makes 'em become red, which I have not experimented. Some also mix *Emery* with the soft pale *Madagascar* Gold, but it must be that of the second Sort, which comes from the Copper Mines.

It is made use of also to cut and divide Marble. They affirm likewise that it becomes an impalpable Powder if put into Brandy or Spirit of Wine, which I cannot vouch for, having never try'd it; that which falls from the Lapidaries Mills, and looks no better than Mud, is by some made up into Balls, and sold to several People under the Appellation of the Putty of *Emery*.

Smyris Lapis, or *Emery*, is a *Lemery*. Kind of *Marcasite*, or very hard Stone, whereof there are three Sorts; the first and most esteem'd is call'd *Spanish Emery*, because it is found in the Gold

and Silver Mines of *Peru*, and several other Parts of *New Spain*; it is reddish, mix'd with Streaks of Gold and Silver. This Kind of *Emery* is very scarce, for because of the Gold contain'd in it, the King of *Spain* has forbid the Transportation of it. The Second is smooth, and red, but has nothing of Gold or Silver in it; it is found in the Copper Mines. The Third is common *Emery*, whose Colour is blackish, it is got in the Iron Mines; they powder or grind it in *England*, by certain Mills made for the Purpose, which they cou'd not do in Mortars, because of the great Hardness of this Stone. This powder'd *Emery* is us'd to polish or clean Arms, Knives, Looking-Glasses, &c. You must choose that which is in the finest Powder, pure and clean. All these Stones are made use of to cut and polish precious Stones, Glass and Marble, and are of no Importance in Physick, except only that they may serve to clean the Teeth. What falls from the *Lapidaries*, in working with this, they dry and call Putty of *Emery*.

6. Of the Magnesia.

Magales, *Magnesia*, *Magne*, or *Magnet*, is a Mineral pretty near approaching to Antimony, only it is softer, and brittle, like Free-Stone, and not so brilliant as Antimony.

There are two Sorts of *Magnesia*, grey and black; the former is very scarce, and so not much in use, but the Black very much, as well by Enamellers, as Potters and Glass-Makers, who purifie and whiten their Glass, by putting in a small Quantity of it; whereas shou'd they add too much it would be of a blue and purple Colour.

We have it from many Places, as particularly from *Piedmont*, where it is found in the Mines in Pieces of different Figure and Bigness; as to the Choice of it, let it be as brittle, as sparkling, but as little attended with Spar, or other extraneous Bodies as may be.

Monsieur *Furetier* affirms *Magnesia* to be the same Thing as *Safre* or *Perigueur*, both which I am going to treat of, and first of *Perigueur*.

7. Of

7. Of Perigueur.

Pomet. **P**erigueur, or Perigueux, is a Mineral, or black Stone, like heavy black Coal, hard to be reduc'd into Powder.

Enamellers and Potters make use of it. There needs no other Choice about it than to see that it be pure, and clean from Impurities; for if there be any other Mineral mix'd among it 'twou'd spoil all, therefore they that sell it to the Workmen, must take the same Care as they do in Lead Oar.

The Perigueur which we sell at Paris is brought us from Dauphiny and England.

Lapis Petracorius, Perigord, or *Lemery*. Perigueux, is a Kind of Marcasite, or hard Stone, that is heavy and solid, black as Coal, difficult to reduce to Powder: It is met withal in several Mines of Dauphiny, and in England, from whence it is brought us in Pieces of different Sizes; the Enamellers and Potters use it: You ought to chuse it pure and neat; it is detersive and astringent.

8. Of Safre.

Pomet. **S**afre, or Zafre, is a Mineral of a bluish or Partridge Eye Colour, which the English, Dutch, and Hamburgers, bring us from the East-Indies, and especially from Surat.

Most of the Safre we have is in a grey Powder-like Ashes, from which it so little differs in Appearance, that we are forc'd to consult such as are vers'd in its Qualities ere we can well distinguish.

There are two Sorts of Safre, the fine and the common; the former is in a bluish or cineritious Stone, the latter in Powder; and very often so bad, that 'tis hardly good for any Thing, and being so very weighty must needs be mix'd with Spar, the other being much lighter.

Safre is much us'd by Delf Ware and Glafs-Makers, to give a blue Colour to both Sorts of Ware: 'Tis also with Safre that they colour calcin'd Pewter, in order to make the false Stone, which I've noted in

the Chapter of Enamels: and lastly, with Safre, it is that the azure Colour of Glafs is produc'd, as is before observ'd, and of which is made the counterfeit Saphirs.

Saphre, *Safre*, *Zafre*, or *Saphire*, is a Mineral whereof there are two *Lemery*. Kinds; one call'd *Fine Saphire*, and the other common: The fine Saphire is a pretty soft Stone, of a bluish Colour; the common Saphire is a greyish, heavy Powder; both Sorts come from India. The fine Saphire is us'd to give a blue Colour to Enamel, to Earthen Ware, and Glafs; to make an Azure; they likewise colour counterfeit Saphires with it, whence it takes its Name.

9. Of Rufma.

Rufma is a Sort of Mineral, in Colour and Figure resembling *Pomet*. the Dross of Iron, found in great Plenty in Galatia, call'd at this Time *Changer*: This Mineral is in such Vogue amongst the Turks to take of Hair, that those of all Ranks use it, by which the Grand Signior has an Income of 30000 Ducats per Annum. This Depilatory is very little used in France, but I'm sure if 'twas better known 'twou'd be preferr'd to Lime and Orpiment upon that Occasion, it being stronger and more efficacious, if there be no Danger in it.

Rufma is a Mineral that is like the Dross of Iron, both in Colour and *Lemery*. Figure; there is Abundance of it in Galatia; it is a Depilatory very much us'd by the Turks.

10. Of Orpiment.

Orpine, or Orpiment, is a Mineral commonly found amongst *Cop*. *Pomet*. per Mines in Stones of different Bigness, Colour and Figure; some being of a golden, others of a reddish, and some of a greenish Yellow, and sometimes also almost quite red; which last proceeds from the different Degrees of Heat in the Bowels of the Earth where 'tis form'd. The Mines of Copper in which this Orpiment is found are never without some little Gold; and for that Reason those that work in them don't fail to make

make Separation of it after the ordinary Method.

The *Yellow Orpine* is found to be of different Colours, wherefore 'tis that the *Dutch* and *English* send it to us in such Variety of Forms and Figures, but the best and most valuable is in thick Pieces, and in handsome bright Scales, gilt, as it were, with Gold, and which easily exfoliate, that is to say, which without much ado are separated and divided into thin Laminæ or Scales, glistening like Gold.

A second Requisite in the *Yellow Orpine* is, that it be half yellow, half red, that is full of reddish Veins; so that which is in small Stones, and of a greenish Yellow, is utterly to be rejected, being nothing but mere Earth, as well as that which is in Powder.

Orpiment is made much use of by Persons of several Professions, especially at *Rouen*, to dye their Wood Yellow, of which they make Combs and sell 'em for Box: Farriers use it upon several Occasions, as also Painters when it is ground; 'tis one of the greatest Poisons we have, therefore we ought to take Care to whom we sell it.

'Tis this same reddish natural *Orpiment*, which ought to be denominatèd the *Sandarach* of *Greece*, and not the following, as most Authors have written; for the red factitious *Orpine* is made of this, as I'm going to make appear.

Of Red Orpine, or Ratsbane.

Red Orpine, which we ordinarily call *Red Arsenick*, as *Mr. Morin*, a Physician of the Faculty of *Montpellier*, has assur'd me, is made of the yellow *Orpiment*, as it is drawn out of the Mines, by heating it in the Fire 'till it has acquir'd a red Colour; and afterwards putting it into a Crucible with Linseed Oil, or Sallet Oil, or Nut Oil, evaporating the Oil; then adding more, and proceeding after the same Manner 'till the *Orpiment* becomes vitrified, and fit to be cast into Moulds of the Form of a Cake, and reduc'd to a Stone as we see it: This Process seeming very feasible, I was willing to attempt, but could not succeed in it; for the *Orpiment*, instead of Red, became calcin'd and white, altogether like Plaster: But tho' I could not, yet I won't say the Thing can't

be done. *Mr. Morin* being a Man of too much Honour to affirm a Thing he did not certainly know to be true.

Yet however this be, *Orpine* or *Red Arsenick* ought to be chosen in thick heavy Pieces, and as high colour'd as possible.

Red Orpine is but little made use of, except when ground into a fillamot Colour by Painters.

II. Of Natural White Arsenick.

White Natural Arsenick is a Mineral pretty much resembling *Pomet*, the common or factitious *White Arsenick*, only it is whiter, and more resplendent, but not so scaly: This Mineral, or *Natural White Arsenick*, is found also in Copper Mines, and when Miners meet with it, 'tis a certain Indication to them that Copper is near; it is found generally in the *Interstices* between the true Spar and fat Earth, and sometimes it is met with in separate Pieces amongst the dry Clay. This *Arsenick* is very little known, and little us'd.

Of the White Factitious Arsenick.

Though I have taken some Pains to discover what this *White Arsenick* that we sell is, yet it has not been in my Power to inform my self, so that I am forc'd, to rest my self contented, and to say with others, that it is a Composition of *Orpiment* and common Salt sublim'd together; which does not stand to Reason, since if it were so, I don't see how the *Dutch* cou'd possibly sell it at the Price they do; for *Arsenick*, in Times of Peace, at *Paris*, is not worth above sixteen or seventeen Shillings the Hundred, which wou'd bring *Arsenick*, and what 'tis made up of to a Matter of a Halfpenny a Pound: But not knowing what to determine in this Matter, I will only remark that it ought to be chosen in thick Pieces, white within and without: Most of what we have from *Holland* is white and rough without, and if you break it transparent like unto Glass within, which gave Occasion to the Ancients to call it *Crystalline Arsenick*, which is in mighty Request at this Day with some, but by others undervalued and rejected.

Vol. II.

U

Arsenick

Arsenick is of some small Use in Physick to perform some Operations, as shall be seen hereafter, but chiefly made use of by Dyers, and in the Country to destroy the Rats and Mice, &c.

Of the Regulus of Arsenick.

Regulus of Arsenick is made of *Arsenick*, Potashes, and Soap put into a Crucible, and by the Flame of a Lamp melted and cast into a great Mortar; it is much milder than the *Arsenick* itself. If the Dross of this *Regulus* is boil'd in Water, and the Liquor filtrated, by throwing Vinegar into it, a yellow Powder will be precipitated, which is call'd the *Sulphur of Arsenick*, and acts with more Violence than the very *Arsenick* itself.

Of Caustick or Corrosive Arsenick.

Corrosive Arsenick is made of *Arsenick*, Saltpetre and Sulphur put into a Mortar to be set on Fire, as in Preparing a *Crocus*; when the Noise or Detonation is over, and the Whole sufficiently burnt and grown cold, the Mass is to be pulveriz'd, and put anew into a Crucible to be calcin'd. If you wou'd have this *Caustick Arsenick* in Liquor, 'tis but placing it in a Cellar for a few Days.

One may draw a Butter, or corrosive Oil of *Arsenick* with Sublimate. This Oil, or Butter of *Arsenick*, is a very strong *Caustick*, and therefore proper for making an Escar: But as all Preparations of *Arsenick* have a pernicious Quality, they are to be us'd with great Caution, and not without the Advice of some skilful Person.

Calcin'd *Arsenick* may be sublim'd with Sea Salt decrepitated; and with this, as some do affirm, they counterfeit the *Venerian Sublimate*, which is what we call *Smyrna Sublimate*; but not being certain of this, I cannot avouch it for Truth, as I before hinted, when treating of Sublimate Corrosive.

Of the Arsenical Load-Stone.

The *Arsenical Magnet* is made of *Poitou Antimony*, Sulphur, and Crystalline *Arsenick* powder'd together and put into a proper Vessel that will bear the Fire, that the Whole

may become one transparent Mass, such as the *Artificial Magnet* ought to be.

'Tis said this Preparation is a gentle *Caustick*, and that it may be prepar'd with a great deal of Facility; it is an Ingredient in the magnetick Plaister of *Angelus de Sala*, describ'd in Treatises of Pharmacy by many Authors, such as Monsieur Charas.

Arsenicum, five *Arrenicum*, or *Arsenick*, is a Mineral that is Lemery: weighty, shining, brittle, sulphureous and caustick, of which there are three Kinds; one Yellow, one Red, and one White: The First is call'd, in Latin, *Auripigmentum*, or *Orpiment*; this is a yellow shining Stone, taken from the Copper Mines, in Pieces of different Shapes and Sizes: There are several Sorts that are distinguished by their Colours; for one is of a resplendent Gold Colour; the other of a paler Yellow; the beautifullest and most valued is in large Pieces, of a golden shining Yellow; they easily separate by little thin Scales that glitter like Gold. The reddish yellow *Orpiment* receives its Colour from the Subterranean Fires that calcine it, it is ting'd from the *Orpin* and the *Realgal*; both which are us'd by the Painters, after being finely ground on a *Porphyry*.

The second Sort of *Arsenick* is call'd *Sandaracha Græcorum*, *Realgal*, *Reisgar*, *Risgallum*, or *Red Orpiment*. Of this *Arsenick*, there are two Kinds, one Natural, and the other Artificial: The Natural is that which is calcin'd in the Mine by the Subterranean Fires; the Artificial, which is more common, being calcin'd by the ordinary Fire: You ought to chuse the *Realgal* that is in largest heaviest Pieces, shining, and of the highest Colour, it serves the Painters. This Name of *Sandaracha* is given to *Red Orpine*, because of the Resemblance it has in Colour with *Minium*, or *Red Lead*.

The third Sort of *Arsenick* is call'd *White Arsenick*, or *Simple Arsenick*, by Way of Excellence, as being the strongest of all: This is a Mineral in large Pieces that are hard, heavy, brittle, very white, shining, or crystalliz'd without and within; there is the natural and the artificial Sort; the Natural is found in Copper Mines, but is scarce; the Artificial is made with equal Parts of *Orpiment* and common Salt mix'd and sublim'd

lim'd together. All the Kinds of Arsenick are corrosive Poisons, but the most active and dangerous is the White: It does not usually work violently 'till half an Hour after it is taken; because the Salts that make the Corrosion are lock'd up, and naturally fetter'd in the Sulphurs, which makes it some Time before they are at Liberty, when they produce great Pains, Inflammations in the Guts, violent Vomittings, Convulsions, Restlessness, a general Loss of Strength, and at last Death, if not prevented. The Remedies proper on this Occasion are, melted Fat, Oil, Butter, &c. in order to sheath the Points of the Caustick Salts, and to evacuate upward and downward: Then Milk being taken in good Quantities, sweetens and corrects the Acrimony of the Poison.

12. Of Sal Gem.

Pomet. *SAL* Gem is a natural Salt so call'd from its Clearness and Transparency, like unto a precious Stone, which the *Latins* call *Gemma*; this Salt is found naturally in the Bowels of the Earth in several Parts of *Europe*, principally in *Poland* and *Catalonia*; and since I have not my self been upon the Spot where it is, to confirm the Truth of what I say, it may not be amiss to let you see what *Dr. Perou* of the Faculty of *Montpellier* has written to me upon the Occasion, who says; That he was in *Poland* in the Month of *March*, 1674, with his Eminence Cardinal *Fanson*, who having the Curiosity to take a View of the Salt Pits of *Wilisca*, near *Cracow*, had a Mind to go down into them, which he did on a Herle, as they call it, made for that Purpose, attended by divers of his Servants with Flambeaux in their Hands; being come to the Bottom, which was very deep, he was receiv'd by the *Subterranean* Inhabitants which live there with their whole Families, but look extremely pale, and was presented by them with Beads and Crucifixes, which *Dr. Perou* afterwards examining by his Taste found them to be a Salt, and to have the same Taste as that which the Druggists call *Sal Gemme*: But the Cardinal had a further Curiosity, and so was conducted to the Workmen, who with Chisels

and Hammers get this same Salt out of the Rocks as they do Stones out of a Quarry. There were two Sorts of Salt in these Mines, and in the same Veins, the one finer, being more pellucid and transparent, and which they separate from the other of less Value, but which the *Poles*, and other Northern People use in their Kirchins, and for their Tables; so that *Dr. Perou* was able to determine concerning the Pieces of Workmanship that his Eminence had presented him, that they were of the purest acrid Taste, and the true *Sal Gem* us'd by the best Dyers. As to the Salt of *Catalonia*, hear what *Mr. Tournefort*, who has been upon the Spot, says also in a Letter to me. There are four Sorts of Salt in the Mountains of *Cardona*, a pretty considerable City in *Catalonia*; the first and most common is a Fossil Salt, white, and pretty much resembling Sea Salt, only not granulated, but cut out into large Quarters, as we do Stones in our Quarries. The Second is a Salt of an Iron Grey, or Slate Colour, which differs only from the Fossil in that it has a little blackish Earth mix'd with it. The Third is a red Salt near the Colour of Conserve of Roses, and differs from the other in having a Mixture of Bole, or a Kind of Rust of Iron. The Fourth is the purest of all, and indeed the true *Sal Gem* as transparent and bright as Rock Chrystal. These several Sorts of Salts lie in *Strata* or Beds, in this Mountain, and are very proper for any Uses of Life, and enter or penetrate into the Flesh better than Sea Salt, being not so fix'd and approaching nearer the Nature of Saltpetre. *Sal Gem* is easily wrought into what Figures you please; and accordingly little Boxes, Beads and Crosses, and other the like Things are made of it; but nothing comes up to the Beauty of a certain Cavern in this Mountain, which is adorn'd on all Sides with most admirable Congelations of this Salt.

The People hereabouts affirm, that this Salt grows in its respective Abodes, and the Holes that you empty fill again after some Time, but this wants Confirmation.

Of the several Sorts of *Sal Gem* which I have spoken of, we deal in none but the best, that as has been said is in thick Pieces, is easily broken, clear and transparent, and for Dyers Use. 'Tis very observable of this

Salt, that it grows red-hot, like Iron in the Fire, and crackles there but very little; but on the other Hand easily dissolves, being expos'd to the Air; yet it may be cleans'd from Dirt, by washing it, without Injury. *Sal Gem*, which some call *Fossil Salt*, is brought us from many Places, but in greatest Quantities from Poland. Mr. *Furtiere* and other Authors say it comes from the *East-Indies*, and that there is a Kingdom call'd *Danzal*, which signifies with them a Country of Salt, and which affords yearly, a Loading for six Hundred Camels, which in *Ethiopia* is ready Money. I do not think it worth While to waste Time in controverting what *Pliny* and others have observ'd concerning this Salt, when they tell us that in *Carrhos*, a Town of *Arabia*, Houses are built of that Salt, and Water is us'd instead of Mortar to bind the Salt Stones, or that the Sea derives its Saltiness therefrom, &c. I must not here forbear to relate that there are Vegetables of Salt produc'd in the Mine, inasmuch that Mr. *Tournefort* has a Vegetation of Fossil Salt as white as Sugar, almost two Foot high, like a Shrub, growing out of a Root of the *Seseli* (Hartwort) of *Marseilles*, which without all Peradventure is one of the greatest Curiosities in all Europe.

Sal Gemmeum, *Sal Fossile*, or *Sal Lemery*. *Gem*, is a Mineral, white and crystalline Salt, which grows in Form of Stone, or a Rock, in several Mountains in *Catalonia*, *Poland*, *Persia*, and the *Indies*; this Salt being broken, is shining and transparent as Chrystal. They say that certain People of the *Indies*, which inhabit in the Countries where it is not met withal but rarely, build transparent Houses with *Sal Gem*, which they work like Stone. The Taste of *Sal Gem* is like that of Sea Salt, but a little more penetrating; they use it with their Mear. Out of the salt Waters of their Springs and Pits, in the *French Country* and *Lorrain*, they make *Sal Gem*; they evaporate these Waters to make the Salt which they use in those Countries as we do Sea Salt. There is made by Distillation of *Sal Gem* an acid Spirit, altogether like Spirit of common Salt. *Sal Gem* is incisive, attenuating, penetrating, resolving, aperitive, laxative, proper in the Colick, and to open Obstructions: They substitute in

the Compositions *Sal Gem*, or *Indian Salt*, call'd *Sal Indum*, which some believe to be a Kind of Mineral Salt, and others Sugar.

13. Of Sea Salt.

SAL Marine, or *Sea Salt*, is a Crystallization made of *Sea Pomel*. Water, perform'd by the Sun, and reduc'd into Grains of a cubick Figure, as Monsieur *Des Cartes* has made appear. As to its Origine, some will have it to proceed from the above-mentioned Fossil Salt, or *Sal Gemma*; but since I cannot decide this Affair, it may not be amiss to transcribe here what Monsieur *Lemery* has written concerning it, p. 345.

Sea Salt is made at *Rocheb* in the Salt Marshes, which ought to lie a little lower than the Sea, and to be of a Clay Mould to retain the Salt Water that is drawn off into 'em; so that all Places that are contiguous to the Sea, are not fit for the Purpose.

When the Season begins to be hot, which usually happens in the Month of *May*, the Water that has lain in the Marshes to be preserv'd there all the Winter, must be drain'd off; then the Sluices or Dams are to be open'd to let in what Quantity of salt Water you please, which must be contriv'd to pass through many different Channels, where it is purified and becomes hot; then 'tis convey'd into plain level Places, in order for the Salt to cream. This Salt does not shoot throughly, but during the excessive Heats, the Sun evaporating some Part of the Humidity, and the Breezes from the Sea, which happen after the Heats, by their Coolness condensing and crystallizing the Salt.

But if it shou'd chance to rain during this Process, only two Hours, there wou'd be no making Salt again in fifteen Days Time, because the Marsh must be made clean, and all the old Water taken out, and other new let in in its Place; so that if it rains but once in all the fifteen Days there's no making Salt after this Manner.

Besides the aforesaid *Sea Salt*, there is the White Salt of *Normandy*, which they make with Water out of a Sort of Mud or Sand that the Sea throws up in the Summer, and upon

upon which the Sun has shone some Time; and when the Water is sufficiently impregnated with the Salt that it will dissolve no more, which is found by the Swimming of an Egg in it, (for every Body knows that Water can be charg'd but with a determinate Quantity of Salt or Sugar) then the Water is to be strain'd or filtrated through Straw; and when it is very clear to be put on the Fire and boil'd 'till it comes to a Skin, and afterwards put into Baskets to reduce it to what we see it. The more this Salt is wrought, the whiter, pleasanter, and better Quality 'tis of; its constant Softness is besides very peculiar to it, as well as its growing the more insipid the longer 'tis kept. There are still other Sorts of Salt in *France*, as that of *Lorrain*, which is made with salt Water cast upon hot Plates of Iron; that of *Franche Comté*, and many more; which I forbear to speak of, not having any Commerce in them.

Of the Purification of Sea Salt.

To purifie Salt, it ought to be dissolv'd in Water, and the Dissolution filtrated through brown Paper, then the Humidity to be evaporated in an Earthen Pan, and so there will remain a very white Salt; but it will be purer and better, if instead of evaporating, all the Humidity, Part is left to crystallize in a cool Place; for at the Bottom of the Vessel is found the finest Salt, which may be separated from its Moisture and dry'd; then ought Part of the salt Liquor to be evaporated again, and having put the Vessel into a Cellar, let it crystallize; thus must you continue to evaporate and crystallize, 'till at last all the Humidity must be evaporated because it will not shoot into Crystals any more; the Salt that is behind being fill'd with an oleaginous or bituminous Matter that hinders Crystallization. If you'd make the Salt up into Loaves like to those of Sugar, it must be put into Moulds when 'tis a little more evaporated to a Skin, and after it has lain a little to coagulate and stiffen, it must be put into a Stove to dry it perfectly. This Salt, well purified, differs not in Appearance from double refin'd Loaf Sugar.

Decrepitated Salt is a Sea Salt calcin'd by the Fire, which serves for many Purposes.

Of Spirit of Salt.

Spirit of Salt is an Ambre-colur'd Liquor drawn from dry Sea Salt, by the Assistance of dry'd Potters Earth, a Retort and Fire. The best *Spirit of Salt* we have comes generally from *England*, and if 'tis good must be void of Flegm, that is faithfully and carefully prepar'd, of a fine yellow Amber Colour, and of a very acid and pungent Taste. I shall not spend Time, at present, to run through all the Particularities and different Sorts of *Spirit of Salt*, Monsieur *Lemery* hath done it at large already, only I must observe of *Spirit of Salt*, that which is right and good is much in use in many Cases as in *Hernia's*, *Apoplexies*, *Scurvy of the Teeth*, *Gums*, &c. The Way of taking it, may be a few Drops by its self, or in Water, or any other Vehicle almost, *ad gratum acorem*, for cleansing the Teeth, mix it with clarified Honey of Roses. Those that wou'd have a dulcified Spirit of Salt, to be taken in a greater Quantity, may make it according to *Basil Valentine*, by mixing Spirit of Wine, and Spirit of Salt, equal Parts, and digesting of them together in a Sand Heat for three Days.

Sal Marinum, *Sal Commune*, or *Sea Salt*, is a Salt they make from *Lemery*, the Sea Water by Evaporation and Crystallization: I believe that the Origine or Rise of that Salt comes from *Sal Gem*, and several Reasons confirm me in this Opinion; the First is, That Sea Salt is altogether like *Sal Gem*, or that Salt made from the Springs in the *French County*, the Pits of *Lorrain*, and several Salt Lakes in *Italy* and *Germany*, whence Salt comes, as all the World know. The Second is, That there is no Salt whereof there is such Plenty as of the *Sal Gem*: It fills not only in *Europe* Abundance of Mountains of a great and vast Extent, but it is found in almost all the Mines in *Egypt* and the *Indies*; and there is no doubt but it is at the Bottom of the Sea, as well as the Earth we live upon, where we meet with Mountains, Rocks and Mines, full of *Sal Gem*. The Third is, That the Naturalists have at all Times observ'd, that the Waters which pass thro' the Mines of *Sal Gem*, and are loaded with the Salts, flow by an Infinity of Channels into the Sea.

The Fourth is, That the Sea Salt must necessarily be made in the Land; for if but a little vers'd in Chymistry, one may know that fix'd Salt compos'd of an acid Earth, as the Sea Salt is, cou'd never be evaporated, or perfected in the Sea Water; it wants the Earth to imbody the acid Liquor, otherwise it wou'd always remain a fluid Salt, and never become solid. If we make a chymical *Analysis* of Sea Salt, one may draw from thence a great deal of acid Liquor, which being separated from the Earth can never gain again its Consistence of Salt. This Argument being clear and demonstrative, it is likewise plain, that the Sea Salt must receive its Elaboration in the Earth before it is convey'd into the Sea: But as we see no Salt so plentiful in the Earth as *Sal Gem*, we may well believe it is that which gives a Saltiness to the Sea; besides the Salt that we now take from the Sea is entirely like it in Taste, in Quality, and in Principles.

But I shall propose some Objections made against this; they say that it is difficult to conceive that the Sea which is so large, and of so prodigious an Extent, shou'd receive all its Saltiness from *Sal Gem*; for tho' there is great Quantities of Salt in the Bowels of the Earth, there does not appear enough to salt so much Water.

To answer this Objection, I say, that the Difficulty we apprehend of the *Sal Gem*'s being sufficient to salt the Sea, proceeds from this, that we do not see the Quantity of Salt Mines, as we do the Extension of the Sea Water: But if we consider that the Earth is full of *Sal Gem*, or the like, in Millions of Places, and that it discharges itself into the Sea perpetually, there is no doubt but we may have Room to comprehend that the Earth in all its Parts, contains Salt enough in it to make the Sea Salt.

Another Objection they bring is, that according to my Argument the Sea ought every Day to encrease in Saltiness, since it perpetually receives fresh Salt, which cannot be dispos'd of otherwise: I answer, that we cannot perceive any Augmentation of the Sea's Saltiness; for if there be a great deal of Salt that is brought into it, there is likewise a great Consumption by Evaporation and the Motion of the Waves that are driven with

such Rapidity and Violence, that they volatilize a great Share of Salt that is receiv'd in Vapour, as may be sensibly perceiv'd by the salt Air we breath in, when upon the Sea, and which contributes much with the Agitation of the Ship towards the Provocation to Vomiting. This Salt is driven by the Winds upon the Shore, where it is useful to make the Land fertile, and by a perpetual Circulation it is brought to the Sea again.

In *Normandy* they make Sea Salt by Evaporating Sea Water over the Fire in great leaden Cauldrons to a Dryness; there remains a white Salt that is less piquant and less salt than that of *Rochelle*, because of the Evaporation, and perhaps occasion'd from some Particles of Lead that are dissolv'd in it, which has blunted its Points; this Kind of Salt loses its Strength as it increases in Age.

There is a Salt prepar'd by Crystallization at *Brotage* and *Rochelle*, besides several other Parts of the Country where there are salt Lakes. The *Rochelle* Salt is grey because of a little Earth that it carries along with it; it is nevertheless more penetrating, and saltier than the white *Normandy* Salt, which is made by Evaporation, but it is not so piquant as *Sal Gem*, because of the violent Motion of the Sea Waves which blunts its finer Points. It may be render'd white as Sugar, by dissolving in Water, filtrating the Dissolution, and Evaporating to a Dryness: But as in this Purification we separate it from a great deal of Earth, which made it weaker; it does not by this Means increase its Strength, but on the contrary it is less biting, because that the Fire has carry'd off, or blunted several of its more subtile Points. Sea Salt contains a great deal of Acid, a small Quantity of Sulphur and Earth; it is incisive, penetrating, desiccative, aperitive, resolute; it is us'd in Apoplexies and Convulsions; they mix it in Baths and Suppositories, and being apply'd hot behind the Neck; it rarifies and dissipates Catarrhs.

14. Of Nitre or Saltpetre.

Saltpetre, which the Chymists call *Dragon*, *Cerberus*, or the *Infernal Pomer*, Salt, is an artificial or factitious Salt, drawn from several Sorts of Materials, as from

from old Stones, whence it has its Name, from Earth, from Althes, and also from Pigeons Dung. I shall not describe here the many different Ways of making *Saltpetre*, seeing they are largely describ'd in the Transactions of the Royal Society at London; and also because 'tis easie to see it made in very many Places in *France*, and especially at the Royal Arsenal at *Paris*, where 'tis made in great Quantities, and where they divide it into a Matter of half a Dozen Sorts, according as 'tis, more or less purified; but the finest and best is what will hardly dissolve in Water, which they send in Casks to the Frontiers; and this *Saltpetre* may be kept almost in any Place without Loss or Decay, but is not at all expos'd to Sale.

Besides the *Saltpetre* of several Sorts made in *Europe*, we have it brought in large Pieces from the *East-Indies*, sometimes rough and unpolish'd, and at other Times as well purified and refin'd as any whatever: There are moreover other Sorts of *Natural Saltpetre*, such as is found sticking to Rocks and old Walls, in small white Crystals, and is what the Ancients call'd *Aphronitrum*. *Saltpetre* is made also in *Egypt*, with *Nile* Water, after the same Manner as common Salt is made with us at *Broilage* or *Rochelle*; and this same *Saltpetre*, made of the Water of the River *Nile*, is that which was so common in *France*, about twenty Years ago, and which used to be sold at a cheap Rate to the Whitsters, to blanch or whiten Linnen, under the Name of *White Pot-ashes*, *Alkali*, *Natrum*, or *Anatrum*.

There is nothing almost has more perplex'd the Ancients, as well as Moderns, than the *Natrum* of *Egypt*, even whilst it was the commonest Thing in the World; for at *Paris*, alone, was consum'd of it more than 2000000 Pounds yearly, without reckoning what the Butchers and Tanners made use of to salt their Skins and Hides, which was the Reason it was prohibited afterwards; and since it is become so scarce, that at present 'tis at its Weight in Silver, and is also prohibited to be sold by Merchants under large Penalties. Some will have this *Natrum* of *Egypt* to have been a natural *Borax*, or a Salt drawn naturally out of the Earth in grey hard Pieces; some that 'twas the volatile Salt

and Froth of Glass Metal taken from the Pots and Furnaces of Glass Founders, and that it is either grey, white, brown, or bluish, altogether unfit for Vitrification, and fit for nothing but to throw to Sheep or Pigeons; but nothing can be more wide of Truth than this, since the true Salt of Glass is still so common among us, that it's sold not above a Groat or five Pence a Pound, and never given to any Sorts of Cattle or Beast, but us'd chiefly by Potters, and Dutch Ware-makers to prepare the Sand wherewith they whiten and varnish their Things; and again Light and Darkness are not more contrary than those two; for the Salt of Glass is in Cakes or Stones, extremely heavy like Marble, contracting no Moisture by the Air; whereas the *Egyptian Natrum* is a white Salt in great Crystal weighty Masses, salt and nauseous to the Taste; and besides easily dissolving into Liquor, when expos'd to the Air, and is of some Use too in Medicine, being an Ingredient of the *Lap. Crollii*. As for *Natural Saltpetre* we have but very little of it, and consequently make use of the Artificial or Factitious, which ought to be made choice of, good and well work'd, according to what Degree or Quality it is of; but however, let it be always dry, and as void as possible of Salt. The common Sort, when good, must be as white, dry, and free from Salt as may be; the Refin'd also, the whiter, dryer and more beautiful, long and large Crystals 'tis in, the better, and more valuable.

The Use of *Saltpetre* is very considerable, as well upon Account of the great Quantities employ'd in making Gun-Powder, as that Abundance of Artificers make use of it, and that diverse chymical Preparations are made thereof. This great Consumption is the Reason why the Sale of it is forbidden to Grocers and others; and that those in and about *Paris* that employ any of it, are forc'd (under Pain of Confiscation, and a Fine) to buy it at the Arsenal; and even then are not to use it to the Purposes of seasoning Meat, or the like, though it be proper enough for that End, as Mr. Lemery assures us.

Nitrum, *Sal Nitrum*, *Sal Petre*, *Saltpetre* or *Nitre* is a Mineral Salt, *Lemery* partly volatile, and partly fix'd, which they make from Stones and Earth upon

upon old Walls, Buildings, and the Urine of several Animals, which has lain a long Time on Cellar Floors, or on the Stones: This Salt being form'd by the Acid of the Air, which after it has penetrated and rarified the Stones or Earth, is thus fix'd and im-bodied.

Salpetre is separated by Dissolution, Filtration, and Coagulation; they powder grossly the Stones and Earth that have lain a long Time in the Air, or which are taken from old Buildings; they steep this in a great deal of hot Water, in order to dissolve the Salt: They throw this Infusion upon Ashes to make a *Lixivium*, or Lye; they pass and re-pass the same Liquor several Times upon the Ashes; then being clear they evaporate three or four Quarts of the Humidity over a Fire, then they set the Liquor to cool and crystallize, taking the Crystals off to dry, and then evaporate almost all the Moisture away, and cool again as before: They take off the *Salpetre* that contains a great deal of *lixivate* Salt, and which is almost like Sea Salt, only that the *lixivate* Salt being Alkali, it changes its Nature because the Pores are fill'd by the Acid of the *Salpetre*. The *Salpetre*, made by this first Purification, is call'd *Common Salpetre*; the last Sort of which ought not to be mix'd with the first, because it is almost fix'd, and consequently not so good.

They purifie *Common Salpetre* by dissolving it in Water, filtering the Dissolution, and evaporating the Water over a Fire, 'till there appear a small Scum upon it; then leaving it to cool, without stirring, there will shoot fine, long, white, clear, transparent Crystals; pour off, by Inclination, the Water that swims upon it, and take out the Crystals to dry, evaporating again Part of the remaining Water, and leave it to cool; new Crystals will be form'd, which dry as before; and in short evaporate the rest of the Liquor, 'till you find nothing at the Bottom but a little Salt like Sea Salt: Repeat several Times the Purification of your *Salpetre* after the same Manner, and every Time separate some of the fix'd Salt; the more it is purified, the finer, larger, more shining and transparent are the Crystals, freed from the fixed Salt, and difficult to melt. There is likewise a Natural *Salpetre*, sticking against Walls and Rocks in little Crystals, which is

preferable to *Common Salpetre*, and which the Ancients call'd *Aphro-Nitrum*.

The ordinary *Salpetre* ought to be chose well purified, in long Crystals, as hath been said, cooling upon the Tongue, and that casts out a great Flame, when thrown upon hot Coals; it is aperitive, resolute, abates Thirst, provokes Urine, resists Putrefaction, allays the Heat of the Blood, drives forth the Stone from the Kidney or Bladder: The Dose is from half a Scruple to a Dram.

Of melted Salpetre, or Salt of Nitre.

Sal Nitri is a purified or refin'd *Salpetre* melted by the Fire, and *Pomet*, put into a Skiller, and so reduc'd into Cakes of three or four Fingers Thickness.

The *Salt of Nitre*, made after this Manner, is very little in use, but instead of it is much us'd a Preparation call'd *Crystal Mineral*, which is made by casting a little of the Flowers of Brimstone upon some of the aforementioned melted *Salpetre*.

Sal Nitri, or *Salpetre*, is fix'd with Charcoal, and said, when fix'd, to have the same Properties as Salt of Tartar, and that a red Tincture of it may be drawn with Spirit of Wine, like that of *Sal Tartari*.

Of Spirit of Nitre.

From any of the Sorts of *Salpetre*, by Means of a little dry'd Potters Clay, a Retort and Fire, is drawn a *Spirit* extremely strong and violent, but very proper for all Occasions where 'tis requir'd.

Spirit of Nitre, when good, is as clear as Rock Water, and sends forth Fumes continually, if the Bottle is unstop'd. Some rascally People sell *Aqua fortis* instead of it, therefore Care must be taken about it, but 'tis easily distinguish'd from *Spirit of Nitre*, by what I have said before, and by the low Price they sell it at; whereas true *Spirit of Nitre* cannot be afforded under eight Shillings the Pound, or upwards.

We have but little *Spirit of Nitre* now come from *Holland*, either through the small Occasion we have of it, or rather through the Covetousness of Workmen that will not afford it, but chuse to make use of *Aqua fortis*

fortis instead of it, whereby their Manufactures are neither so good nor so well wrought.

Spirit of Nitre, being a strong Corrosive, is very seldom us'd internally, wherefore 'tis dulcified, or softned, by adding as much *Spirit of Wine* to it; and this is observable in this Mixture, that it wants no Fire to make it; for as soon as those two Spirits come together, there arises as great an Ebullition and Bubbling, as if they were upon a good Fire: In performing this Operation, Care must be taken to avoid the Fumes and Vapours which are very hurtful and offensive. When this Mixture is become clear, it may be taken a few Drops of it in any proper Vehicle, and is said to be very good in flatulent and nephritick Colicks. *Sal Armoniack* dissolv'd in this Spirit makes the *Aqua Regia*, or *Royal Water*, so call'd from its Capacity of dissolving Gold, the King of Metals.

Of Aqua fortis.

Aqua fortis is a Spirit drawn from Saltpetre, and German or English Vitriol calcin'd to Whiteness, by Means of some dry'd Earth or Clay, a Retort and Fire.

Aqua fortis, so call'd from its Strength, though it be not so violent as *Spirit of Nitre*, is very much in Use with a great many Sorts of Workmen, such as Coyners, Mint-men, Goldsmiths, Engravers, Cutlers, and Abundance of others, as well as by those that dye in Grain.

The best *Aqua fortis* we have comes from *Holland*: Not but that it can be made as good in *France*; but to sell it a little the cheaper, 'tis not above half deslegmated with us, and consequently not above half so strong as it shou'd be.

With *Aqua fortis* and Clippings or Filings of Copper, is made a second Sort, as they call it, of Water, of a blue Colour, which Farriers make use of, or otherwise that which the Workers in Silver make with Phlegm of Vitriol, or Spirit of Vitriol, that is made of *Aqua fortis*, and to which the Name of the *Aqua secunda*, or second Water is given.

There's no Fear of counterfeiting *Aqua fortis*, or selling any other Spirit for it, there being none can be afforded at a lower Price.

When this Water has no Phlegm in it to be sure it is good and genuine.

Of Crystal Mineral.

Crystal Mineral, which some call *Sal Anodinum* or *mineralis Lapis* or *Sal Prunella*, is a refin'd Saltpetre melted in a clean Iron Pot, throwing a small Matter of Flowers of Sulphur into it: When it is thus in Fusion, the Saltpetre being thoroughly melted, and the Sulphur consum'd, let it stand a While, then take off the Scum with an Iron Spoon, and pour out the Saltpetre into an Iron Skillet, or Poringer, to make it thin, after the Manner as we see it. We send to *Holland* for our best and whitest *Crystal Mineral*, but it being in little thick Cakes, we have but small Sale or Demand for it, since it's only fit to be sold by Weight, and to those that make use of it themselves.

Crystal Mineral ought to be chosen very white, new made, and thin; and when it is to be retail'd, let it be as dry as you can. That which is made with the purest Saltpetre is to be prefer'd to that which is made with the common or ordinary Saltpetre, and this is easily known by its Whiteness, and keeping well. 'Tis a Mistake to believe, as an Author of late observes, that those who hawk *Crystal Mineral* about the Streets make it up with Alum; for 'tis impossible to make Alum and Saltpetre unite, the Alum becoming immediately a Scum when 'tis thrown into the Saltpetre, as it does with Sugar, tho' 'tis pretended to be made use of to whiten it; so that those that make *Crystal Mineral* for Cheapness must use the common Saltpetre; for 'tis but melting it twice and it will be as white as the other, and the only Difference will be in keeping but a short Time, which they to their Cost know that buy of those Strowlers. Care must be taken not to wrap it in Paper, which being porous, attracts Humidity, and moistens the *Crystal Mineral*, and renders it unsaleable; for this Commodity ought not to be moist, or in Powder: Wherefore, by the Experience I have had, the best Assurance you can have that 'tis good, will be to have it made by your self.

Crystal Mineral is very much in use in Physick; it has acquir'd the Name of *Sal* Vol. II. X *Prunella*,

Prunelle, 'tis said, from its specifick Quality of curing Inflammations of the Throat, and the Quinsy, which some call *Pruna*, or *Prunella*: And according to others, from the essential Salt, which is drawn from the *Prunelle*, or *Sloe*, resembling *Crystal Mineral*; or because it is much made use of in inflammatory Fevers, compar'd to a Fire, which the *Latins* call *Pruna*; or lastly, because the *Germans* give it the Figure of a wild Plum.

Of Sal Polychrestum.

The *Sal Polychrestum*, so call'd from its many and great Virtues, is made of the finest Saltpetre, and *Holland's* Sulphur, powder'd together, and by Means of a gentle Fire wrought into a very white light Salt.

This Way of making it is very different from that of all Authors that have treated of it, who recommend a Crucible made red hot, by keeping a Fire about it for three or four Hours: I will not say this Process is not good, but the Impossibility there is of Selling it when 'tis heavy, and of diverse Colours, is the Reason why it can't be dispos'd of; and I believe my Method will be prefer'd, since with two lighted Charcoals, and in the Space of one Hour, a Salt may be made both white, bright, and well qualified, also more saleable, and that costs less. And since I disapprove the Ways of making the *Sal Polychrestum* hitherto used, it will not be amiss to declare the Manner of succeeding best in it. Take therefore equal Parts of Sulphur and fine Saltpetre, and having heated a Crucible, not varnish'd in the Inside, and plac'd it upon five or six lighted Charcoals, so that the Bottom be red hot, throw into it a Spoonful of the Mixture of Saltpetre and Sulphur; and when the Detonation is over, and the Sulphur and Saltpetre are sufficiently burnt, another Spoonful in like Manner must be thrown in, and so 'till all is calcin'd; then take the Pot off the Fire, and after it is cool break it, and therein you'll find a *Sal Polychrestum*, both white, light, and very saleable, and what I say stands to Reason enough, since this Salt cannot be made heavy, and in a Mass, but by the great Violence and Strength of the Fire. They that wou'd be still more curious, and wou'd have a *Sal Polychrestum* purer and more beau-

tiful, that is to say crystalliz'd, let them dissolve it in Water; and after having filtrated and evaporated it to a Pellicle, it must be put in a Cellar, or some other cool Place, to shoot into Crystals; which when dry'd, ought to be in small Plates moderately thick and brilliant, or shining like Diamonds, and of a clear White, and solid, that is, that are hard to break; for that which is easily reduc'd to Powder is not well made.

This *Sal Polychrestum* crystallized, is preferable to the first Sort, how well soever made, being free from that ungrateful Taste, and evil Quality, which the Sulphur, that is inseparable from the other, gives it.

In Selling of this Salt there are great Cheats and Abuses committed, instead of which those who trade in it expose to Sale only the Saltpetre itself melted and cast into a Mass like a Stone: But it is easy to discover the Imposture, for as much as the true *Sal Polychrestum* neither cracks nor flashes in the Fire, but will become red hot; whereas the Counterfeit flames and crackles as Saltpetre itself, and is also to be known by its exceeding Whiteness, and the cheap Rate it is sold at.

The Rock or Crystal *Sal Polychrestum*, that is, as it comes out of the Crucible, was some Years since much in Vogue in Physick, but at present being out of Fashion, (as there is a Mode in Medicine, as well as in every Thing besides) is now seldom made use of; losing, as it were, its Virtues with the Opinion of the World.

This Salt has had the Appellation of fugible Sulphur or fix'd Nitre given it, as *Pennotus* describes at large, and which shews it to be no new Composition, since it has been known a long Time by the Name of fix'd Nitre.

Of the Antifebrifick Salt.

The *Sal Antifebrilis*, or Salt against Fevers, is made of the finest Saltpetre, Flowers of Sulphur, and distill'd Urine, all mix'd together, proceeding after the same Manner as is directed in Treatises of Chymistry, whether the Reader may have Recourse. This *Antifebrifick Salt* is esteem'd an excellent Remedy for Fevers, taken at the Beginning of the Fit, or upon the Return of it, from eight Grains

Grains to half a Dram in any agreeable Vehicle.

Of Nitre Vitriolated.

Vitriolated Nitre is made of Salt of Nitre dissolv'd in Spirit of Vitriol, and then prepar'd; and to which is attributed the same Qualities as to the vitriolated Tartar. *Note*, It ought to be white, light, and in small Striae or Needles, like *Sal Saturni*.

There is also a Sort of Butter prepar'd of Nitre, by the Means of Tartar; the Process whereof may be seen in Monsieur *Charas's* Chymistry, p. 853.

15. Of Natural Borace.

THE Natural Borace, to which the Ancients have given the Name of *Chrysocola*, or *Tincal*, is a Mineral Salt of the Figure of the common *Sal Gem*, found in the Bowels of the Earth in many Places of *Persia*; and at the Bottom of a Torrent, among the Mountains of *Purbeth*, in the Country of *Radzioribron*, that reaches to the Confines of the white Tartary. When this Mineral is taken out of the Earth it is expos'd to the Air, that it may contract a Sort of fat reddish Rust, which nourishes and preserves it from being calcin'd, as it were by the Influence of the Weather; and when it is as it ought to be, the *Persians* carry it for the most Part to a Place call'd *Amadabat*, from whence the *English*, *Dutch*, and We have it; and this is what we call *Natural Borace*, or the unpolish'd, rough, fat Borace, which some Workmen employ for the same Uses as they do the refin'd.

We have another Sort of *Natural Borace* brought us, which differs only from the Former in that it is a little dryer, and of a grey Colour, which proceeds only from its having been longer expos'd to the Air, whereby the reddish fat Substance, wherewith 'tis covered becomes dry, and like to the *Englisch* Copperas that has lain a great While above Ground. Those that have Occasion of one Sort or 'tother must take Care that it be not mix'd with Stones, or other such Refuse, as it frequently happens to be. 'Tis of either of these Sorts of Borace the *Venetians* and

Dutch make that which they send us under the Appellation of refin'd Borace.

The Ancients were not out when they said there was a greenish *Natural Borace*, of the Colour of a Leek, no more than *Agricola*, who rightly enough observes, that he had seen a Fossil Nitre, solid and hard, like a Stone, of which the *Venetian Borace* is made: But the same Author is very much mistaken, when he says, that then no Borace was in use but the Factitious or Artificial, made of the Urine of Boys that drank Wine, Brass Rust, and sometimes Nitre beaten together in a Bell-metal Mortar to the Consistence of an Ointment; which is far from Truth, since the Borace he means is only the fat Borace refin'd and shot into Crystals.

Borace, *Chrysocola*; *Capistrum Auri*, *Auricolla*, or Gold Flux Powder, is *Lemery*, a Mineral Salt that has the Colour and Transparency of *Sal Gem*, but a great deal more Pungency; it is found in certain Mines of *Persia*, and several other Places: When they take it from the Earth they expose it to the Air, where it becomes greasy and reddish on its Superficies; this is that which is call'd *Fat Borace*. This fat hinders the Salts that they cannot be penetrated and dissolv'd, or melted by the Air; there is likewise found a grey or greenish Borace, which Colours proceed from the various Impressions, that the Air being hotter or colder, makes upon the Salt, by opening it more or less.

The *Venetians* and *Dutch* purifie or refine their Borace as they do other Salts, by dissolving in Water, filtrating the Dissolution, leaving it afterwards to evaporate, and settling it to crystallize. They bring us this Borace under the Name of *Borace refin'd*. Chuse your Borace in fine white Pieces, neat, crystalliz'd and transparent. One may, by Refining, separate from Borace a vitriolick Matter, which gives it a great deal of Sharpness; for which Reason the *Refin'd Borace* is much softer than the Natural, and ought to be prefer'd in Medicine; it is incisive and penetrating, proper to open the Obstructions of the Glands of the Mesentery, and dissolve the *Schirrus* of the Liver and Spleen. The Dose is from four Grains to twenty. They also use it externally to consume the Excrecencies of Flesh. They may draw a Spirit from Borace like that of Alum, by a very

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strong

strong Fire; it is aperitive, and very like Spirit of Salt: It is call'd *Chryso-colla*, *Gluten Auri*, *Capistrum Auri*, and *Auri-colla*, because the Goldsmiths use it to flux Gold withal.

Of Refin'd Borace.

As Natural Borace is found of different Colours, sometimes greenish, and other While yellowish, the *Venetians*, who were the first that brought Borace into Vogue, finding it could not be well made use of with its natural Fatness and Unctuousity, consider'd of a Way of purifying of it, by dissolving it in Water; then filtrating and crystallizing it, in order to which they made use of Cotton Matches, upon which the Borace is crystalliz'd, after the same Manner as Sugar Candy or Verdigrise does on Sticks or Splinters of Wood.

As for others that don't use Cotton, they reduce the Borace into little Stones of the Form and Figure of the Tag of a Lace or Point; but as this Sort of Borace had a greenish Cast, the *Dutch* has taken it to Task, and made it whiter and more vendible, and reduce it into larger Pieces, which is what we sell at this Day.

Borace, whether it be the *Venetian*, or that of *Holland*, ought to be chosen clear and transparent, of Taste almost insipid, taking Care that it be not mix'd with *English Alum*, which is difficult enough to discover, if the Alum has been soak'd in Water, and then expos'd a few Days to the Air, to give it the natural rough Appearance of Borace; but this Cheat may be easily found out, if you'll put it to the Test: For first it will by no Means solder Metals, nor being put upon lighted Charcoal will it swell and heave like Borace, or is it ever altogether so white or light.

Refin'd Borace is much in Use by a great many Sorts of Workmen, and serves as well to solder, as to melt and dissolve Metals: Some use it also in Fucus's; 'tis of some small Use too in Medicine, since 'tis an Ingredient of the *Ung. Citrinum*, &c.

16. Of Alum.

Pomet. Alum is a Fossil Salt drawn from Stones of different Bigness and Colour in several Parts of Europe, especially

in Italy, England, and in France. After Alum is taken out of its Bed or Quarry, as you take other Stones, it is burnt in a Kiln made on purpose as you do for Lime, or the like; and when it is calcin'd, its Salt which is the Alum, is drawn out with Water, proceeding after the same Manner as in making Saltpetre. A certain Person in the World, in the Presence of a Man of Worth, maintained that Urine was made use of instead of Water in drawing this Salt; but since his Authority was not sufficient to make him credited, I chuse rather to rest satisfied with what *Matthiolus*, upon *Diascorides*, has written of it, who having been an Eye Witness of the Fact, has given us an ample Description of it in his Book, p. 733, to which my Reader may have Recourse.

We commonly sell six Sorts of Alum, to wit, the plumous Alum, or Earth Flax; the *Roman*, *English*, *Liege*, *Burnt Alum*, and the *Sugar Alum*; as for the round Liquid and Black Alum I know nothing of it.

Alumen, or Alum, is an acid mineral Salt, made from a Kind of Lemery. Stones of different Sizes and Colours, which are found in the Quarries of France, Italy and England: They calcine this Stone, and then make Alum of it by Solutions, Filtrations and Coagulations, as they make Saltpetre; there are several Sorts of it, as *Roman Alum*, *Rock Alum*, and *Sugar'd Alum*.

The *Roman Alum*, or that of *Civita Vecchia*, call'd *Alumen Romanum*, is a Salt in Stones of a moderate Size, that are reddish within, of an acid stiptick Taste; they use it outwardly for stopping of Blood, and inwardly in Gargarisms for Inflammations of the Throat, and to clean the Teeth: They dry it or calcine it upon the Fire to free it from its Flegm, then it is call'd *Burnt Alum*; this is an Eucharotick, and serves to eat away proud Flesh, dissolve Excrecencies, and open Ulcers and Chancres.

Rock Alum, White, or *English Alum*, call'd *Alumen Rupeum*, or *Rock Alum*, is a Salt in large great Lumps, that are clear, white, and transparent as Crystal, which is brought from England, this Alum has the Virtues of the former, but is not so strong. The Dyers, &c. use it. The Alum, call'd *Alumen Saccharinum*, or *Sugar Alum*, is a Composition made

made with Roch Alum, Whites of Eggs, and Rose Water boil'd together, to the Consistence of a PASTE, and form'd while hot into little Cakes, like Sugar Cakes, whence it takes its Name. *Alumen Catinum*, or *Dish Alum*, because it is made in a Platter or Dish, is what we call *Pot-Ashes*, or the *Ashes of Kali* calcin'd, or some other Ashes, or *Alkali Sale*, made from Vegetables; they call it *Catinum*, because they use to dry it in a Plate or Dish.

Of Plumous Alum.

Plumous Alum, or *Earth Flax*, is a *Pomet*. Mineral found in the *Negropont*, which some will have to be the Stone which the Ancients call'd *Lapis Amiantus*; but as I am not sure of the Thing, I will content my self to say, that the *Plumous Alum* which we sell, is a Sort of thready Stone of diverse Colours, but most commonly of a greenish White, in Figure pretty much resembling *Venice Talek*, excepting only that it is not so green nor shining; and instead of parting into Scales, this rises in white soft Threads or Filaments, like the Feathers of a Quill, from whence comes its Name; and accordingly most Part of the Plumous or Feather Alum one meets with, is almost ever in small Fibres, and but little in Stone, proper to spin and make the perpetual Matches. This *Plumous Alum*, to which some have given the Name of that of *Sicily*, is of very little Use in Medicine, and at present it is almost of no Use. since the Secret of drawing it out into Threads, or Spinning it, has been lost: The Cloth made with this Sort of Alum when dirty, to be made clean, needed only to be thrown into the Fire, and it would come out thence as white as Snow; and with this Sort of Cloth did the ancient *Romans* preserve the Ashes of their Emperours, and separate them from those of the aromatick Wood, wherewith their Bodies were burnt. Some People, at this Day, also make use of this Plumous Alum instead of Cotton to make Matches; and to that End it ought to be in long Wicks, and as soft as possible. This Alum is a strong Corrosive, or Escarotick; for what Part soever of the Body it touches it causes Whelks and Blisters, and a most intollerable Pruritus or Itch, which is to be appeas'd only, that I know of,

by anointing the Part with Oil of Olives. Besides this *Plumous Alum*, we begin to sell a certain Stone Mineral, ponderous, white, woolly, and in a Word, wholly like to *Plumous Alum*, and incombustible also, wherefore it has obtain'd the Name of *Asbestos*, which in *Greek* signifies Incombustible, and by Corruption we call it vulgarly *Albestos*.

This Stone Mineral is found in many Places in *France*, more especially in the County of *Foye in Gascoign*, where there are Quarries out of which Stones of a surprizing Magnitude are taken, and from which Cotton Threads may be drawn fit to make Cloth, and to endure whitning or cleansing in the Fire, like that of Feather Alum already spoken of. And besides this *Albestos*, is found in *France* (particularly about the *Pirenees* in the Valley of *Campan*, near the Stone-Quarries, about three Leagues from *Grippa*) certain Plants about two Foot high, which have Stalks all as it were silver'd over, their Leaves like those of a Nettle, excepting only that they are white underneath, of a dark Green at Top, and resembling Shagreen. This white Stalk steep'd in Water, like Hemp, may be run into a long and round Sort of Flax or Tow, of which good Cloth may be made that will resist the Fire like *Plumous Alum*, only it will not whiten so well: And it is to be remark'd, that when this Flax is put in the Fire it immediately grows red, but black if apply'd to a Candle. Perhaps what I say may not easily meet with Credit; but since I have some of it in my Possession, to shew to those who won't believe, and the Person that has collected it is still in Being, and a Man of Reputation and Fidelity, I thought it might not be amiss to advertise the Publick, that *Plumous Alum*, and what we call the *Albestos*, are not the only Druggs in Nature capable of enduring or resisting the Fire.

This incombustible Plant might be call'd *Asbestos*, and the Tow that comes of it *Incombustible Flax*, being long, large, and soft, like Flax.

Alumen Plumum, sive *Alumen Scissile*, or *Feather'd Alum*, is a *Lemery*. Kind of stringy Talk, like the Feathers of a Quill, whence they call it *Feather'd Alum*; it is very soft to the Touch, of a white, greenish, shining Colour, is produced

duced in the Mines of *Negropont*; it will neither flame, nor consume in the Fire; some Alchymists use it for Wicks in their Lamps; 'tis call'd *Sciffile*, because 'tis easie to break and divide.

Of Alum of Rome.

Roman Alum, which we also call *Pomes*. *Alum* of *Civita Vecchia*, because great Quantities are made in the Neighbourhood of that City, is a Stone Alum of a middle Size, red without, and within clear and transparent, and of a disagreeable styptick Taste: This *Alum* is of a reddish Colour; the Mine from whence it is drawn being of the same.

Chuse the *Roman Alum* that is reddish throughout, in the Inside as well as on the Outside, because there are some who colour the *English* and *Liege Alum* of a dark Red, but the Cheat is easily discover'd; for if you find it not as red within as without 'tis a Sign it is counterfeited; it ought to be as free of small or broken Pieces as possible; which yet is no Disadvantage to those who use it, provided the *Alum* be pure and genuine, but only to such as retail it.

Roman Alum is much in Use with Dyers, Tanners, and others, that make counterfeit Pearl, but it ought to be very good for all of 'em.

Of English Alum.

English Alum, to which the Ancients have given the Name of *Roch* or *Rock Alum*, *White* and *Glass Alum*, is an *Alum* clear and transparent as Crystal, which is sent us from *England* in Pieces of different Figure and Bigness; since sometimes 'tis to be met with in Lumps as big as a Man's Body, sometimes clear and white as Crystal, and at other Times blackish and moist: In fine, the *Glass Alum* is more or less beautiful, according as it has been more or less purified.

As this *Alum* is much made use of by several Sorts of Trades, particularly by Mint-Men or Coyners, and Dyers; as also for many Preparations in Physick, as will be taken Notice of hereafter; Care ought to be taken in the Choice of it, that it be white, clear and transparent, as dry and as free from

any Sort of Filth as may be; also Care must be had that it be not *Liege* or *Meziere Alum*, which is grossier and fatter than that of *England*, and not so fit for Dyers Use, and which they never make use of but for want of the true *English*. We had not long since a greenish Sort of *Alum*, like *Saltpetre*, drawn from a Stone taken out of the Mines in the Neighbourhood of *Soissons* in *Picardy*; but as this *Alum* is of no Account, as well by Reason of its ill Looks, as because we continue ignorant of its Virtues, I shall say no more concerning it. From the *English Alum* is distill'd a clear and acid Water, which we call *Alum Water*, and which is us'd as an Ophthalmick for the Eyes; after the Phlegm comes over an acid Spirit, useful in Fevers, whether continual or intermitting; and also good against small Ulcers or Excoriations in the Mouth, from four to eight Drops; that which remains in the Vessel being a light white Substance or Mafs, is what we call *Burnt Alum*: But as this Water and Spirit of *Alum* is in little request, those that have Occasion for *Burnt Alum* do not trouble themselves about distilling, but only put the *Alum* into a Pot, which they place in the Midst of a good Fire; and when the *Alum* is become very light and white, they take it out and keep it for Use.

Calcin'd or *Burnt Alum* ought to be light and friable, that is, easily reduc'd to Powder, so that Care must be taken that it be not such as has been pass'd through a Silk Searce or Sieve, which is put into a Bag tied close, to make it into Stones or Lumps, but this Cheat is easily discover'd; the Counterfeit *Alum*, being heavy, extreamly white, more like Paint or Plaster than any Thing else, and of a styptick Taste.

True *Burnt Alum* is esteem'd a very good Escarotick to eat away proud luxuriant Flesh; Persons of Condition commonly wear it in little Bags under their Armpits, and their Feet to prevent Sweating, but then it ought to be extreamly Fine.

Of Saccharine, or Sugar like Alum.

Saccharine Alum, because it resembles Sugar, is made of *Glass Alum*, *Rose Water*, and *Whites* of Eggs boil'd together 'till it is stiff; and this *Alum* so boil'd, and re-

reduc'd into a PASTE, what Figure or Form you please may be given to it, and when it is cold it becomes as hard as a Stone.

Some make this *Sugar Alum* enter the Composition of their *Fucus's*.

There is moreover other Sorts of Alum, namely that which is in a white transparent Stone, in every particular almost like the Crystal Rock Alum, and to which the Name of *Scayolle Alum* is given, or that of *Muscovy Glass*, which is found in the Quarries of *Passy*, and which after it is calcin'd is of a very beautiful White; but that of it which is counterfeited is more like Plaister, not

long since great Quantities of this Sort of Alum was found in the Clayey Earth of *Passy*. There are others that make use of another Sort of *Muscovy Glass*, which we call *Gip* or *Plaister*; Potashes also have obtain'd the Name of *Alum Catin*, as is observ'd in its Place.

Some say the Name of *Alum* is deriv'd from the Latin, *Lumen*, which signifies Light, because *Alum* gives a Lustre, or Brightness to dyed Colours, and that without it there wou'd be no dying or colouring to any Purpose.

End of the Third BOOK of MINERALS.

BOOK