

others *Alumen Plumosum*; this when genuine deserves all the Praises they bestow upon it, as possessing all the Virtues of Alum in their highest Degree: But it would be a very fatal Error to give the Amianthus, usually met with in the Shops under its Name, internally in its Place.

The chemical Characters of Alum are these ○ or □.

In Medicine it proves a very powerful and valuable Astringent. *Dioscorides* and the other old *Greek* Authors are full of its Praises in stopping Hæmorrhages of all Kinds, and in fastening the Teeth and strengthening the Gums. It was an Ingredient in all their Dentrifices on this Account, and obtains a Place in most of ours also to this Day. It is also a gentle Desiccative, and is good externally in Ulcers. We are fond of it also internally at this Time, in Cases of Bleedings from whatever Part. The best Method of giving it is in Pills, its Taste being a very displeasing one in a Liquid Form. There is a very good Method of making Pills of it by melting it over the Fire, and adding to it, while in Fusion, a fourth Part of its Weight of Dragon's Blood in fine Powder. The Mass is to be taken from the Fire as soon as the Powder is well mixed in it and made into Pills before it cools. These are to be given half a Dram for a Dose, and in Extremity are to be repeated in the same Dose every three or four Hours, and after the Hæmorrhage is stopped, they are to be repeated once or twice a Day for some Time. As it is not right however to be too sudden in the stopping Evacuations of this Kind on some Occasions, it is necessary to bleed sometimes both before and after the Use of this Medicine; and as it is apt to prove an Astringent in the Bowels, an emollient Glyster ought to be occasionally given during the Use of it.

A Gargarism with a large Quantity of Alum in it has often proved a Remedy in the Beginning of Quinsys, which might else have had fatal Consequences. Three Drams of Alum may on these Occasions be dissolved in a Pint of Water, and the Mixture sweetened with Syrup of Mulberries, to take off somewhat of the bad Taste of this Salt.

The white of an Egg beat up into the Form of an Unguent with a Piece of Alum, which is easily done, makes an excellent Liniment to apply over the Eyes in Cases of Inflammation and Defluxions upon them; but it ought not to be suffered to remain too long on them.

In scorbutic Disorders of the Gums Alum is found excellent; it is very conveniently used in Form of a Lotion on this Occasion. Four Ounces of Sugar, two of Alum, and one of Camphire, macerated in a Quart of Brandy make an excellent Lotion of this Kind.

Alum heated red hot among burning Coals and immediately plunged into Vinegar, will dissolve in it; and on Evaporation will form very clear and fine Crystals. These are recommended in intermittent Fevers, a Scruple or more for a Dose, to be given just before the coming on of the Paroxysm.

The Preparations of Alum received at this Time into the Shops are only, 1. The purified Alum. 2. The burnt Alum. 3. The Sugar Alum, or *Alumen Saccharinum*. And 4. The *Aqua Aluminosa*, or Alum Water of *Bates*.

ALUMEN PURIFICATUM,

Purify'd Alum.

Take *Roman* Alum four Ounces, fair Water four Pints; dissolve the Alum over the Fire, and filtrate the Solution. Evaporate a little more than one

called *Chrysocolia*, *Gluten Auri*, *Capistrum Auri*, and *Auri colla*, because the Goldsmiths use it to flux and solder Gold with.

Of Refined Borace.

Pomet. As Natural Borace is found of different Colours, sometimes greenish, and other whiles 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, considered 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 crystallized, after the same Manner as Sugar-candy or Verdigrise on Sticks or Splinters of Wood.

As for others that do not 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* have taken it to Task, and made it whiter and more vendible, and reduced 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 mixed with *English* Salt, which is difficult enough to discover, if the Stone has been soaked in Water, and then exposed 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 will 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.

Refined 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*. It is of some Use too in Medicine, as it is incisive and penetrating, proper to open Obstructions of the Liver, Spleen, and Mesentery, and to promote the *Menses*; the Dose is from five Grains to twenty.

[Borace is the Borax, *Charlt. Foss. 9. Dougl. Ind. 18. Nitrum salitium, Arabice Borax, Worm. 21. Nitrum unde Borax excoquitur, Aldr. Mus. Met. 324.* Both the native and refined are common in the Shops; the native is brought to us in Pieces about the Bigness of a Walnut, foul and earthy, and of a dark green Colour, and greasy. It is had from *Persia* and other Places, where, in Copper Mines, they find a greenish turbid Water, which they evaporate to a proper Consistence, and afterwards make to a Paste, with the Slime and Mud of the Springs it runs from, and some Quantity

of Animal Fat. This Paste they bury for some Months in the Earth, after which, opening the Pits, they find the Water concreted into knobby Substances, which dug out of the Pits, with the fat Earth about them, are the *Native Borax*.

The *Refined Borax*, which is what we most commonly sell, is the native Kind purified by a *Lixivium* of Quick-lime. We formerly had it from *Venice*; but now the Trade of refining it is almost entirely in the Hands of the *Dutch*.

This is the Borax of the Shops at present; but it is evident, that it is very different from the *Chrysocolia* of *Dioscorides* and *Galen*, which was a green metallick Substance, found sometimes like a loose Sand, and sometimes adhering to other metalline Matters, and was a kind of native Verdigrise, not soluble in Water, which, taken inwardly, always proved Emetick, and sometimes poisonous. They had also, beside this native *Chrysocolia*, two factitious Kinds, the *Herbacea* and *Santerina*: The *Herbacea* was made of the native *Chrysocolia*, bruised, calcined, and macerated in Vinegar, tinged with *Luteola*, or Dyers Weed; and the *Santerina*, of *Cyprian* Verdigrise and Urine, with the Addition of *Nitre*. These, it is plain, must also be very different from our Borax; but whether the *Tincar* of the *Arabians* differs from it or not, is not easy to determine, as none of it comes to our Hands.

Our Borax is a fixed alkaline Salt, something of the Nature of Salt of Tartar; but differing from it in this, that it unites with Acids without Tumult. It yields nothing in Distillation but an insipid Phlegm: A Solution of it turns Syrup of Violets green; and a Solution of corrosive Sublimate to a Saffron Colour.]

16. Of Alum.

Alum is a fossil Salt drawn from *Pome's* Stones of different Bigness and Colour, in several Parts of *Europe*, especially in *Italy*, *England*, and in *France*. After the Stone 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 calcined, its Salt, which is the *Alum*, is drawn out with Water, proceeding after the same Manner as in making Salt-petre. 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 is not sufficient to make him credited, I chuse rather to rest satisfied with what *Matthiæus*, upon *Dioscorides*, has written of it, who having been an Eye-witness of the Fact, has given us an ample Descri-

Description of it in his Book, Page 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 them.

Of Plumous Alum.

Pemet. *Plumous Alum* is a Mineral found in the *Negropont*, which some will have to be the Stone which the Antients called *Lapis Amiantus*; but as I am not sure of the Thing, I will content myself to say, that the *Plumous Alum* which we sell, is a sort of thready Stone, of divers Colours, but most commonly of a greenish white, in Figure pretty much resembling *Venice Talc*, 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 Emperors, 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 Escharotick; for what Part soever of the Body it touches, it causes Whelks and Blisters, and a most intolerable *Pruritus* or Itch, which is to be appeased 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 obtained the Name of *Asbestos*, which in *Greek* signifies incombustible; and by Corruption we call it vulgarly *Albestos*.

This Stone is found in many Places in *France*, more especially in the County of *Feyx* 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 whitening or cleansing in the Fire, like that of Feather *Alum* already spoken of. And besides this, there are found in *France* (particularly about the *Pyrenes* in the Valley of *Campan*, near the Stone Quarries, about three Leagues from *Grippa*) certain Plants about two Feet high, which have Stalks all as it were silvered 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 steeped 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 remarked, that when this Flax is put into the Fire, it immediately grows red, but black if applied 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 would not believe, and the Person who 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 *Asbestos*, are not the only Drugs in Nature capable of enduring or resisting the Fire.

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

Alumen Plumaceum, sive Alumen Scissile, or Feathered *Alum*, is a kind of stringy *Lemery*. *Talc*, like the Feathers of a Quill, whence they call it *Feathered Alum*. It is very soft to the Touch, of a white, greenish, shining Colour, is produced in the Mines of *Negropont*. It will neither flame nor consume in the Fire. Some Alchymists use it for Wicks in their Lamps; it is called *Scissile*, because it is easy to break and divide.

Of Alum of Rome.

Roman Alum, which we also call *Alum Pemet*, 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 the Outside, because there are some who colour the *English* and *Liege Alum* of a dark Red, but the Cheat is easily discovered; for if you find it not as red within as without, it is a Sign it is counterfeited. It ought to be as free of small or broken Pieces as possible;