The Hermes Paradigm

Book III

Metallic Oils of the First Order

Rubaphilos Salfluère

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By the same author:

The Hermes Paradigm - Book I - First Principles (Paperback)
The Hermes Paradigm - Book II - The First Work (Paperback)
The Hermetic Alchemy Essays Vol: I (Digital)

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To Sophia

Midnight in my Father’s garden,
Barefoot in the fountain,
Gown of white silk, damask,
Hair - aster and frankincense.

The Hermes Paradigm

Book Three – Metallic Oils of the First Order

By Rubaphilos Salfluĕre

"A spirit is never joined to a body but by the interposition of a soul. For the soul is the medium between body and spirit, joining them together."
(Arnold de Villa Nova – Flower of Flowers)

Acknowledgements

The list is slowly growing longer. Thanks must first go to Arsolis (Apostolicus Hermetæ Scientiæ), for his foreword and his helpful input. His enthusiasm and the level of his commitment to the great work is rare; a true Son of the Art and a trail blazer who's rising contributions to the science have yet to be properly recognised. Thanks to 'C' for my original instruction in the secunda. Our time together taught me that a traditional education in Hermetism is essential to seeing with the eyes of the old Adepti. I hope this series of books helps to repay some of the debt I owe you for my education. Thanks also to Alden (who contributed to the Guild forum, and Rubellus' forum), who's knowledge of chemistry and his polite and calm willingness to share, has often been a help. Some last minute revision to this volume and some changes to the next are based on pieces of the knowledge you have shared, and I wanted to be sure you were credited for that. Thanks to Rubellus Petrinus, whose request for help with his own manuscript unwittingly started me on this literary journey. Credit must also be given (again) to those students of the Heredom Group who travelled as far as the secunda, and who's personal and meticulous lab work added to our collective knowledge of the metallic oils process. Once again thanks to Greg Kaminsky of www.occultofpersonality.com. His very professional service in reviewing my books has sent many inquiries in my direction, helping to connect serious students with serious tuition. Thanks must also be given, again, to those of you who have brought the previous two volumes in this series, and in particular those of you who weren't too shy to contact me and share your thoughts and kind words; and those of you who were keen to demonstrate

your degree of your curiosity by entering in to discussion upon the ideas I have thus far presented in my publications, in order to learn more. Finally, thanks must go to everyone on the Hermetic-Alchemy Yahoo Group (Forum) who has participated in discussion, asked helpful questions and shared information about their own alchemical journey. Discovery follows in the footsteps of cooperation.

Foreword

It is not uncommon for instructors of first-year chemistry to begin with a passing nod to alchemy as the proto-science that preceded modern understanding. These academics would have us believe that filled with nothing more than a desire to turn lead into gold, and achieve immortality, the ancient dabblers in chemical experimentation would ultimately fail. Yet they would pave the way for the real scientists to take over where the alchemist left off. Marginalized by this pervading voice, the legends of The Philosopher's Stone and The Elixir of Life – the quintessential fruits of alchemical toil – would be seen as nothing more than the subject of fairy tales and children's stories.

Over the centuries, as the dabblers and charlatans were puffing away and giving credence to this perspective, an underground current of Hermetic Scientists were preserving their art and guarding their success. Reserved only for those who had proven their sincerity of purpose, the Masters of Our Art were passing on their secrets only rarely through private apprenticeships, and when publicly, only by way of cryptic texts; accounts that were typically indecipherable by those who had not yet gained the understanding that comes only through the hard labour of the athanor.

From mouth to ear were these teachings passed on and locked away from the eyes of the profane in secret societies and mysterious cabals until the time, perhaps, when mankind would reach the intellectual and moral maturity that would warrant their more widespread unveiling. Thus, the puzzles of alchemical transmutation remained enigmas to even some of the greatest minds of the scientific revolution who sought the legendary fruits of the Art.

Then in the middle of the 20th century, a Rosicrucian initiate known as Frater Albertus broke with the secret tradition. In 1960 he formed the Paracelsus Research Society and began offering valuable instruction in alchemical laboratory procedures to anyone who would dedicate themselves to the pursuit. In this way, a flow of information began to emerge from the underground. What was once accessible to only select individuals slowly became available to the public at large.

Today we find ourselves in quite the opposite situation. Living in the Information Age of the Internet, opinions concerning the alchemical tradition can be found in relative abundance. With a quick search on Google™ we may find articles on Wikipedia that reference eBooks written by members of Yahoo Group message forums who are more than willing to share photos of their alchemical works, provided you have been accepted as their “friend” on Facebook™, and promise to “like” them after your viewing. Where just over fifty years ago serious contemporary information on alchemy was as rare as gold, today anyone with a smart phone can find opinions on the subject with the mere click of a button. This has been quite a blessing for those of us who pursue the study of Alchemy in the modern age.

However, in yet another sense, the ease with which false opinion, poor understanding, and outright lies can spread makes it quite difficult to sift through the rubbish and find that which will truly guide us to success in the Great Work. Paracelsus taught us that it is improper dosage that can turn a medicine into a poison, and this is no less true with information. It is my opinion that with each book in *The Hermes Paradigm* series, Rubaphilos Salfluĕre gives us a dose of the antidote to this widespread infection of false notions regarding alchemy – opinions that are held in such high esteem even when based on little or no experimental validation.

I began my journey in the Hermetic mysteries with such awe and wonder. Like so many in this age of materialism, my soul yearned for more than could be explained under the lens of a microscope. Though it was over twenty years ago that my eyes were first opened to the greater world of spiritual wisdom, it wasn't until ten years later – after becoming initiated into one of the largest Hermetic organizations of modern times – that this spiritual yearning would cement itself into the sole motivator of my life. My initial awe and wonder was compounded after being introduced to many sincere individuals knowledgeable in magic, alchemy, and Hermetic philosophy. All of which seemed to promise the accomplishment of the Great Work; to lead me towards the confection of the Philosopher's Stone; to guide me into union with my Higher Divine Self; and to expand my consciousness into that of the Supreme Being Itself.

Over the course of ten years, I became proficient in the Hermetic teachings of this school. In that time, I had come to serve as a leader for the organization as well as consultant to the elders of the group. I took part in the most sacred of their magical rites, worked from their alchemical texts, and assisted on those occasions when their most coveted of private teachings were being received. I soon found myself in the circle of an elite whose precise workings to this day are known to less people than I have fingers. According to the highest of these teachings, I had arrived at the summit of their Hermetic wisdom. Yet I had become entirely empty.

Void of my initial sense of awe, I found myself in the now disparaging position of having lowered all of my expectations, all of my hopes and dreams concerning mystical possibility. Certainly, I had experienced profound depth of spirit. I had seen practical magic manifest material wishes. I even bore witness to phenomena I would consider miraculous. Yet these moments were fleeting and nearly impossible to predict or replicate on a reliable basis. If I was at the summit, and that was all there was, then the sacred mysteries of Hermes, of the

Philosopher's Stone, of the Rosicrucians, and of the Magi were not at all the stuff of their legends.

Filled with doubt and the lack of my early sense of wonder, I came to the sad conclusion that the legends of old were a fantasy; the Art could not be mastered in a reliable and repeatable fashion; the miraculous was only as impressive and as chance as an hallucination; and laboratory alchemy was more about chemical meditation than the true spiritualization of matter. However, after taking one last leap of faith on a chance introduction to Rubaphilos, I now find myself eternally grateful that through my education in the teachings of The Heredom Group, they have demonstrated to me that I was dead wrong.

With each new instalment in *The Hermes Paradigm* series, a good amount of these teachings are being released to the public for the first time. Where alchemists like Frater Albertus of The Paracelsus Research Society and Jean Dubuis of The Philosophers of Nature played a major role in the initial release of alchemical lab theories and practice, I am confident that with this series Rubaphilos is playing a major role in bringing the discipline back to its roots – the development of higher understanding based on seasoned experience and validation.

In *The Hermes Paradigm – Book One: First Principles,* Rubaphilos explained in detail the core Hermetic principles implicitly following from an understanding of reality that emerges from validated illumination. Moreover, we saw explained in clear language the foundational perspectives that are held by those who have succeeded as Masters of Our Art – an invaluable treasure! Although there may be some among readers of this current work who are undoubtedly motivated to uncover quick "recipes" for alchemical products, I urge you to read and reread *First Principles* and to meditate upon the reality of its implications. Without adopting the *Mind* of the alchemist, it is unlikely that true success in the Great Work can be accomplished.

After laying the Hermetic foundation, *The Hermes Paradigm – Book Two: The First Work* provided us with what could be regarded as the most unique presentation of the Lesser Work upon Vegetables in print. Rather than a rehash of the same basic approaches to this work, Rubaphilos chose to explain the work in a way that helps the aspiring laboratory adept unlock for him or herself solutions to those problems that must be overcome when carrying out the Great Work – the preparation of the Philosopher's Stone and the Elixir of Life. To this end, experience is King. All else is merely a distraction from our lack of sincere dedication. And in the gems presented in *Book Two*, we have all we need to proceed into our labs and achieve the experience needed to make success much more likely.

When I was first introduced to the teachings of the Heredom Group, I was struck by a unique wisdom that I had rarely witnessed in all my years of experience. The words of Rubaphilos may not always be popular among those who take certain unproven theories as fact, but after having worked with this group for some time now, I can assure you that what is being taught is based on a solid foundation of experimental verification. What you will learn in this series is Hermetic *Science*. As such, if a theory is true, it can be verified as so. Whether the subject is the psycho-spiritual domain of Inner Alchemy or the sensual world of the alchemical laboratory, what you will discover in these pages is not mere theory or wishful thinking. Here you will find only that which has stood the test of repeated demonstration.

One area where the fruits of such demonstration are so rarely understood is that of Metallic Sulphurs and their preparation. In *The Hermes Paradigm – Book Three: Metallic Oils of the First Order* you will find this elusive subject clearly explained for possibly the first time. Though many modern alchemists will move directly from the *First Work* of the vegetable Kingdom to the *Third Work* of the mineral and metallic preparation of the Philosopher's Stone, experience has shown that many years of failed technique and poorly executed operations are lost without discovering that which Rubaphilos has openly provided for us within this concise manual. Without understanding the alchemical solution for the “extraction” of the Soul of Metal, you will not find Our Stone.

It is likely that many readers, moved for such greater understanding, will find themselves consuming this text from cover to cover in one sitting. However, I urge you to challenge yourself and think critically as you do so. Alchemical procedures and theories are spelled out here with nothing omitted. Yet the true gold to be found in these pages is the illustration of how one approaches the Great Work with an Alchemical Mind, not merely a puffer's fancy for recipes and shortcuts. Practice Our Art with a passion for illumination, live in accordance with The Hermes Paradigm, and the light of truth that I attribute to rebuilding my sense of awe and wonder will reveal itself to you, as it has been revealed to the Masters for thousands of years.

Arsolis Perficio $^{\text{AHS}}$
Indianapolis, Indiana, USA
July 2011

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Thesis

(On the Alchemical Work of Metallic Sulphur)

Introduction
(To the Digital Edition)

> “Among the three principles the Sages have justly assigned the first place to Sulphur, as the whole Art is concerned with the manner of its preparation.”
>
> (Sendivogius, A Treatise Concerning Sulphur - 1608)

To begin we should first consider the background to this volume in the Hermes Paradigm series. This work is the third in this series. The first two works were published by Salamander and Sons in conventional format. Due to the publisher's decision not to hold up to his end of my publishing contract I have decided to publish the remaining books in this series digitally, and at no cost. Eventually I will republish volumes 1 and 2 in digital format, as well, in re-edited versions with new material included.

Each volume is designed to define the key concepts of Hermetic Philosophy, as they pertain to laboratory alchemy (primarily, but not exclusively), while also defining the basic structure of the schema for teaching and studying that science in a traditional format. The first volume in the series, *First Principles*, focuses primarily on the evolution of the alchemical tradition (as a history), and an explanation of its core philosophic concepts. Without knowledge of these ideas the task of mastering alchemy is greatly undermined. The second volume is titled *The First Work* (Prima), explaining the mechanics of applying the fundamental principles of Hermetism in the alchemist’s laboratory, with a focus on the work in the Plant Kingdom. The manual techniques learned in this simple practical introduction make it possible to then move on to the more complex and indepth *Second Work* (Secunda), which is the subject of this treatise. Each of the steps explained in these first three volumes provides important key information and experiences required to then make a successful attempt at the *Third Work* (Tertia), the Great Work … the preparation of the Lapis Philosophorum and the Elixir Vitæ. The subject of the volume planned to follow this one.

For anyone who has not studied the proper use of technical alchemical terminology, or who has not read my previous two books in this series, I have placed a glossary of terms at the end of each text. This will help with understanding to a limited degree, but much will still remain elusive if the introductory subject is not attended to. This is partly due to the nature of studying advanced alchemy, but it is also partly due to the deliberate ruse on my part, not to make the full apprehension of this advanced work *easy* for anyone. The very point in the study of alchemy is not as much the goal of the work as it is the journey. I know this is a cliché, but it is also true, and in considering this truth it should be remembered that my concern here is with aiding the student of alchemy who accepts the *esoteric* approach to the work, not the cold chemical and capitalist approaches which are concerned only with gold or fame. So my aim is not simply to *give away* accurate answers to the serious questions of alchemy, but instead to describe the most direct route through which you may find them for yourself.

In a more complete traditional instruction in laboratory alchemy the *Second Work* would have covered the application of alchemical technique to the Animal Kingdom. But in this day and age, with many persons who take their advancement through alchemical training seriously, there are often moral or ethical objections to working on substances derived from the Animal Kingdom. For this reason instruction and work in this particular area has fallen in to disrepair, due to neglect. Nevertheless, what remains of work on animal substances can still be investigated by the curious and experienced student, while my skipping this information in our instruction here will not in any way undermine the effectiveness and goal of my broader and long term purpose.

This much being understood, *our* Second Work will cover the subject next in the natural order of progression … the preparation of alchemic mineral and metallic Sulphurs of the first order; that which is referred to in more common alchemical language as the so-called *metallic oils*.

It is a curious point of note that in the many years I have been observing or partaking in discussions on the subject of laboratory alchemy, one of the least published, inquired about, or talked about subjects in the public arena would have to be that of metallic Sulphurs. It would seem that a vast portion of students are either concerned only with the Plant Work (because they realise its importance in the study process, or have no desire to move to more advanced work), or that they desire to tackle only the most advanced mineral-metallic processes. Of those who concern themselves with advanced mineral or metallic work it seems that it is not uncommon for the important role of mineral and metallic Sulphurs to go unrecognised, or misunderstood, ignored, or sometimes not even known about.

While the mechanics of obtaining the three alchemical *Principals* (Mercury, Sulphur and Salt), from plant substances requires a bit of study and work to grasp, the truth is that the techniques are largely no mystery, especially if you already have a broad understanding of herbalism and of very basic chemistry in general. Obtaining the alchemical Principals in the mineral and metallic realms, though, is somewhat trickier, and by far less well known. The subject is one that is almost exclusively the interest of alchemists (that is, it cannot really be found in any other area of chemical or para-chemical research), and until relatively recently, knowledge of the exact techniques involved was kept behind closed doors. Even today a larger portion of knowledge about the real operative approach to advanced alchemy is still a closely guarded secret, known by probably only a few dozen people in the world.

It is my intention, herein, to make quite clear why the mineral and metallic Principals are so hard to obtain and manipulate (compared to the simplicity of their manipulation in the plant realm), with a specific focus on metallic Sulphur.

With the plant process[1] the method of teaching alchemical technique sees the work as one flowing integrated operation, followed and acquired in close steps. The theory of that entire operation is easy for most people to grasp, even if they may not agree with aspects of it. Within the broad scope of the various approaches to the metallic and mineral works, obtaining the alchemic Principals and Elements is approached as very separate areas of operation, at the outset. It is therefore best to learn about the ins-and-outs of each metallic Principal individually.

The second reason for teaching the various aspects of the mineral and metallic works as discreet operations is that it helps to keep the most advanced alchemical knowledge difficult to obtain. For example, before we can even begin to deal with the method of preparing the Philosopher's Stone, a great deal of time must first be invested in recognising the various pieces of the puzzle as individual units, then later, how to fit the pieces together. At the same time, while the theory of the Plant Work is simple and reasonable, the theory of the metallic work is complex and in a number of places includes ideas which at present are not recognised by modern science (or indeed by many persons who consider themselves students of advanced alchemy). Some of these ideas I will reveal here for the first time, publically, as examples of the kinds of concepts Adept

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[1] For details see my previous publication *The Hermes Paradigm, the First Work*.

alchemy includes as part of its deeper understanding. I also want to discuss some of these arcana because they provide excellent examples of how modern science has enough knowledge to grasp these once hidden ideas, but not the attitude to focus on the possibility of their existence, or their feasibility. In this the intelligent reader will begin to see just what the real nature of an advanced alchemical secret really is. That it is not that we cannot discover these secrets for ourselves, but that they remain secret often, and simply, because we refuse to look in certain places for them, on the insistence of opinions had by people who claim authority, but who have not the slightest idea about the facts.

I also want to make it quite clear, for the record, that some of the assumed new ideas I present here are not my personal discovery alone. At this point in my journey I know of a small handful of persons, some of whom I do not personally work with, who also are aware of these concepts (or rather pieces of them), but who, for their own reasons, have decided to keep the information to themselves. As far as I can tell while these key ideas have been simultaneously discovered by myself, and by other alchemical researchers around the same time (roughly speaking), I may be the first such person to join all of the pieces of the puzzle together in order to grasp a somewhat complete view of the subject[2]. Therefore in having reached the conclusions I present here independently of any other researcher's aid, I owe no debt of secrecy to anyone. Nevertheless I am quite sure that in saying as much as I have,

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[2] I admit that I am being a little vague here as to exactly what I am referring. But I would point out that only part of this enigma is presented here, on the subject of metallic Sulphur, the rest will have to wait until the fifth volume in this series, where the entire subject of the Great Work will be discussed in detail. At that time my claims here will (hopefully) become completely obvious.

publically, I will infuriate more than one individual who has gained notoriety by openly hinting at this knowledge, and then greedily withholding the details of its facts.

To this end I devote this third volume to the preparation of metallic Sulphurs, before anything else. This is because the production of metallic Sulphurs is by far an easier process than obtaining metallic Mercuries, or preparing metallic Salts (alchemically). Ease, though, it should be understood, does not suggest meaninglessness. The subject of metallic Sulphurs is a very curious one, and, as we shall see here there are some very interesting things to learn about this work that have changed the way alchemists have viewed at least one class of metallic Sulphurs for 1000s of years. At the same time the most reliable of the old Adepts inform us that the power of the Philosopher's Stone to *tinct*' (transmute base metals in to gold), lies in the Principal of metallic Sulphur, itself. In this way when it comes to transmutation, it might be argued that Sulphur (energy), is the most important of the Principals. So, in considering this subject here, we have an interesting discussion ahead of us.

In presenting the view of the production of metallic Sulphurs you will read herein, it should be noted that the processes described are not the *core* methods used by the most advanced of the old Adepts. They are *models* of the core techniques. Models that have been used by the old alchemists, since ancient times, to act as a reflection of the most advanced and secretive methods they developed and have largely kept hidden. These model approaches to the work are not without their own value. They are more complex and laborious than the more secretive approaches, but … they will still get you to the ultimate goal with patience and hard work. These model teaching tools are important, for now (if our intellect is keen enough, by their means), we see through a glass, darkly, then later face to face.

If we follow these model methods, and think about what we are observing in the practical application of their theory, it will not be difficult to *see* and to *understand* the deeper, simpler, hidden road to success. At the same time, in using these model techniques as a vehicle for explaining the work in metallic Sulphurs, I am in a position to use this view of the work as a platform for providing hints about the more secretive theory and methods of the deeper work, later. In this way I may say more than I dare, without exposing too much that is of a sensitive nature to those who have not reached the maturity to make *productive* use of it. At the same time, for those who know something of this subject already, and are hoping for some further help from this discourse, be assured I have left *nothing* out here. My description is complete.

So, before entering into the work proper, I should explain a couple of related concepts that are often the basis of questions asked by any serious student of the Royal Art, when considering the works of alchemical authors. The first question that often arises is … *just how cryptic is this guy being in his explanations*? I can assure the reader that herein I do not *lie*. I do not use allegory or metaphor, except where I explicitly state it, and then not to conceal, but simply to discuss ideas for which our common shared language has no way of explaining literally. For it should be remembered that the further we venture into advanced metallic alchemy, the less we have access to commonly established terminology to explain that which we experience there. It is the foundation of my intention in writing this work that when I speak, I speak literally and as clearly as I can. The primary method I make use of in covering my tracks, so as not to reveal *everything* in a clear and simple fashion, is to use technical terminology in such a way that one has to either be well trained in *traditional usage* of alchemical language, or of contemporary chemical language. Otherwise, everything required for success is here. So it should be noted that if your own experiments fail it is not for lack of my accurate instruction, but rather for your lack of skill in either understanding this text, or in carrying out the manual operations exactly as I describe them.

I will also clear up another often posed argument while we are on this subject. I know some students will insist that the methods I explain here may not be accurate (or true), and that any successes I have had might be the result of delusion or mistakes on my part, and therefore cannot properly be replicated by anyone else. To put this idea to rest it should be understood that I have taught these concepts and their practical usage to literally dozens of students over the last 25 years, and so the methods and results are tried and true. The rubbish has been discarded and reliable technique and theory retained. These methods also form the canon of accurate traditional technique of the path we are here considering. So again, if you do not obtain results the problem is not with my accurate instruction, it is with your intellectual capabilities or the level of your practical skill.

I should also include something of a disclaimer here. While I know from a great deal of personal experiment that the techniques I describe are safe if carried out responsibly, and the products of the work are safe to ingest, if confected according to my *exact* instruction, I also know from experience that no matter how carefully one explains even the most simple experiments to a student, the vast percentage of them simply can never manage to carry them out properly (for a number of reasons). It is therefore my strong recommendation that you do not ingest any of the products of the work described herein. There simply is too much opportunity to poison oneself. Where the manual work is concerned, I strongly suggest you do not attempt anything here without either an experienced tutor's personal guidance, or after many years of personal laboratory experience.

A Little History of Metallic Alchemy

> "Quick sulphur is the active principle of metals, and, when purged from all foreign matter, is the Matter of our Stone."
>
> (The Golden Tract, Anon - 1620)

Find the lesson that history can teach us and half of the game will already be won.

It never ceases to amaze me how, today, so many persons who consider themselves students of alchemy approach the subject with so little interest in its history and development. They tend to immediately jump in to the deep end and hope to understand the process of confecting the Philosopher's Stone without any background study. If the most extreme claims of alchemical tradition are true … that it is possible to synthesize a substance that can transmute base metals into noble metals, then the subject of advanced alchemy has to be one of the most elusive enigmas known to mankind. We have to ask ourselves, what are the chances that a person who does not *study* alchemy as a philosophy, not merely its recipes, could ever have a chance at solving that enigma, especially when some of the most advanced minds in history have applied themselves to that test and failed?

The solution to that enigma has eluded all but a very small number of persons in modern history. In an age when modern science thunders and roars in boast at the heights of its achievements, if the claims of history are even half way accurate then we are producing fewer successful alchemists today than in any other period of human achievement. If the most advanced understanding of physics and chemistry cannot solve the problem, (let alone understand it), then what is it that allowed the old alchemists to first see the possibility of transmutation, and then achieve it, without access to modern technology? The answer is simple … they saw the world through a different pair of eyes than we do today.

To be able to grasp that paradigm begins with a careful study of the history of alchemy, and of the alchemists themselves.

When we look at the history of alchemy a greater portion of what we see revolves around work with metals. So the history of the development of metallic alchemy (in comparison to that dealing with plants and animals) is well defined, and important.

I personally divide the development of metallic alchemy in to three epochs. The earliest period begins in pre-history and ends with Jabir ibn Hayyān (721-c.815 AD). The qualifying distinction of this first period is that alchemy flourished at that time without knowledge of mineral acids[3]. We know this because Jabir is the first alchemist that record describes as having experimented with mineral acids. This idea is important because by it we understand that if alchemists before Jabir had the Great Stone, then they did so without the aid of strong acids. That is, they only had recourse to weak organic acids (and weak lye (alkaline solvents). This is a key concept because today, in an environment of investigation of alchemy which is ruled by the paradigms of chemistry and modern physics, many modern students of alchemy believe that if hermetic claims of transmutation are true then the use of strong acids *must* play a role in the preparation of the Philosopher's Stone.

The second epoch stretches from Jabir to roughly the time of Robert Boyle (1627-1691 AD), and the founding of the Royal Society (1660 AD), where modern science had its birth. This second period of the development of alchemical ideas and practice is marked by the distinction that it involved both the use

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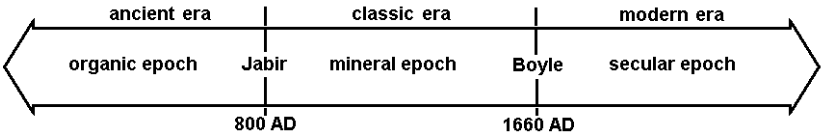
[3] Specifically: sulphuric acid, nitric acid, hydrochloric acid and *aqua regia* (a combination of nitric and hydrochloric acids).

of strong (mineral) acids, and a proliferation of new concepts about ways in which the Stone might be confected, based on the alleged alchemical value of these acids. That is, at this stage of history lots of new claims about paths to the Stone were created, and a number of these new methods saw the use of mineral acids as being key to the work. (It should be noted that if this is true then we must accept that any claim of having attained the Stone before the discovery of strong acids must then be false). At the same time a barely discernable thread of belief ran through the realm of alchemical thought during this period which insisted that the use of strong acids was a mistake and a distraction. That the true *key* solvents of the Great Work were strong in their effect, but also that their effect was quite discernibly different than that experienced with common mineral solvents.

My third epoch of alchemical history begins with Robert Boyle and continues to our present point in time. It is marked by the huge effect chemistry and physics, as modern sciences, have had on the way some people attempt to understand alchemy. One of the primary factors that colours the modern Western view of alchemy is that it has almost completely lost its connection with its organic and holistic roots.

The first era I call the *organic* epoch, the second the *mineral* epoch, and the third the *secular* epoch.



The eras of alchemy

While there may be some merit in the addition of the use of mineral acids in advanced alchemical work, there is equally no doubt that systems of thought and practice that centre on the use of strong acids are a world away from the systems used in the first epoch. The environment of work that distinguishes the first epoch, and in which the core knowledge of advanced mineral alchemy was born and flourished, is an environment we rarely hear about, consider, or experience in the secular environment of modern alchemy.

The history of alchemy in the second epoch reads like a history of chemistry. Its primary waypoints of achievement are the discovery of strong chemical solvents and the development of more effective ways of producing them. The discovery of new metals, minerals and then new chemical elements, as well as the development of medicine towards the form it now takes today, has also played a similar role in etching a timeline of the unfolding of al-chemical history. We mustn't ignore the fact that if the Stone had been discovered and effectively employed in the catalytic evolution of base metals in the first epoch, then a complete theory and practice of the Great Work also existed at that time. Any addition to the canon of alchemical theory and practice in later ages *may or may not* have contributed productively to the effective system of knowledge that the earliest alchemists possessed (allegedly). It is also necessary to make clear that that early knowledge is an alleged knowledge, because there is a school of thought which believes that the idea of the Philosopher's Stone was just that (in the earliest ages), simply an idea. That the alchemists theorised its possibility, but had never actually realised the idea (al)chemically. That it did not happen (if indeed it ever happened at all), until much later in history, when the necessary knowledge, techniques and chemicals had been discovered[4]. But I should make it quite clear that I myself do not hold to that view of alchemical history. My

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[4] I might add here that this philosophy is one I have only ever heard espoused by students of alchemy whom I would say were more chemists than alchemists, and who had more faith in modern science than they do in Hermetism.

insistence is in the idea that we only have alchemy as a body of knowledge and practice, and a school of philosophy, today, because the Stone existed in the first instance. I believe Occam's razor applies here.

Another important aspect of the history of alchemy focuses on the discovery and development of the equipment used by alchemists in their lab-work. If we accept the idea that transmutation was a fact in the first epoch, then we also must consider that the further back in history we search for a beginning to our science, that the Stone was confected under very primitive conditions – where equipment was concerned. While we enjoy the benefits of beautifully designed and manufactured laboratory equipment today, it does not necessarily follow that the use of that equipment in the pursuit of alchemy makes our ability to understand or carry out the work any easier.

If the reality of transmutation was known in the first epoch, then that reality evolved in the simplest experimental environment, with the simplest materials, knowledge and the simplest methods. This view, I believe, should form the departure point for our search for the Stone.

At the same time a careful study of the history of alchemy can throw an important light on a matter which would be said to be of key importance to most students of the subject … the nature of alchemical literature. Most individuals who study alchemy form the foundation of that study in the reading of alchemical books written by respected authors, especially those claiming to have practical experience of the claims they make. Anyone who has taken time to read enough classic literature on the subject will easily agree that it is nearly all permeated with information that is cryptic. The use of analogy, metaphor and symbolism, as well as excluding pieces of any description is routine to the veiling of key information.

Curiously, though, many students of alchemy, relying so much on what these texts tell them, spend little time studying the nature of the veils used by alchemists. At the same time, while not denying these veils exist, against their better judgement they try to treat as much of any written instruction as literally as they feel they can get away with.

There are a few simple and common concepts which appear time and time again in the history of alchemical publications and manuscripts that a careful historical overview can solve, though. For example, it is almost universally claimed by alchemists that in over 2000 years of written explanations of the Great Work no author who knew the facts ever revealed the key secrets to producing the Philosopher's Stone. There are a few problems with this claim, though. Firstly, there have been a huge number of authors on the subject, and most of them were separated chronologically and/or geographically, and sometimes linguistically, from each other. Therefore, to claim that all of these individuals would agree on anything would be a big ask. Something that one man might consider of the utmost importance in one century could be a mere trifle in another. (For example many things that were for hundreds of years great secrets in alchemy are well known even to high school students today). We will see, in this way, that in many cases authors even disagree as to exactly what the key secrets of the process might be. While it is common to insist nobody ever openly spoke of the substance alchemists take in hand to begin the Great Work, where other so-called secrets are concerned some authors pass over them revealing their nature openly, while some insist they have never been described publically.

It has also been pointed out, often by those who love to study the concept of conspiracy, that history has provided enough evidence of the fact that it is extremely hard for any one man to keep any secret for long, let alone for 100s or 1000s of individuals to do so.

Taking even these few examples of mistaken claims about secrecy as starting points, we might suggest that in fact some persons not only have openly described the *crude matter* that is the start of the work, but also explained the entire method of the production of the Stone in simple detail.

It is a convenient factor, of course, that if one believes these claims of universal secrecy, then he will also never believe it if he reads a work that discusses the whole subject openly. At the same time the old Masters knew that our personal view of the world is bounded completely by our personal beliefs. We experience only that which we expect to experience, a form of psychological scotoma. Therefore one of the ultimate tricks of the master secret keeper is not the literary or pictorial cipher, but the ability to create a belief system in the mind of the seeker that excludes him from finding even that which is left in plain sight.

A Definition of the Subject

> “[We...] like Solomon, demand from Him [God] with eagerness and perseverance that wisdom, who holds in her right hand length of days, and in her left hand riches (Proverbs Ch3.v16).”
>
> (Antoine-Joseph Pernety – The Great Art, c.1750)

The defining of the subject we are considering here should be our next concern. First, a quick and abridged recapitulation of the story so far, as presented in the previous volumes in this series. Alchemy, and therefore Hermetism, postulates the following idea: that all things are composed of three conditions of being, which we can call in modern language Energy, Intelligence and Structure[5]. In order for any thing to appear and exist here in our physical reality for a time, and then to decay and disappear, it must be composed of these three conditions. In this way alchemy teaches that these conditions are the basic unit of life; that is, when these three conditions unite under the influence of nature, the result is *life.* This is important, because Hermetism does not see life itself as a separate and distinct ‘thing’. Life is that which occurs when the three Principal conditions of existence are combined by nature in to a living system. *Life*, Hermetism insists, is a word we use to label what might more accurately be called *evolution* (and it is necessary to understand by evolution I do not refer strictly to Darwinian evolution). All evolution moves through four stages … birth (the arrival of a living system into physical reality), growth (the maintenance of the living system in physical reality, and its advancement), decay (the motion of a living system towards death), death and re-birth (the end of the living system as it existed in physical reality, and its re-introduction back into life).

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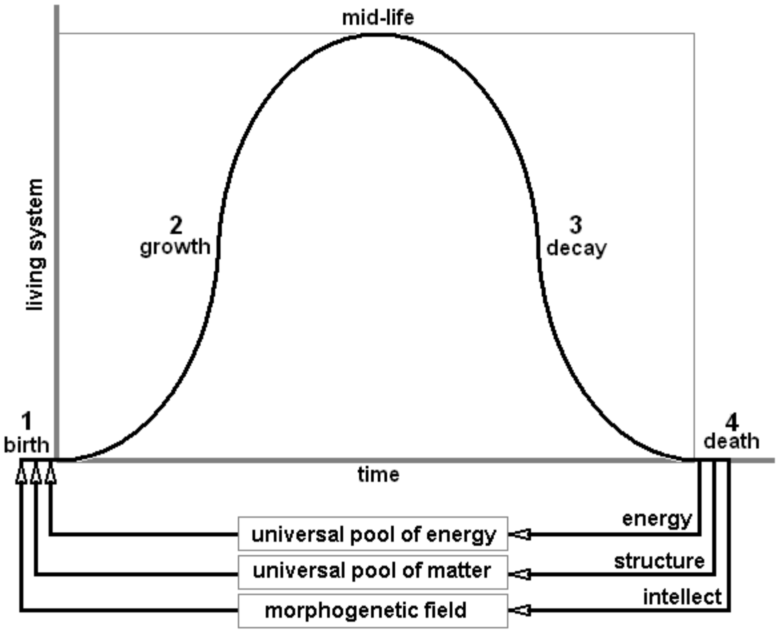
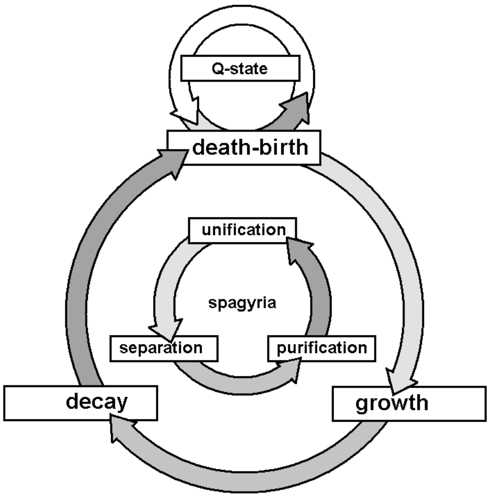
[5] In traditional language, Sulphur, Mercury and Salt.

During the life cycle, which is the exterior manifestation of evolution, another cycle, called the spagyric cycle, operates internally, within the living system. The spagyric cycle is the inner mechanic of evolution which is composed of three phases: separation, purification and homogenisation.



The life cycle

There is a fifth condition to the life cycle, and a fourth to the spagyric mechanism, which tradition refers to as the Quintessence, which I call the Q-state. After death and before rebirth, in the life cycle, is a condition where evolution does not exist, but where the collected essence of evolution is stored. Just as all things in the inner world have their corresponding and co-dependent outer state (“as above so below”), so the inner Q-state has its outer vehicle. In its highest expression in the mineral world tradition calls this outer vehicle the Philosopher's Stone, when it is confected artificially by the alchemist in his laboratory. While the life cycle is concerned with evolution of the three alchemical Principals through physical existence, the spagyric mechanism is the driving mechanism of that evolution and of extracting from it its quintessential nature.



The cycle of evolution and the spagyric mechanism

Laboratory alchemy can, therefore, be said to almost exclusively concern itself with the spagyric mechanism. The goal of laboratory alchemy is the production of Quintessences.

Hermetic alchemy teaches that in order to produce a Quintessence (Q-state) the Principal conditions of a living system must be *separated*, *purified*, and then *recombined* in to a pure homogenous unit. All of the secrets of alchemy are focused on these concepts:

(1) How to recognise the three Principal conditions in any living system.

(2) How to separate them and contain them undefiled.
(3) How to purify them without corrupting or losing them.
(4) How to reunite them (once pure) into a single homogenous unit.

All of the arguments, discussions, misunderstandings and accurate knowledge about laboratory alchemy are concerned with one or more of these four subjects.

Plant alchemy (apart from any medicinal value it may have), is a system of study and practice designed to teach the application of fundamental alchemical theory, mechanically. The plant process proves that the basic concepts I have described above are physically real. Once that work is mastered we are then in a position to learn that the operational techniques and theoretical understanding of the plant process are a foundation for work in the other two Kingdoms, the animal and mineral-metallic.

This being the case then our first task in the metallic realm is the identification, separation and preparation of metallic Sulphur.

I realise that those who are familiar with this subject at all are also quite aware of just what metallic Sulphur is (generally speaking). But at the same time many students of alchemy have only a vague idea of the subject, and some students none at all. So there are some deeper technical concepts about the three Principals of the alchemists that need to be carefully defined, in such a way that we can be sure we are talking the same language, before we start discussing technique in detail.

As I have previously pointed out all things in existence are composed of three *Principal* conditions. Alchemical tradition names these Principals *Mercury, Sulphur* and *Salt*. These terms are both allegorical in meaning, and to a degree correspond to literal concepts. Nevertheless we should not make the mistake of thinking that alchemists believe that all living systems are composed of metallic mercury (Hg), mineral sulphur (S) and mineral salts, combined. These three labels *represent* ideas about conditions of existence, or concepts about the requirements for existence[6]. They are not intended to be taken as literal descriptors.

Modern science has long recognised that ‘things’ are made up of particles (Salt-structure) and energy (Sulphur), but is only now attempting to come to terms with the idea that all things also possess intelligence or (more broadly), information (Mercury), in varying degrees of complexity.

Alchemists teach that each of the three Principal conditions of living systems have two facets – a physical and a non-physical side. The physical and non-physical are tied together by nature in to a co-dependent relationship. In this way mind (Mercury-information), in a person (or example), has physical matter in which it is anchored (the brain and nervous system primarily). The same goes for energy (Sulphur), and we can use the analogy of electricity travelling through a copper wire – the electricity requires a vehicle through which to move and have its existence in order to manifest and be useful. To manipulate one pole of the binary of any alchemic Principal (i.e. physical or non-physical), is to also manipulate the other pole. So, for example, to manipulate the so-called physical alchemical Mercury of a thing is also to manipulate its raw intelligence (mind, or information field). This concept is absolutely fundamental to understanding any alchemical operation. It is a core Hermetic principle.

When alchemists work with natural substances in their laboratories, they are not so much concerned about the fact that

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[6] In order for an atom (for example) to hold its structure it must contain information that defines what the structure is, how it forms, and how it functions. This ‘information’ is the Mercury of a thing, its mind or consciousness.

they are manipulating chemical (or bio-chemical) states. For alchemists the primary focus is on the fact that they desire to manipulate the Mercury, Sulphur and Salt, or intelligence, energy and structure of a thing, as discreet sub-units of a living system. In this way an alchemist is no more a *chemist* than a chef is. Chemistry and physics obviously have a lot to do with cooking a meal, but the chef has little concern for chemistry, and more for the effect that varying degrees of heat, cold, evaporation, coagulation, etc., have on the components of the dish he is cooking. While the components of a meal are obviously composed of chemicals, and chemical reactions play an important role in cooking, the Chef does not need to be a chemist in order to be at the top of his game. An alchemist's interest is in the relationship between each of the three Principal sub-units (conditions) of a living system and with how natural processes, such as heat, cold, evaporation, precipitation, etc. affect these sub-units. His interest is in the conservation and improvement of the essential integrity of the relationship between these sub units, and with the degree of purity of their existence, both physically and non-physically.

I cannot emphasize enough the absolute importance of the statements made in the previous paragraph. They are ideas so common and simple to the average student of alchemy, that they will often be read, accepted, and overlooked in their value to the point where ignoring the true import of what is said can cause years of pointless struggle in the laboratory.

While each alchemic Principal, (from its non-physical perspective), has its own physical (chemical and/or bio-chemical), vehicle through which it exists in the physical world, it needs to be understood that under varying conditions the non-physical aspect of a Principal may migrate from one vehicle to another. Each new student of the art is taught (if he enters in to the work by the right door), that in the plant Kingdom ethanol (ethyl alcohol) is the physical vehicle of a plant's Mercury (information field), for example. Nevertheless, how many students of the Plant Work have stopped to consider that the ethyl alcohol they use in their operations was not present in the plant, which is the subject of their work, while it was growing in the field? The theory is that the non-physical Mercurial Principal (information field), of any plant, uses a different physical (bio-chemical), base in a *living* plant, than it does during the spagyric operation. It is through the medium of putrefaction that the non-physical aspect of plant Mercury is able to migrate from its original vehicle in the living plant, to the new vehicle of alcohol, after its philosophic death (in this case its fermentation, putrefaction, in vitro), according to unspoken conventional theory.

Mistaken understanding of this idea is, in my humble opinion, one of the foremost grounds for the unsuccessful study of alchemy. Fools spend their entire lives searching for *specific* chemicals, or specific chemical compounds, that they believe contain the key Principals of the alchemical operation, in vein. The real *key* is not found in specific substances (and the old Adepts repeatedly insisted this fact[7]), but rather it is found in *method*, in technique and *operation*[8]. How much more helpful will your search be when you have what you believe to be the specific *matter* for the work, if you then have to try and figure out what to do with it? A simple read of many respected classic works on alchemy will show that the *method* is (seemingly), vastly more complex than discovering the *matter*. But those who have had the fortune of success will tell you, if they were so

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[7] The wiser of the old Adepts repeatedly pointed out that *our matter* is found everywhere, and in everything. Few people can grasp just how this could be, when in fact the solution to this enigma is not complicated at all.

[8] Where key *substances* are an issue, they evolve directly out of proper technique, a product of art not of nature.

disposed, that success in method itself reveals the nature of the true matter - the one following naturally in the footsteps of the other.

Because the subject of mineral-metallic Sulphurs obviously deals with minerals and metals I should end this chapter on *definition* by explaining exactly what minerals are, what metals are, and the relationship between the two.

Metals begin their life as minerals (metallic minerals). But when metallic minerals are heated until they melt into a liquid, and are then cooled down, unlike other minerals their nature changes and they form shiny compact structures that have high electrical conductivity.

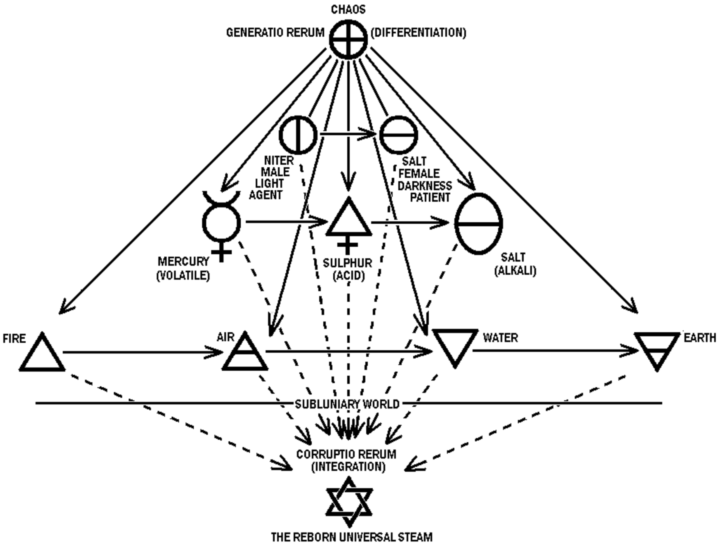
Metals exist in the earth in various forms. Some metals have mineral sulphur mixed with them, and are called by chemists *sulphides*. Such as with Antimony tri-sulphide, or with Galena, the sulphide form of Lead (Pb). Some metals are carbonates, because the metal atoms have carbon mixed with them. Such as with cerrusite, which is the carbonate of Lead. Some metals are oxides, obviously because their atoms are mixed with oxygen atoms. Often these mineral-metals will also have arsenic mixed with them and other trace amounts of mineral or metallic impurities. So when we buy metallic ores (metals in their raw natural mineral state), if we have the ore assayed we will obtain an analysis which describes the proportions of other chemicals that are mixed with the metallic atoms.

When we take these mineral-form metals from the earth, powder them, and we can heat the powder very gently, without melting it, and the more volatile components such as sulphur and arsenic will fly away. During this process oxygen in the air will attach itself to the metal atoms and form an oxide of the metal (to some degree). If we then increase the heat more, we will discover that the powder starts to form beads and then puddles of shiny metal, of the kind we are used to seeing in common metal objects. When this happens the metal has made the transition from a mineral state to its true metallic state.

The Importance of Acids and Alkalis

> "By dry fyre after that schale cume Oyle wherewith we make red gum: Wych ys our tincture and our Sulfur vive, The soule of Saturne and the Golde of life."
> (The Black Monk – Theatrum Chemicum Britannicum, 1652)

Key to an understanding of the evolution of nature's alchemical mechanism is the role of the acid and the alkali. Generally, there is a lack of understanding (a modicum of ignorance), amongst many students of alchemy, concerning the importance of the subject of acids and bases[9], how they work and what their role in alchemy is. A good grasp of the topic is necessary if we are, in any way at all, to have a deeper insight into the nature of alchemy.



Chemical evolution, from the Golden Chain of Homer

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[9] 'Base' is the modern chemical term for that which used to be called an alkali.

Some of the most important core concepts of alchemy involve knowledge of how common acids and bases react with different substances, and how they are the beginning of everything chemical in living systems.

Likewise, it is important to know how to recognise these common acid and alkali reactions in comparison to those of uncommon (philosophic) solvents and their effect on substances.

To be as sure as I can that the greatest number of readers are in a position to understand the chemical descriptions I am about to present in this discourse, it is probably a good idea if we begin by covering some basics of chemistry, first, for those who need their memory jogged, or knowledge added to. With that, a discussion of the subject of acids and alkalis is the perfect place to start.

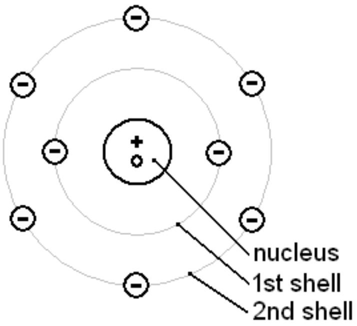
To begin, the novice should know that while the name for an acid has not changed in a very long time, the word used to describe alkalis has. The word alkali is Arabic in origin. In relatively recent times some enterprising chemist decided to change the Arabic *alkali* for the modern *base*. I personally find that the word 'base' can be confusing, and much prefer the older term *alkali*.

As any high school chemistry student should be aware, modern science has used a symbolic model of the atom to represent its structure. That model is sometimes called the solar-system model, or the Bohr model, (after the physicist Niels Bohr, who discovered electron shells in 1913). We now know that the atom does not look like this, but it still serves us, at the most basic level of chemical education, as a good model for discussing something which is hard to imagine in its reality. Certainly, for the purpose of our discussion of how chemistry relates to the production of metallic Sulphurs, the simple Bohr model of the atom suits us well.

Atoms, as chemistry and physics tell us, are composed of three main parts: protons (which have a positive electric charge), neutrons (which have no charge), and electrons (which have a negative electric charge). Some alchemists who have chemical knowledge suggest that these three sub-atomic particles are the basic vehicles of the alchemical Principals at the atomic level of physical reality.

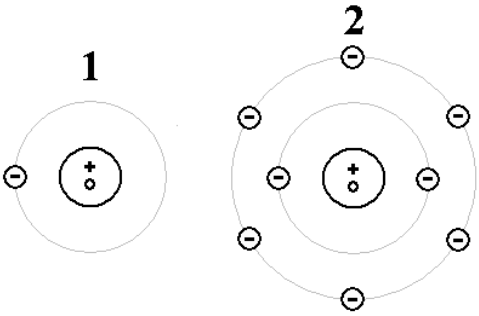
The protons and neutrons clump together at the centre of the atom, and make up *the atomic nucleus*. The electrons orbit the nucleus, and stack themselves in to what is known as electron shells. We can imagine these shells as being something like the layers of an onion.

In the first shell (the one closest to the nucleus), we can have up to two electrons resident. Once that shell is full the next one accepts electrons, and it can accommodate up to eight. Once the second shell is full the third accepts electrons, any number up to eighteen, and so-on. Under normal conditions any particular atom has the same total number of electrons in its shells as it has protons in its nucleus. *In this way the positive and negative charges of the atom are balanced*, and the atom is electrically neutral as a unit. So this simple format is shown in the following diagram.



The Bohr model of the oxygen atom

The number of electrons (and therefore protons) in any atom is known as its *atomic number*. Chemists and physicists tell us that each specific chemical element is defined by how many electrons and protons it possesses. So, for example, the chemical element of hydrogen has the atomic number of one. This means that it possesses one electron in its first electron shell, and one proton in its nucleus. See '1' the following diagram:



Hydrogen and Oxygen atoms

Oxygen (in contrast), has an atomic number of eight. It therefore has two electrons in its first shell (which is then full), and six electrons in its second shell, and eight protons in its nucleus (see '2' in the above diagram). Even though this atom is electrically neutral, its second shell is not full, it can still accommodate two more electrons.

It is a good idea to keep in mind that it is firstly the number of protons in the nucleus of an atom that defines what element that atom will be. Those nucleic protons (secondly), define how many electrons need to be in its outer shells. *The nucleus is a relatively fixed unit, and its proton count cannot easily be changed, because the forces which hold it together are very rigid. Alternatively the electron numbers in the outer shells can be manipulated by relatively common chemical operations* *and natural processes*[10] *because the forces which hold electrons in their orbits are relatively weak.*

The outer-most shell of an atom has a special name, it is referred to as the atom's *valance shell*. When it comes to considering how various atoms interact with each other, and some of the changes individual atoms can go through, the state of the valance shell is very important.

It is the nature of atoms to want to fill their valance shells up to their maximum limit of electrons. They do this by attracting other atoms to themselves (through an electro-magnetic connection), in order to *share* valence electrons. When two or more atoms join together in this way the new unit they form is known as a molecule. An example of how this can happen can be seen in how hydrogen atoms and an oxygen atom can join together to form a water molecule.

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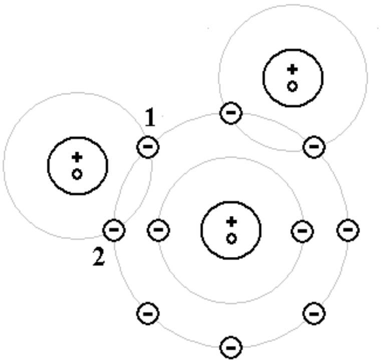
[10] It is important to note that this condition is the main basis for arguments (by modern science) against alchemical transmutation. Modern science insists that in order to change lead (for example) into gold the number of protons in the lead nucleus must be changed from 82 to 79. In the experience of modern science huge forces, and usually complex expensive technology, are required to make such an alteration to an atom's nucleus. Since alchemists had no access to such funds and technology alchemical transmutation must never have been achieved by them, science argues. Therefore, the core question concerning alchemical transmutation is: *did alchemists find a way of manipulating the atomic nucleus under relatively normal ambient* (*low energy*) *conditions*?



A water molecule

Again, the hydrogen atom has one electron in its valance shell and it wants one more electron to fill that shell. Oxygen wants to attract two electrons to fill its valance shell. So, then, it is possible for two hydrogen atoms to share their single outer electrons with the oxygen atom (see above diagram). We see in the hydrogen atom on the left its single atom (1) has linked in to the oxygen atom's valance shell, and it now shares one of oxygen's valence electrons (2). By this sharing action oxygen now has eight electrons in its valance shell, and hydrogen now has two. In this way we obtain H_2O – two hydrogen atoms (H_2) joining with one oxygen (O) atom, to form one molecule of water.

In nature, because atoms have various different numbers of electrons in their valance shells, many different combinations of atoms, in-to molecules, are possible. In this way all of the substances we experience in our physical reality are composed of collections of a single type of atom, or combinations of various types of atom, and then various molecules.

All of these substances, and therefore all of the various combinations of atoms and molecules, are divided in to two basic classes by modern science: organic and inorganic matter.

Because of this the modern study of university level chemistry is (at its earliest stages), divided into two subject areas: *physical chemistry* which concerns itself with the (fundamental) chemistry and physics of inorganic matter (and is usually taught first), and then *organic chemistry* which deals with the special complex field of organic molecules. Organic matter is defined by the fact that at their core all organic molecules are composed of chains of carbon (C) atoms along with different combinations of oxygen (O) and hydrogen (H) atoms attached to them[11]. Chemistry insists that these three atoms, in combination, are the basic building blocks of living (organic) matter.

It has been postulated by some alchemists who have knowledge of chemistry, that oxygen, hydrogen and carbon are the first atomic-molecular vehicles of the alchemical *Principals*, Sulphur (oxygen), Mercury (hydrogen) and Salt (carbon). If there is any validity to this theory it could only be accepted as a general rule, because organic molecules can also contain atoms of other chemical elements (which are, strictly speaking, non-organic). Also, we know (as alchemists) that all substances, including non-organic ones, are themselves composed of the three alchemical Principals, and that inorganic matter (in the chain of evolution), precedes organic matter.

It is at this point that I should repeat a statement I have made previously: that the three alchemical Principals do not possess *specific* chemical vehicles through which they *always* manifest. The Principals (which are *firstly* non-physical), seem to migrate from one chemical vehicle to another, *under the right conditions*, as one vehicle becomes unfit, and/or new ones become available. Again, this concept is one I have only slightly touched on in my previous book, in connection with the

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[11] These carbon atoms form the backbone of nearly all organic molecules, and are thuswise called *carbon chains*. (Because our bodies are composed of organic matter we are referred to as carbon-based life forms.)

migration of the Mercury Principal (in the Plant Work), from its native chemical host, in to ethanol, during alcoholic fermentation. Nevertheless, as the concepts in the previous paragraph allude, the chemical vehicles for the alchemical Principals are arranged in a kind of hierarchy, as we progress up or down the ladder of atomic-molecular structure and organisation. As the arrangement of sub-atomic (quantum), atomic and molecular particles become more complex, and nearer to the surface of physical experience, the numbers of choices the alchemical Principals have for vehicles also increases.

Understanding how modern science views the structure of the water molecule is half of the complete picture we need in order to understand how acid-alkali *chemistry* operates. So let us use a simple organic acid as an example of how the acid side of acid-alkali chemistry works. Because this acid is a solvent that we will often talk about in the following work, we should begin by considering the nature of *acetic acid*[12]. Acetic acid is the acid that we find in common cooking vinegar. Vinegar is generally (and naturally), produced when the alcohol in wine (or beer) becomes oxidized. This most often occurs when a bacterium called *acetobacter* eats alcohol and converts it in to acetic acid, which it excretes. It should also be understood that modern science, after coming to understand this much, has invented industrial methods of synthetically producing acetic acid through a number of different methods.

Because acetic acid is a complex substance the chemical formula for acetic acid can be written in various ways. Most commonly (and in its simplest form), it looks like this: $C_2H_4O_2$. The first thing we should notice is that this molecule is composed of carbon (C), hydrogen (H) and oxygen (O) – which shows us it is an organic molecule. In order to get some idea of

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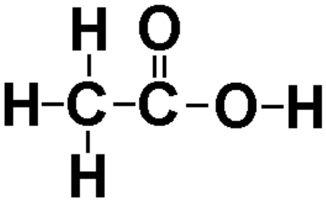
[12] That which chemists technically call ethanoic acid.

what this molecule looks like, chemists have a couple of ways they can draw stylised diagrams of it. The following diagram is one of the more simple ways of depicting the acetic acid molecule:

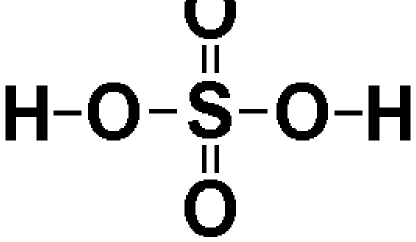


$$\begin{array}{ccccccccc} & & H & & O & & & & \\ & & | & & \| & & & & \\ H & - & C & - & C & - & O & - & H \\ & & | & & & & & & \\ & & H & & & & & & \end{array}$$

An acetic acid molecule

We can see here our C_2 carbon chain (two carbon atoms at the core of the molecule), H_4 (four hydrogen atoms) and our O_2 (two oxygen atoms), and the lines which represent the electron (valance) bonds between them. (Note that one of the oxygen atoms has a double-bond with one of the carbon atoms.) Carbon has four empty slots in its valance shell, oxygen has two and hydrogen has one. With a little presence of mind we can see how that Lego concept works in the above diagram.

There is a particular part of this molecule that makes it an acid, and that is the O-H portion on the right hand side. As a general rule, this O-H (oxygen and hydrogen) portion is found on all acid molecules (as defined by chemistry). So for example we see it in sulphuric acid (H_2SO_4):



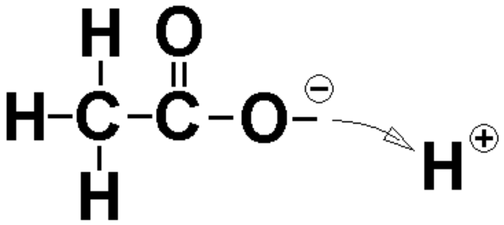
$$\begin{array}{ccccccccc} & & & & O & & & & \\ & & & & \| & & & & \\ H & - & O & - & S & - & O & - & H \\ & & & & \| & & & & \\ & & & & O & & & & \end{array}$$

A sulphuric acid molecule

The first thing we can notice about sulphuric acid is that it has hydrogen, oxygen and sulphur (S) atoms, but no carbon. Therefore this acid is not organic. It is inorganic, or what we can call a *mineral* acid. Another peculiarity of this acid is that it has two O-H sites, which makes it a very strong acid.

Chemists have a couple of ways they describe the definition of an acid. The Bronsted-Lowry definition (for example) says … an acid is a compound which donates a hydrogen ion (H^+) (to another compound, which is a base (alkali)). In describing what this means, I am going to simplify the explanation in order to avoid creating confusion because of some aspects of the chemical view that are questionable, and complicated.

Chemists tell us that in order to activate a 100 percent concentrated acid we need to add it to water. So if we use our acetic acid as an example, let us imagine we are adding *glacial* acetic acid (99.999% pure acetic acid) to distilled water. Chemists tell us that as soon as we do this the 'H' (hydrogen atom) on the end of the O-H portion of the acid, breaks off from the acid molecule.



The formation of an hydronium ion

When it breaks free it leaves its single electron (which it was sharing with the oxygen atom), behind. If we think about this for a moment, and consider that hydrogen only has one electron and one proton, this means that the bit that broke free is really only a proton now. (Ideally this is not possible according to the laws of physics, but it is a convenient way for chemists explain how acids work). This free hydrogen proton is now called an hydronium ion by chemists[13]. An *ion* is any particle that has an electric charge to it (it is no longer electrically neutral). Remember I had pointed out that atoms normally have an equal number of protons and electrons, and this gives the atom an overall balanced charge. But now that our hydrogen atom has split, its negative charge (electron) has created a charge imbalance in the oxygen atom it was attached to. Because of this extra negative charge the entire remaining acetic acid molecule is slightly negative now. On the other hand, the hydronium ion (the hydrogen proton), is also out of balance. It is electrically positive in charge now.

If we now look back at our Bronsted-Lowry definition of an acid, we can see what it means. Our acetic acid ‘donated’ an H^+ to its environment (the water it is dissolved in). Even though it is not properly understood how this donated proton can happen (or even if this is really what is happening at all), what chemists do know is that the acid solution (acetic + water), now measures as if it has an increased hydrogen ion concentration in the water. The way they represent this in chemical formula is to say that some of the water is now H_3O^+ (which is, again, chemically impossible, because oxygen atoms do not have three free slots for additional electrons in their valance shell).

The water side of the equation is not really what we are interested in though. What we (as alchemists), are interested in is the remaining condition of the acetic acid molecule, which now has a negative charge (i.e. is a molecular ion). It is this electro-magnetic imbalance in this molecule that allows it to rip

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[13] Technically it is most often not considered an hydronium ion until the proton attaches itself to a water molecule creating H_3O^+.

apart (dissolve) *some* substances put into its solution.

Acetic acid is known to be a weak acid. What this means in chemical terms is that only a small portion (about 4 percent), of acetic molecules, when added to water, have hydronium ions which dissociate. At some point the water-acid solution knows when roughly 4 percent of hydronium ions have been created, and the acid-dissociation process stops. Different acids have different dissociation levels; strong acids (like hydrochloric acid), have extremely high hydronium dissociation levels.

Base (alkali) reactions work in exactly the same manner, but the opposite way around. The Bronsted-Lowry definition of a base is any compound that *accepts* a proton (hydronium ion). (I am not going to explain that process in detail here, as anyone interested in it can research references on their own. Our concern here, at this point, is the acid reaction).

With this basic understanding of the structure and mechanics of the atom, and the acid-alkali function, we are now in a position to understand how some classes of alchemical, metallic-mineral, Sulphurs are made. But before we talk about the chemistry of this alchemical process, let us next consider how one class of these metallic-mineral Sulphurs are produced, from an alchemist's point of view, using the acetic method.

Valentine and his Triumphal Chariot

> "Therefore Paracelsus says the inward parts of the earth are to be visited; not only the earth, which is Vitriol, but the inward parts of the earth. He meaneth the sweetness and redness, because there lieth the inward parts of the Vitriol a subtle, noble and fragrant juice, a pure oil."
>
> (The Rosie Crucian Secrets – Anon, c.1712)

Look carefully enough at the canon of respected alchemical literature and you will discover that few texts explain in any real detail the methods of working with mineral-metallic Sulphur. It should be noted that the subject material of this work was taught by Frater Albertus in the second of the seven classes he taught at his Paracelsus College, at the time when my teacher was attending them. A number of books were recommended to students of this – secunda – amongst which were *The Stone of the Philosophers* from A.E.Waites Collecteana Chemica and *Alchemy Rediscovered and Restored* by A.Cockren. But the work I am most concerned with here, which he taught the secunda principles from, is called *Currus Triumphalis Antimonii* (The Triumphal Chariot of Antimony), written by an individual who used the name Basil Valentine. There is some argument about when the book was actually written and first published, but the accepted date of first publication is 1604. (The version I use as reference here being that produced by the Holmes Publishing Group, 1992). The argument arises out of the fact that the view of alchemy Valentine had was also the same view we see in the works of Paracelsus the Great (1493-1541). So the question arises, to whom do we credit that particular view, which includes many key concepts that today are part and parcel of conventional alchemical teaching?

Nobody knows when Valentine actually lived, but it was generally accepted that Valentine's work falls into a period of history at the end of the strictly alchemical approach to chemistry, and just before the beginning of the iatrochemical[14] period initiated by Paracelsus (that is, in the early 16th century). There remains no evidence in any literature at or before the time of Paracelsus of the existence of Valentine. The first known reference to him occurs around 1600 (59 years after the death of Paracelsus).

The Triumphal Chariot of Antimony was published (in 1604), by a gentleman by the name of Johann Thölde, whom Professor Stillman[15] suggested is the real Basil Valentine. It is curious to note that Stillman tells us that the famous alchemist van Helmont (1577-1644), claimed that Paracelsus lived 100 years *after* Valentine and had used Valentine's knowledge without due credit. For some time this idea was accepted by many researchers, but subsequent research by a number of scholars has failed to find proof of that argument. For this reason it is now more generally accepted that a number of concepts and chemical facts once attributed to Valentine are now credited to Paracelsus – including the all important Sulphur, Salt and Mercury theory of the structure of matter.

A number of other publications that appeared around the same time, and later, also bore Valentine's name, and have been credited with validity, but are known today to not be products of the same individual.

It was claimed by Valentine himself that he was a member of the Order of Saint Benedict, and that he was the canon of the Priory of Saint Peter in Erfurt. But it should also be noted that some individuals insisted that his name and monastic position

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[14] Iatrochemistry is a branch of both chemistry and medicine. Having its roots in alchemy, iatrochemistry sought to provide chemical solutions to diseases and medical ailments.

[15] Professor Stillman, Popular Science Magazine, *Basil Valentine, A 17th Century Hoax*.

were a cover for his real identity, since no trace of his existence has been found in any place where it should have been recorded.

The primary subject of the book, as its title suggests, is the mineral (or semi-metal), commonly called Antimony. Valentine explains in the text a good number of experiments which may be carried out on this mineral. His descriptions show his indepth knowledge not only of this substance, but of all kinds of curious chemical operations known in his day, explained in rare detail. For the serious alchemist the foremost curiosity about this book is that it concerns itself with a mineral which is mentioned a great deal in alchemical literature. Indeed, very often (the word) *Antimony* is claimed to be, or insinuated to be, the crude substance from which the Philosopher's Stone is made. At the same time, though, it is obvious that a number of these claims use the word Antimony in a way that causes us to suspect, or blatantly accept, that it is a cipher for some other substance, or condition of matter. In this way there is a lot of controversy surrounding the alchemical reference to mineral Antimony, and Valentine's Triumphal Chariot seems to be aimed at clearing up some misunderstandings in this area, while at the same time adding a little to the controversy, and mystery, itself.

Another core subject of his work concerns itself with the exact nature of the *Principal* we call metallic (or mineral) Sulphur. That is, the energy complex of a metal's existence, which the ancient alchemists, who were concerned with accuracy in technical terminology, commonly called *the soul*. (The soul being the non-physical side of the Sulphur complex.) In exact terms metallic Sulphur (non-physical) is always found *in* so-called metallic oils (physical).

The edition of the Triumphal Chariot which I use as my reference also includes the end-note comments of an individual by the name of Theodore Kerckringius, who is obviously very familiar with the system of alchemy explained by Valentine. For his notes include elaborations upon Valentine's work that allow us in places a special insight in to some more secretive techniques and concepts. Of importance is a brief and almost innocent looking end-note number 19, where he explains a secret about the spirit of wine Valentine uses to produce the oil of Antimony from its glass. Kerckringius explains that this spirit of wine is not common ethanol, but has been manipulated with ammonium chloride to produce a very special kind of solvent. Later alchemical teaching has referred to this solvent the title of Kerckringer's Menstruum (KM).

For the reasons that Albertus used this work as a textbook reference in his teaching, and the fact that it gives us a deeper insight into certain Paracelsian concepts and practices, I have decided to use it here as the backbone for my teaching on the subject of metallic Sulphur.

Part Two

Praxis

(On the Alchemical Work of Metallic Sulphur)

The ‘Many Jars’ Experiment

> “Mathematics have demonstrated the existence of elements that fall outside the physical; we must take this into account, and if rationalism brings us up against an impenetrable wall, in so doing it in fact teaches us that it has its limits and that we should seek another means of knowledge.”
>
> (Schwaller de Lubicz – The Temple of Man, 1957)

Within the range of experiments dealing with mineral-metallic Sulphur there is one which will teach all the fundamentals of a very accessible technique for producing what we call mineral-metallic oils *of the first order*. In this chapter we will look at an experiment I devised a number of years ago. I wanted an efficient way of teaching students as many of the lessons that I had learned about the effect of organic acids, as well as alkalis, on metals, for the production of *first order* metallic Sulphurs. So, this experiment condenses 20 years of experience and understanding into one process. I nicknamed this experiment the ‘many jars’ experiment, because it requires 15 glass jars (or flasks) filled with various solvents and metal samples. The following equipment and ingredients will be required:

15x 500mL flasks (or glass jars) with non-corrosive lids
3x coin sized samples of iron
3x coin sized samples of lead
3x coin sized samples of tin
3x coin sized samples of silver
3x coin sized samples of copper
1250mL of dilute acetic acid
1250mL of saturated citric acid solution
1250mL of saturated sodium hydroxide solution

The actual size of the samples of metal is not important, as long as they are no smaller than a small coin, and not larger than a large coin. Each metal sample should be made either in to filings, powder or beaten into very thin plates. The metals can be ores, sulphides, oxides or carbonates as you please, or the product of industrial smelting (common metals). But I suggest using samples of metals as they are found in common use. For example copper piping, silver cutlery, lead flashing or fishing sinkers, iron rust, etc. But see if you can find samples that are more than 60 years old. (I found that rummaging around in antique shops, junk shops and demolition yards can be helpful in finding cheap samples of old metal). The older the metal the more productive to alchemical requirements were the industrial processes they have passed through. Largely, the modern electric smelter furnaces that are used today to process metals ruin the metallic substructure for alchemical purposes.

Citric acid can be brought as a salt at most supermarkets or health food stores. Sodium hydroxide is a common de-greasing agent, or drain cleaner. So it can often be found at supermarkets or hardware stores (under various brand names), in salt-form, too. Acetic acid is not always as easy to buy. It can be ordered from chemical supply companies over the internet. It can also sometimes be brought from chemist shops (drug stores). You can also use common white vinegar, but that is very dilute and doesn't react as well as we would like for our purposes. Ideally you want a dilution somewhere around 30 to 60 percent (30 percent acid/70 percent water, to 60 percent acid/40 percent water).

Take five of your jars and label them 'acetic acid' and write the name of one metal on each jar. Then take the next five jars and label them 'citric acid', again including the name of one metal on each jar. Do the same with the last five jars, labelling them 'alkali' with their metal-names. Date each label also.

In each of the acetic jars pour 250mL of acetic acid, then place the appropriate metal in each of the five jars, according to the label. For the citric acid jars, make up 1.25 litres of citric solution (as concentrated as possible), and add 250mL in to each jar, along with its appropriate metal. The same process is required with the sodium hydroxide[16].

Again, the exact amount of the solvent in each case is not important, as long as the liquid covers the metal entirely, and the concentration is relatively strong.

Lid the jars (with lids that are not susceptible to chemical corrosion), and store them in a safe place. The process is more effective if the jars are stored in a warm place, such as an incubator. Make note of the date and the condition of each jar. Then as the conditions in the jars begin to change update your notes.

What you will notice as time goes by is that the clear liquid (solvents) in some of the jars will start to change colour. For example the three jars containing the iron will start to go yellow, then orange, then deep red. The acetic acid in the jar containing the silver will turn light green, then at length deep blue. Some of the jars, though, will not change colour at all. Some will change very fast, and some will take weeks or even months.

These ‘tinctures’ (colours) are that which acetate alchemy refers to commonly as metallic oil *extracts* (aka: metallic Sulphur extracts). If we remove the metal samples by filter, and use chemical processes (such as distillation[17]) to separate the

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[16] Add the hydroxide to the water, not the other way around. The reaction is exothermic (produces a lot of heat) so be very careful to work slowly. Also, be aware that sodium hydroxide is a powerful corrosive, so care must be taken not to allow the solution to splash on to anything. This substance should also be handled while wearing appropriate gloves and eye protection.

[17] Only the acetic can be separated from its ‘oil’ by distillation. The process required for the citric and hydroxides is more complex.

solvents from the tinctures, we will concentrate the tinctures and indeed they will be found, to the touch, to be of a kind of oily consistency.

The oils produced in the acetic jars are that which chemists call metallic *acetates*. So, for example, the tincture in the iron-acetic jar is known as iron acetate. The tinctures in the citric acid jars are known by chemists as citrates. The tinctures in the sodium hydroxide jars are known as hydroxides. Even though chemists recognise that each of these products belongs to one of these three classes of chemicals, for an alchemist these chemical distinctions are of little or no importance. Primarily what matters in metallic *alchemy* is that these oils carry the alchemical Principal of mineral-metallic Sulphur. Also, that when they are subjected to other spagyric operations, that they will all behave in the same way, providing us with certain specific (al)chemical products that we require in order to continue the spagyric operation on metals (or minerals).

Now, initially this experiment is designed to demonstrate a number of important alchemical and chemical concepts and physical facts to the student. Foremost amongst those lessons are: that if we place metals in *organic acids* or effectively potent enough alkaline lye, in many cases we will produce these so-called metallic tinctures. This is why I suggest using acetic acid, citric acid and sodium hydroxide. The former are both organic acids, the latter a strong lye, and they show that this process doesn’t solely work with acetic acid (which is one of the foremost and well known ways of making these oils). Once the basic technique is understood, a lot can be learned by repeating this experiment with various kinds of organic acids which are cheap to buy, and easy to obtain, such as ascorbic acid (vitamin C), as well as with various states of the metal-minerals (such as their oxides, sulphides, carbonates and smelted metals).

Secondly, we can learn that a common myth that circulates within the alchemical community, which insists that metallic oils cannot be made from metals that have been industrially processed (passed through the smelting process), will prove in many cases to be untrue, if you have used common metal objects in your many jars experiment. A common 'theory' is that you need to use metallic oxides that are carefully produced from natural ores (or which are natural ores), or natural carbonates or in some cases natural sulphides. An important part of this lesson is that many things that are 'common knowledge' in alchemical circles can prove, upon experiment, to in fact be false. This then opens up the question … *how much of what we are being told under the guise of traditional fact, is not experimentally true*? This is the question you should be asking yourself every time you read an alchemical recipe. You should be dividing the recipe process up into each of its parts, and questioning each step … *is this true*? *How can I prove this for myself*? Or *do I have good evidence this piece of the recipe is a fact from some other reliable source of experience*?

Thirdly, and we shall look closely, in detail, at this idea in coming chapters, that these first order *oils* are in fact not *extracted* from their mineral-metals, as we have been told through the entire history of metallic alchemy.

Just as we have seen how alcohol can extract oils from a herb (when we experiment with Plant Alchemy, for example), traditional theory insists that the tinctures we see in the many jars experiment are extracted (similarly), from the metals. But this in fact is not at all what happens, in this case. Modern science has insisted that such oils cannot be extracted from metals, while many students of alchemy will insist, because of this experiment, and ones like it, that they can. I have often witnessed, in this vein, students of alchemy mocking modern science, on the basis that alchemists know that these (allegedly) extracted oils are a deep secret of alchemy that science has no knowledge of. But, as we shall see, the foolishness is not on the side of chemistry, but squarely in the lap of students of alchemy who are ignorant of the real nature of the process, and of the various *orders* of metallic Sulphur. This is an important situation to be aware of, because it contributes to my argument that there are many ideas taught as part of traditional and commonly accepted alchemical knowledge, which are not at all true. Once we allow ourselves to be aware of just how common these false teachings are, we can encourage ourselves to be more vigilant in questioning every aspect of alchemical lore, and in doing so, by correcting these errors in our own practice, we will more quickly come to success in our work.

Now that we have produced these oils *in solution*, in our jars, the next thing we need to know is how to isolate them from their solvents, so they can be used for alchemical purposes. I will first discuss the acetic method, then I will quickly discuss how we work this with the citrate and hydroxide tinctures. I will explain enough for anyone with experience to make use of, but will not describe the citrate and hydroxide processes in full detail, because the use of tinctures via those solvents is not the theme of this work, nor of the texts which will follow this one. My concern is with explaining fully and properly the method of obtaining the concentrated and pure tinctures from the acetic method – since this is the central theme of my discourse.

Valentine and the Vinegar of the Ancients

> "Pour thereon the true Vinegar of the Philosophers, rendered more acid with its own Salt."
> (Basil Valentine – The Triumphal Chariot of Antimony, 1604)

Your first concern when approaching the practical method of dealing with the most basic level of preparing mineral-metallic Sulphur (Sulphurs of the first order), is the preparation of your solvent. Where the acetic technique is concerned (which is the core theme of my discourse from here on in), there are a couple of necessary questions we must first consider concerning its value.

From the previous chapter, if we have actually carried out the process described, we can learn a number of things about these so-called metallic oils. Firstly (and I believe foremostly), that alchemists of past ages obtained these 'oils' by various different means. There is not just one *technique* to the process, there are several. For example, by one route we can use various organic acids acting on metals. By another route we can use alkali solutions, acting on metals. Yet again there are methods which use mineral acids, then organic solvents. Another method of obtaining these oils involves simple combustion of certain materials, and the subsequent collection of the combusted vapours (gases, oils, liquids and solids). The rarest, most secret methods use very special solvents that decompose the metal radically[18], resolving it in to a philosophic tincture. Over the

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[18] Alchemists define the radical decomposition of a metal such that the metal is dissolved to the degree that it cannot thereafter be returned to its metallic state, but remains an oil.

centuries different cultures and different schools within each culture have discovered many variations on these basic themes; variations which suited, at the time, the resources, means and understanding of the persons practicing them.

One of the main sources of information on the most common methods, as worked by Frater Albertus, was The Triumphant Chariot of Antimony (Basil Valentine, 1640). If memory serves me right my teacher explained to me that Albertus referenced the Triumphal Chariot on this subject because it was one of the earliest records of a clear and exact description of a prime theme of how alchemists produced the first order of metallic oils we are considering here, primarily. Albertus encouraged his students to study this book, and to contemplate (specifically for the purposes of his secunda), the passages relevant to the production of metallic oils *via acetic acid*, and via the alkali technique. So, for the sake of setting the scene, as it were, I will quote one of the main passages concerning acetic acid, as a solvent, from the aforementioned work, and then elaborate upon what is said so that we can fully understand that which old Valentine intended us to grasp.

The first mention Valentine makes of the use of acetic acid as a solvent for extracting the Sulphur from Antimony goes like this …

> "*Take pure glass of Antimony prepared in the first way, and uncombined with any foreign matter; pound it as fine as the finest flour, and place in a broad-bottomed glass vessel, called a Cucurbit.*
>
> *Pour, over the Antimony some highly rectified vinegar, subject to a digestive fire or in summer, expose to the rays of the sun, shaking it once and again every day*." (Page 40, and endnote *22)

It is not important, here, to understand what the glass of Antimony is (more can be learned about that, if you are curious, by reading Valentine's book), suffice it to say it is vitrified Antimony (later powdered), a mineral preparation which can be worked on more productively than the ore or oxide of antimony can, by the alchemist, and which is the basis of a mineral-metallic Sulphur of the special class of its own. The important point in this passage is that Valentine is telling us that one way of obtaining a mineral Sulphur is by the use of rectified[19] *vinegar* (dilute acetic acid), as a solvent[20]. This is an important concept (where my treatise is concerned), because it forms the very basis of the idea of an Acetate Path to the Philosopher's Stone. That is, acetic acid is the first solvent used in the Acetate Path, and the first product of that dissolution is the first order Sulphur of the metal used, hence this discourse.

At this stage the question that is often asked (by those who feel a need to argue the point), is … when Valentine instructs us to extract the red Sulphur of the glass of Antimony with *vinegar*, did he mean dilute acetic acid, or was he using the term *vinegar* metaphorically, or as a cipher, for some other substance? The argument is posed that when some authors speak of *vinegar* they do not mean common vinegar (dilute acetic acid), but rather some undisclosed secret solvent that is discussed using the term vinegar as a cipher to conceal its true name.

This is a very important argument, because if *our* vinegar is not dilute acetic acid, then the entire concept of an acetate approach to the production of metallic oils of the first order, by

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[19] See the glossary of terms at the end of this work.

[20] It should be noted that generally the old alchemists could not make highly concentrated acetic acid, except by one method, the distillation of copper acetate (which method was not well known until the renaissance). It is therefore assumed that in most cases when a recipe speaks of rectified or concentrated vinegar, that it will be a relatively high dilution (of roughly 30 to 60 percent acid).

this means, and by extension, production of the Philosopher's Stone by the same Path, could be misleading.

One of the main contenders for the 'cipher' argument is a substance referred to as the *Vinegar of Antimony*. If we take powdered, raw, ore of Antimony and subject it to maceration in (for example), a soxhlet extractor, using distilled water as our solvent, we obtain a substance (a clear liquid), which smells just like dilute acetic acid (common vinegar). For this reason this substance has been given the symbolic name of the Vinegar of Antimony. Some students of alchemy have postulated that when alchemical authors tell us to extract Antimony (for example), with vinegar, they mean this somewhat ambiguous *Vinegar of Antimony*. This is an important suggestion, no argument there. But the immediate problem we have when considering the value of this argument is that the action of acetic acid on Antimony (especially its glass and its oxide), is well known and documented. The reaction is exactly as Valentine describes it when he explicitly instructs us to use concentrated *wine vinegar*. At the same time Valentine also discusses the subject of the Vinegar of Antimony as a quite distinct preparation, with distinct reactions, and in places makes it clear when he intends using one or the other of these two 'vinegars' in various operations. If Valentine wanted to cover up his use of the Vinegar of Antimony as the *real* solvent, it would seem counterproductive, to my way of thinking, to explain how it is made and used, in the same book in which he is allegedly trying to conceal it as the secret solvent of his technique.

An even more substantial argument, in favour of the role of acetic acid, comes from the work of the well-known contemporary French alchemist, Jean Dubuis[21]. Dubuis

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[21] Jean Dubuis, the founder of the French alchemical school *Les Philosophes de la Nature* (LPN), which was eventually exported to America and became known there as The Philosophers of Nature (PoN). Dubuis rightly owns the

publically claimed, during the closing years of the 20th century, to have performed transmutations with a Philosophic Stone that was the product of the Acetate Path. The process Dubuis used is a development of, and refinement upon, the foundation techniques described in Valentine's Triumphal Chariot. Almost on the basis of this event alone I believe we have a strong argument for the claim that in many cases where authors such as Valentine use the term *vinegar*, and we assume they expect us to understand by that dilute acetic acid, they were not attempting to be devious. They actually meant what they were saying … use distilled wine vinegar (dilute acetic acid).

I should add to this claim, though, that it is also very likely that solvents other than acetic acid, which were spoken of using ciphers such as the term *vinegar*, (including the aforementioned Vinegar of Antimony), can produce reactions and products in the same (alchemical) class as those produced by acetic acid. In which case we may be faced with the argument that any of these solvents could be used to the same end, and the value in their use may depend only on a matter of personal choice, or an understanding resulting from the quirks of one's personal education in alchemy.

For those of us who have attempted the many jars experiment (described in the last chapter), we can say without any fear of proof to the contrary that when certain metals are placed in acetic acid that a coloured oil-like substance is produced. This experimental fact alone should give us warrant to consider there may be some reason to validate the argument that Valentine was not covering up the truth. The only sensible question that would now remain, on the basis of the many jars evidence, is … is the oil produced by the acetic method of any real use in the Great Work? Or is it just a pretty curiosity, with

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reputation of being the pre-eminent alchemist of the latter half of the 20th century, second only to Frater Albertus in modern history.

no philosophic value? The answer to this particular question, though, will have to wait till the next volume in this series. Here we are solely concerned with just how these acetate-oils are produced manually, and with explaining the theory of how that works.

So, from the many jars experiment we will now have a very rough idea of how we go about obtaining a solution of so-called metallic Sulphur … of the first degree. We simply take a metal that is known to react with acetic acid (because not all metals do), and immerse that metal in a dilute, but high concentration, of the acid. Sooner or later (and the timing is often dependant on variable conditions), a tincture will appear, and we are ready to separate and coagulate our oil.

There are a few ideas we need to grasp, first, before we bowl head-long in to experimenting with this process. For example, it is taught as *tradition* that alchemically viable metallic Sulphurs can only be obtained from the properly processed *ores* of metals (as mentioned previously). That is, that metals which have been industrially prepared, in a smelter, it is said, will not serve as good material for the production of metallic oils. The theory is that smelting (exposing metals to extreme temperatures) 'kills' the metal, and therefore an important 'spark of life' has flown the coop, by means of the fire[22]. Many students of metallic alchemy who perpetuate this claim do so without having any physical evidence, and/or without any reasonable supporting theory. They simply do not understand the process by which *real* metallic Sulphurs are produced, beneath which process metallic oils of the first degree form a basis. The argument is technically inaccurate, and I will

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[22] This argument was taken as part of Albertus' instruction, and he pointed to passages in *The Philosophers Stone*, and small text found in A.E.Waite's *Collecteana Chemica*, to support this theory, which was also adopted by Jean Dubuis.

explain why.

The old alchemists tell us that all things are composed of three conditions – Mercury, Sulphur and Salt. It is claimed that if we bring a metal to a state of fusion (heat it through to its liquid state), its spark of life, or life energy, or life force, is evacuated. When asked what this 'life' is, the reply is commonly that it is the Mercury Principal (or some vague invisible 'thing' that has no physical vehicle). This betrays a lack of understanding of basic Hermetic alchemical lore. Mercury is *not* the life principle. It also is *not* some form of energy (sic: life energy). Energy in all substances is carried by the Sulphur Principal. Mercury is the Principal of *information* in a thing. *Life* in a thing arises out of the natural conjunction of the three alchemical Principals. It is not something which belongs to one 'thing'. The entire concept of a 'thing' that carries 'life' in a living system is not compatible with proper Hermetic theory. That is my first argument concerning this concept.

My second argument is that in the many jars experiment we have already proved that a tincture can be extracted from smelted metals (if we actually used industrially processed metals as material for that experiment). If we then take the oils produced by that means and dissect them alchemically, we will discover that *all three* alchemical Principals are present. So the argument that one or more may be lost in the fire is *to a degree* erroneous. I say degree, because in fact on occasion it is difficult to obtain *Sulphurs* from some (industrially) processed metals, but this is not by any means the hard and fast rule[23].

So, when we attempt to obtain the first class of metallic oils from the classic metals of the alchemists we will discover

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[23] When a metal undergoes fusion (is liquefied in the fire) the geometric structure of its atomic matrix changes. This change is not only structural but also energetic. This tells us that what is possibly lost in the smelter is a certain *energetic* (Sulphur) signature.

by experience that lead, tin, iron, copper, silver and zinc are the best candidates (when using the kinds of organic solvents discussed in this text). We can also include Antimony in that group, because it is an important candidate as a source of high-end alchemical Sulphur of a higher order. While in most cases the processed metals will prove effective, the *best* forms of these metals to use are their oxides and their carbonates[24]. Some of these oxides and carbonates exist in nature and can be brought over the counter, saving us a lot of work. But usually alchemists will buy the ores of these metals in their sulphide form, (for example), and then carefully powder and gently heat them in order to cause them to oxidise, without fusing them, in the fire. Once we have the un-fused powdered oxide of a metal then we will find, by experiment, that we will often obtain a tincture much more rapidly, in more quantity, and of a darker more intense hue (generally).

Because this approach is so helpful I have found that for the purposes of practice and experiment, the oxide of iron (commonly - *rust*), is the cheapest and most easily obtained metallic oxide to work with.

Having chosen and prepared our metal, the second half of the equation is the solvent – acetic acid. Again, it is often said that tradition asserts that the only viable form of acetic acid to use for alchemical experiment is naturally produced acetic. Of course *traditionally* synthetic acetic (or even the idea of it) did not exist, so the idea that synthetic acetic is unproductive, alchemically, is a very modern argument. In my humble opinion, modern arguments should be looked at with great care, because they are often based on the concepts of chemistry (as opposed to alchemy), and other unsubstantiated clichés. That view is roughly in the same category as that given for the use of

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[24] This is worth contemplating when considering the role organic substances play in the Great Work.

carefully heated ores … if you use synthetic (industrially prepared), acetic acid, it is lacking 'life' (or a particular *kind* of life). The problem with that argument is that it can be proved that if we use industrial acetic (usually glacial acetic), it provides us with the exact same product (our oil-Sulphur), as does naturally produced acetic. No easily discernable difference between the two kinds of product can be recognised. With the small differences that do exist, or (more importantly, are claimed to exist), no proof has been forthcoming that these differences are a requirement of the role the acetic plays in advanced alchemy.

Again, a common claim made about this issue is that since the 'life force' is invisible, its necessity and benefits cannot be seen or analysed … somehow they are simply 'known'. How valid can an argument be in favour of something for which no effect can be noticed or calculated? Accurate Hermetic philosophy insists that all non-physical states or conditions have a physical vehicle. A reaction in one side of the equation always causes a corresponding reaction in the other. (Again: "as above so below"). If some mysterious and invisible *life force* plays a key role in alchemical work, then some recognisable (and therefore quantifiable), effect of its presence should manifest.

There are a number of opinions as to how acetic acid should be used for our Sulphur experiments. The general rule is that at the least a 60:40 ratio acetic-to-water concentrate is an adequate solvent[25]. I would not argue with that opinion because I have used it many times myself with excellent results.

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[25] An 80:20 water-to-acid concentration can be attained by careful distillation of cooking vinegar, and is the oft times a quoted requirement where rectified vinegar is recommended, on the basis that this was the most common standard preparation of rectified acetic acid in the classic era.

The Separation and Coagulation Of Metallic Sulphur

> "The gum which to the vegetable work proceedeth of that matter; they call Sericon; The oil which proceedeth of that gum menstrue, moreover, they termed the gum of the green lion of the philosophers."
>
> (Samuel Norton – Clavicula Alchemiæ, 1491)

Mind that you take special care to give due attention to the instruction I give in the following text, if you intend experimenting with the techniques of Sulphur production I describe in this volume. This advice is of serious importance should you decide to overlook the caution I give in my disclaimer about ingesting any of the products I describe herein. The issue of safety largely revolves around the information I provide in this chapter.

Once we have obtained a tincture from our metal the next stage is to separate that tincture, our Sulphur, from the Salts of metal and from the solvent. Removing most of the metal, and the metallic Salt (which appears in a clay-like form), is a simple matter of the filtration of the tinctured solution. This should be done with the finest mesh filter that is practical.

Separation of the solvent (dilute acetic acid), from the oil is much trickier, and requires good lab experience to complete successfully. A mistake in this part of the process could result in producing a poison, not an alchemical remedy.

First, the filtered dilute acetic-oil solution should be poured in to a clean retort (or distillation flask, if you prefer). The solution is then heated in a sand bath, with care. We should not boil the liquid, but allow it only to get hot enough to gently evaporate the volatile solvent. This distillation is continued until all of the acetic and most of the water is driven over the still-head. But we must not go so far as to allow all of the water (the last of the solvent), to come over, and the oil to remain dry at the bottom of the flask. If we do this we risk the oil being burned, and of losing its Mercury into the receiver. So we stop the distillation when the oil is still mixed with the last of the water from the acetic-water solvent. I usually judge the time to stop when a ring of dried oil appears on the inside wall of the flask at the level of the surface of the liquid. This is a sign that the solution is nearing saturation point.

A small amount of fresh distilled water should now be added to the flask, just enough to allow us to dissolve all of the oil, so that we can decant it with ease. We decant in to an evaporating dish, then place the dish in a sand bath at no more than 30°C[26]. The dish should be covered with a paper towel to stop dust falling in, and the whole left until all of the water is evaporated and the oil is left dry (the consistency of a thick paste).

If we look closely at the dried oil we will see it is a slightly gummy mass that also contains little clumps of Salt. A mixture of Sulphur and Salt, just as it should be.

Because of the gentle way in which we have dried this mass if we smell it closely we will sense that some acetic has remained with the oil. This must be removed. So we reintroduce more distilled water, just enough to re-dissolve the oil, and then gently dry the mass again. As we drive off the added water the acetic goes with it, because these two substances have an azeotropic relationship (they distil at roughly the same temperature). We repeat this process until the exact moment that the acidity has been eliminated, and no further. This moment can be ascertained by smell (if your olfactory sense is sensitive enough), or by litmus paper or pH meter.

What we now have is a clean mixture of pure oil mixed

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[26] The first degree of heat.

with traces of the metallic Salt. We must now separate the Salt and oil, because that mineral Salt is the gross body of the metal and is poisonous if ingested (in most cases).

Now we must prepare a batch of dry ethanol. That is, ethanol which is water-free. Any good student of the art will know that to do this we use a mixture of distillation and potassium carbonate. In order for this next step in the process to work we must make sure no water (H_2O) is present in the process. This means the alcohol must be absolutely dry, and so must the oil-Salt mass. We must take every precaution, once we have them dry, to ensure they remain so, because both substances are hygroscopic. This means storing them in clean, dry, air tight containers, and to only open these containers in a dry environment.

For the purposes of practicality, the last time we dissolve the oil-Salt mass in order to help drive away the acid, we should transfer the solution from the evaporating dish in to a small round bottom flask. This will make the next step easier.

When we have the oil-Salt dry in its flask, and the ethanol dry, we should then use an eyedropper and introduce the ethanol to the oil-Salt; enough to simply dissolve the oil. The flask should be very gently swirled in a circular motion, and we shall witness the ethanol washing the mass, but only dissolving the oil, leaving the Salt intact and separate. This Salt will appear as small cream-coloured clumps, of a clay-like consistency. The ethanol will become tinctured with the oil, which can now be gently decanted in to a very fine mesh filter.

Traces of Salt will still remain in the ethanol-oil filtrate, and must be removed. We do this by carefully evaporating half of the ethanol from off the oil. This will slightly concentrate the solution and allow any residual Salt suspended in the solution to form larger clusters and precipitate. So the solution, now reduced by half its volume, should be stored in an air-tight flask and left undisturbed for a few days to allow the Salt to fall out of solution. This solution should now, again, be filtered with care, then reduced again by half its volume. This filtration and reduction process should be continued until no Salt precipitates after three days digestion. Since this may take four or more cycles it is wise to begin with enough ethanol over your Salts to accommodate at least four reductions-by-half volume. If you end up with so small an amount of liquid by the third or fourth reduction (for example), simply add back more pure alcohol, digest the solution at 30°C for 24 hours, and repeat the reductions-by-half, digestions and filtrations, again, until no Salt precipitates.

When no more Salt precipitates we have completed the process. We now have our pure so-called metallic oil (of the first order), dissolved in a solution of pure ethanol. If no traces of the metal remain, it is safe to ingest. Nevertheless I will repeat my earlier caution: that *I strongly suggest that you do not attempt to ingest this preparation* until you have a great deal of experience with removing the metallic Salt, or have access to the personal guidance of an Adept who is an expert in this technique. The danger of poisoning by ingestion of residual heavy metals is simply too great.

The Science

> "There will come forth a red earthy Oil towards the end, but in very little quantity; which Oil some account the true *red Oil of Saturn*, but erroneously, it being nothing else but the more heavy and earthy part of distilled *Vinegar*."
>
> (Christopher Glaser - The Complete Chemist, 1677)

Now that I have explained the entire method of how to obtain a so-called metallic oil (via the acetic path), from the point of view of the alchemist, we should consider the chemistry of the process, so that we might reveal some of its secrets, and remove some of the errors in belief that exist about what is happening here.

A certain group of the old alchemists, when discussing this process, tell us that the metallic oil we obtain is *extracted* from the metal. That is, from the metallic Salts (aka: calx). There is little doubt that when they talk about this process in this way they mean us to understand that the *physical* metallic oil is *extracted* from the physical metallic Salt. Certainly when we are familiar with the Plant Work, and how plant oils are obtained by extraction with ethanol (for example), and we look at what happens in the metallic process, we cannot help but assume that the same kind of extraction is happening (if we do not know any better). In other words it *seems* that when we pour acetic acid on to some metallic oxides, that the acetic is extracting an oil out of the mineral/metallic Salt. All things being considered this would appear to be a reasonable assessment of the situation, and we can understand why the old alchemists, who had no knowledge of modern chemistry or physics, and no high-tech analytical machinery, believed that this is what was happening. Indeed, today, for lack of any other explanation, most alchemists who work with and discuss metallic alchemy still talk about the *extraction* of metallic Sulphur-oils from their native Salts, as if it was a process similar to that which we see in the Plant Work.

But in reality this is not what happens at all. The *physical* oil that we obtain in a solution of ethanol, at the end of the process I have described so far in this work, is not a metallic *extract*. That oil is in fact a by-product of a catalytic reaction between the metallic salt, and the *organic* solvent. In fact, that oil has its origin in the acetic acid, not from the metallic salt. This is one reason why, once the salts are removed in the final stage of the oil preparation, the resulting oil is safe to ingest. Because that oil is not metallic (chemically speaking), it is organic.

I suggest that if you understand the basic theory of the production of metallic oils you re-read the previous paragraph again, and stop and think about what I am suggesting; because herein is presented the central theme of this treatise.[27]

If you have understood everything I have explained up to this point, and you have some idea of the importance of metallic Sulphurs in the bigger picture of metallic alchemy, then you will recognise that the claim I have just made will be controversial in some quarters. The idea that much of that which has been claimed to be a metallic extract (in the past), for use in advanced metallic alchemy, is in fact not metallic, but organic. Nevertheless we should not be hasty to make judgement on this idea, because as with most things in alchemy this situation is not what it seems to be at first. So let us now consider the chemistry and physics of the production of this class of metallic Sulphurs,

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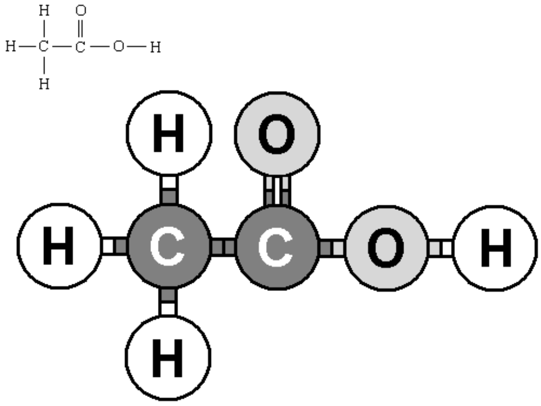
[27] I might add that I believe that alchemical metallic-mineral Sulphurs can be graded into three hierarchical categories. (1) Those which are the product of catalytic (or pseudo-catalytic) reactions of the kind I have mentioned here, (2) those which are formed by combustion of substances, and (3) the higher preparations which are formed from the radical (and irreversible) dissolution of metal and mineral Salts, by means of philosophic solvents.

in detail, so that we can consider properly the exact reactions that are involved here, both from a chemical point of view, and an alchemical point of view.

For those students of alchemy that have a shaky understanding of acid-alkali chemistry, I suggest that before reading further, you re-read the chapter that explains the subject. I suggest this because what I am about to explain revolves around the central concept of knowledge of how acids and alkalis arise. Things are about to get a little *chemically* technical now, in my explanations.

When we begin the process of producing a metallic Sulphur we start with two things, the powder of a metallic oxide (for example), and the organic solvent (acetic acid, for example), that we will use to decompose that metallic powder.

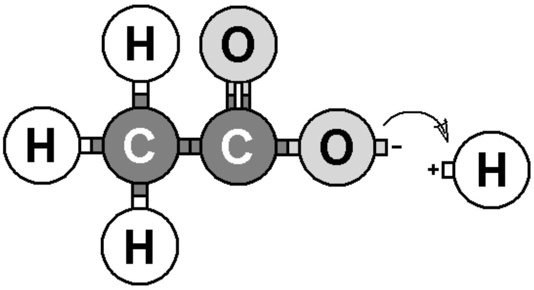
Let us begin by considering a molecule of acetic acid, as it would appear in the condition called *glacial* acetic acid (99.999 percent concentrated acetic acid (or 17.4N molar). We can represent the structure of that molecule as it is in the following diagram.



An acetic acid molecule

As I have pointed out earlier, we can tell that it is organic because it is based on a carbon chain (the two carbon atoms at its centre), as well as containing oxygen and hydrogen atoms. We can also recognise the piece of the molecule that is going to be responsible for the acid reaction, the oxygen and hydrogen atoms on the right side of the molecule.

According to the way modern chemistry describes the acid reaction, when we add water to glacial acetic acid about four percent of the acetic molecules in our flask will lose a hydrogen proton. See the following diagram.

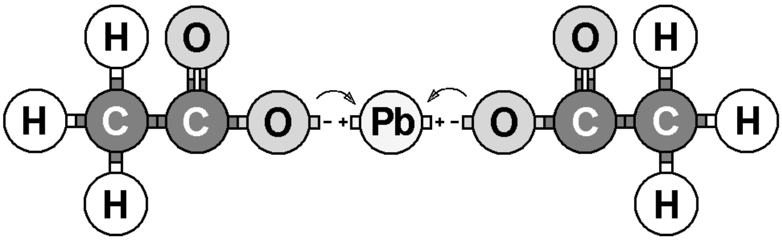


The acetic molecule loses a hydrogen proton.

The proton of that hydrogen atom breaks off the molecule leaving its only electron behind, attached to the oxygen atom. Because the proton is the positively charged nucleus of the hydrogen atom, that proton is no longer electrically neutral, it is now a positively charged particle (an ion). Likewise, the remaining body of the acetic molecule is also no longer electrically neutral, that extraneous electron has made it slightly negatively charged.

As soon as particles or molecules become charged (that is, they become ‘ions’), they are attracted to other particles or molecules, seeking to become electrically neutral again.

So our flask has a liquid in it which has four percent of its molecules seeking compatible particles. We now add our powdered Lead oxide (lets say PbO for argument sake[28]). As soon as we do this the negative electric attractive charge on four percent of the acetic acid rips Lead atoms off of the granules of Lead powder. In this case each detached Lead atom will end up with two acetic acid molecules attached to it. This new molecule is called Lead di-acetate, and is shown in the following diagram.



Lead di-acetate.

To keep things simple we might just call this new substance … Lead acetate. This much is commonly understood basic, simplified, acetate chemistry. From this point we start to move away from information commonly understood by chemists, about acetates, slowly towards the realm of alchemical understanding.

Our acetic acid started life as a clear (transparent) liquid. As soon as we add Lead oxide to this solvent, and the acid decomposes the Lead molecules, and every dissociated Lead atom links with two acetic acid molecules, these acetic acid molecules (attached to the Lead atom), turn either green or red in colour[29].

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[28] There are a number of oxides of lead, namely: Litharge or Massicot - PbO, Minium or red Lead - Pb_3O_4, Lead dioxide - PbO_2, Lead sesquioxide - Pb_2O_3, Monoclinic Lead - $Pb_{12}O_{19}$.

[29] The exact colour of the tincture depends on a number of variables, primary amongst which are the way in which the metal has been prepared before

After a good deal of reading on the subject and from discussion with a number of qualified chemists, I have never found a mainstream source of information that properly explains this colour change phenomena; a lot of guesswork, but no solid explanation. At the same time I have noticed that most commercial reagent grade Lead acetate, in its solid form, has virtually no colour at all. So, industrial chemists are largely unfamiliar with this colour occurrence. It seems to mostly be a reaction that is related to ‘homemade’ Lead oxides and the homemade Lead acetates that are produced from them. As for my own observations of this reaction, I have noticed that generally the acetate molecule turns red when the Lead used has impurities (relatively speaking), attached to it. Acetates made from oxidised Galena (Lead sulphide) are typical of this. The green colour seems to more reliably occur when the Lead used is more pure, and has higher oxygen content (eg, PbO_2 and Pb_3O_4). That is, when it has been dissolved in acetic, filtered, concentrated via distillation and washed in distilled water, repeatedly, a number of times (for example).

Next, when we take our so-called metallic oil process to the point where we separate the oil from its Salt, we notice two things. Ethanol, in this part of the process, acts like a cutting tool and breaks the weak molecular bond that exists between the acetic molecules and the Lead atom. See the following diagram.

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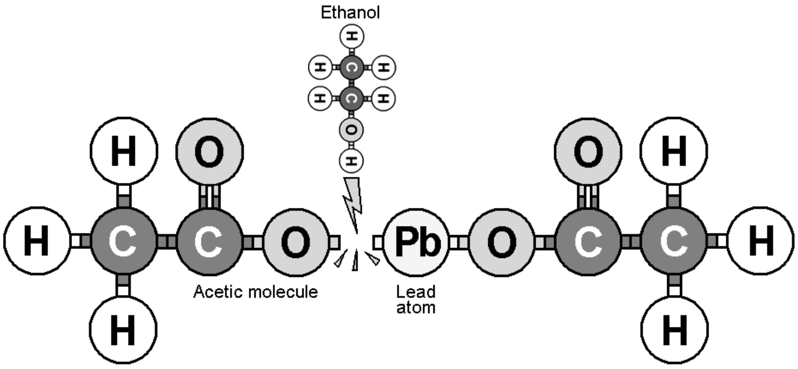
dissolution. In some cases the solution can remain transparent, until it is concentrated by distillation, and the coagulated fluid then takes on a red or green tincture.



Separation of oil from salt.

That is, ethanol reverses the process. The acetic molecule, now green (or red), is separated from the Lead atom (Salt), which itself is no longer the colour it was when we first introduced it to the solvent. It is now a creamy white colour of a clay-like consistency. The connection that both parts of our equation have made (the acetic molecule and the Lead atom), has altered them. Their change in colour (and other physical characteristics), is outward evidence of that inner change.

The connection they had made was an electro-magnetic one (molecular bonding). In other words, it was an energetic connection. As I have already pointed out the alchemical Principal of Sulphur is the energy aspect of the system it inhabits. This is the point where modern science becomes ancient alchemy. When the metal connected with the acid molecule the *Sulphur* aspect of both parts of the equation was changed. We should be aware that *colour* is directly associated with *light*. Light is a radiation of energy. Energy is heat. Heat and fire, again, are *our* Sulphur.

In modern physics we are told that when electrons bounce up and down the shells of their atoms, when more energy is added to the atom, or energy is removed, the atoms change colour. The different colours an atom displays when energy is added to or removed from it are indicative of the degree of energy that is added or removed. We witness this, for example, when a piece of iron is heated in a forge. The iron turns red, orange or white depending on how hot it gets … that is, on how much energy it has absorbed from the fire. These colours are light and heat radiation emanating from the electrons in the iron atom's electron shells.

From this we understand that in the realm of physics, when the colour of a thing changes, so has its energy state changed.

The kind of change we are considering in this acetate reaction is a pseudo-catalytic reaction. The introduction of the metal to the acid has forced a change in the acid. Four percent of the acid has had its colour changed to green (or red), and at the same time it has taken on an oily or gummy consistency. This change in consistency would suggest that not only has the energy state been altered in the acid, but that the structure of that part of the acid has also changed. Physicists will tell us that a change in a molecule's energy also often coincides with a change in its geometry (its structure and shape).

I should make it clear that I term this reaction *pseudo-catalytic* because it does not seem to conform to the strict definition of catalysis: *the change in rate of a chemical reaction due to the participation of a substance called a catalyst. A catalyst is not consumed by the reaction itself*. It is questionable, at this point, as to whether the change which takes part in the metal (its white clay-like consistency), could be considered as the catalyst being 'consumed' by the reaction. Likewise, it is also not clear at this point as to whether the *rate of change* of the reaction is of the kind defined by catalysis. My knowledge of catalytic chemistry is not sufficiently developed to make this judgment. Nor has enough indepth analysis been carried out on this reaction, as far as I am aware, to satisfactorily categorise the type of reaction which is actually occurring. There is definitely room for much more technical research here.

An alchemist who knows his business would explain this state of affairs in the following way: that when an organic acid is introduced to a metallic oxide, that some of the *Sulphur* (energy) of the metallic Salt is transferred to the acid. That is, that metallic Sulphur has migrated to and taken up residence in the organic realm. Or alternatively, that the energy (and possibly structure), of the mineral complex has caused a change in the energy (and structure), of the acid.

The so-called metallic *oil* is not metallic at all (chemically). It had its origin in the vegetable kingdom (acetic acid comes from the oxidation of grape alcohol). But we need to remember that the *oil* is the vehicle for the Sulphur Principal, it is not the Sulphur itself. So, that which began life as an organic substance, derived from the vegetable kingdom, is now *alchemically* considered metallic … or more accurately, to hold the *energetic signature* (and possibly structural signature), of the metallic realm.

So while the *oil* is not *extracted* from the metal, the *Sulphur* is. In other words, in this process, what the old alchemists had discovered was a way to manipulate metallic Sulphur (energy), for the purposes of their Great Work, via an organic medium. This concept, of the use of organic solvents in mineral operations, is of the utmost importance to advanced alchemy.

Because of this theory it is sometimes insisted by alchemists that mineral acids (non-organic acids), have no real place in alchemy (or at least cannot have alchemical effect), because the ‘trick’ in alchemy involves organic acids (at least to a certain degree), and other organic based solvents[30]. Other

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[30] See Weidenfeld, The Secrets of the Adepts.

alchemists, in their typical confusing manner, called mineral-metallic preparations, which were manipulated with organic solvents ‘vegetable’ preparations. Hence, a Stone, for example, made via the Acetic Path, was termed *the* Vegetable Stone[31].

Once we understand this much, we are now capable of solving all kinds of other enigmas that exist concerning the real nature of aspects of metallic alchemy. Some old myths can be busted, and some bright new concepts can be realised. At the same time we get, for the first time, possibly, a clear look at the real relationship between alchemy and modern science, and understand that in fact science has all (or almost all), of the pieces of the puzzle, and the language to discuss alchemy, but not the vision to piece them together … yet.

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[31] See Samuel Norton’s ‘Key to Alchemy”.

The Alkali Method

> "Kermes mineral or *Alkermes* mineral was a compound of antimony oxides and sulfides, more specifically, antimony trioxide and trisulfide. It can be made or obtained in the laboratory by the actions of potassium carbonate (K_2CO_3) on antimony sulfide."
>
> (Wikipedia – Kermes Mineral, 2011)

Now that we have considered how all of this works with acetic acid, let's consider one of the other aspects of the many jars experiment – the alkali approach. This technique was also presented by Basil Valentine in his book *The Triumphal Chariot of Antimony*, on page 66, the final paragraph, where he says …

"*Sulphur of Antimony may also be prepared in the following manner: Pulverise the antimony, and digest for two hours, or longer, in a strong lye made of ashes of beechwood. Strain, add vinegar, and the Sulphur will be a red colour, and sink to the bottom…*" (etc.).

The first thing to understand about the alkali method, in comparison to the acetic method, is that acetic acid is a liquid, and the alkali is a salt. This means that while we can distil away the acetic acid from an oil, in order to coagulate the same, we cannot use distillation with the alkali, for the same purpose. If we distil the alkali-oil solution, we will draw off the water (that we dissolved the alkali in), and the salt will re-crystallise and be mixed up with the oil. We cannot, then, easily separate the two. So we need a totally different approach to the separation of the oil from its solvent.

Valentine explains the process exactly, without veil, but not in any real detail. He expects the student to have enough knowledge of lab procedure to be able to fill in the gaps himself.

First we need to understand that while Beechwood alkali can be used, today we have much stronger alkalis at our disposal. The technique I was taught used Sodium Hydroxide $NaOH$ (caustic soda), which is a very strong alkali. Again, the argument could be raised that it is *more traditionally correct* to use Beechwood, since it is a natural substance. Arguments are also proposed that Beechwood must be used because it carries alongside it, or within it, something else that is essential to success. But when we question for a wider theory on why this might be so we find most explanations devolving in to mere chemistry, not founded at all in a substantial alchemical argument. But the final proof of the argument for $NaOH$ is found in the proverbial pudding.

Now, we can take one of the alkali jars from our many jars experiment, one that shows an obvious tincture, as the basis for this experiment. The trick to the first stage of the separation of the oil from the solvent is a very simple trick of chemistry. If we add the right amount of an acid to an alkaline solution the result is always water (H_2O) and a salt[32]. That is, that the two cancel each other out and become neutral in pH. This neutralisation of the pH does not affect the oil (alchemically). Any acid will do in this reaction; my suggestion is to use acetic acid.

We start by removing the metal (by filtration). The appropriate jar (from the many jars experiment) is now decanted into a heat proof flask, large enough that the liquid only fills half the flask. We need to do this because when we add the acid to the alkaline solution we will cause an exothermic reaction (it will produce a lot of heat). If we leave the solution in a normal jar the heat generated may crack the glass.

Now we add the acid to the alkaline solution in small

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[32] Acid + base = water + salt. The cation in the salt comes from the base; the anion comes from the acid.

amounts at a time, carefully and thoroughly stirring the liquid as we do. What we want to achieve is to reach a point where the pH is neutral (pH 7), so we don't want to go past that point and start moving to the acidic end of the pH scale. (If we do, by accident, then we need to start adding back alkali to the solution to bring the pH back to the centre of the scale). One way of doing this is to add a small amount of acid, stir, and then measure the pH with litmus paper or a pH meter. Then add more acid, stir, re-measure the pH, etc, etc. A skilled artist will know when the pH hits neutral, by sight, because the solution will suddenly turn milky, then look like curdled milk (flaky). If we stir the solution when it reaches this point, and the curdled milk effect does not disappear, then we have hit neutral pH.

When this is achieved we can leave the jar so that the 'flakes' precipitate to the bottom of the water solution. Then we can pipe-off the water (or use a combination of decanting and piping), until we have removed as much as we can without disturbing the sediment (Sulphur). The remaining portion can then be gently dried in an evaporating dish. The dry solids are our oil in its rough condition. We should now add a small amount of distilled water, re-check the pH, and as long as it is neutral we are where we want to be at this point. If the pH is still alkaline, then add drops of acetic until the pH is neutral to slightly acid. Then re-evaporate, wash with more distilled water, evaporate again, etc, until the solids are dry and neutral. This must all be done with due care, so that the solids are not burned or lost through wastage.

The final product can now be extracted with dry alcohol (ethanol, without any traces of water), as with the acetic method, to remove any salts, and separate them from the pure oil.

The Citric Method

> "It is truly amazing that none of the seekers after this great treasure, though willing to submit to any amount of labour and hardship for its sake, seem capable of perceiving the lesson which constant failure is striving to impress upon them."
> (The Book of 'The True Way' – Anon, 1677)

The method for dealing with the citric acid jars, in the many jars experiment, is essentially the same as the alkali method. But I want to talk about it in a little detail, because there is a tweak on the process which can be used to reveal a cunning secret, one which leads to quick proof of the effectiveness of these operations in the realm of the Great Work.

This work with citric acid was largely an invention of my own. That is, I have never met with or heard of another western alchemist who has used this approach, in the way I work it[33]. I was originally introduced to the possibility of using citric acid as a solvent of metals, and as a means of obtaining metallic Sulphur, from a friend of my teacher, in the early 1990s. The technique was to dissolve egg shells (calcium) in the filtered juice of lemons. The result (if all went well), was *oil of calcium*, a nifty little trick. One of the problems with the method, though, was that often the lemon juice, being a complex organic compound, would grow mould on it, and the experiment was ruined before any oil was produced. Even keeping the experiment in a refrigerator often didn't help eliminate this problem. So my approach to that initial technique was to use pure citric acid, thereby eliminating the mould issue.

I later moved from making oil of calcium by this method,

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[33] Although I have noticed recently that the basic theme has been picked up from mention I have made of it online, by other experimenters.

to using a solution of citric acid to produce oil from iron, actually native ore of titanomagnetite (black iron sand), which can be found abundantly on the beaches of the northern west coast of the north island of New Zealand, between Mount Taranaki, to just south of Auckland[34]. One of the things that really amazed me about this experiment was that it produced enormous a mounts of oil from the iron. Far more than any other method I have worked with. The resulting oil was black, with a slight yellowish tint (not unlike liquorish). One of the curiosities of this technique is that the product ‘ferments’ (as the old alchemists might have said), releasing fine bubbles of hydrogen during the reaction of the acid on the metal.

The first issue with the citric approach is that the acid is a salt, just like the alkali in the previous experiment. This means that we cannot distil the solvent away from the oil (Sulphur), as I pointed out previously. So we have two options: first, to neutralise the acid by adding an alkali. I found potassium carbonate suitable to the task. The method of work is then exactly the same as that used with the alkali approach. We add the alkali until a neutral pH is reached, and the Sulphur precipitates. Then that Sulphur is dried carefully and extracted with dry ethanol.

The second method is more complicated and very messy, but allows us to do something that the pH-neutral technique won’t. We take the solution of citric acid and oil of iron and evaporate off the water, very carefully and slowly. This will both coagulate the oil, and re-crystallise the citric acid. As soon as the acid starts to form crystals in the oil we sieve the liquor, to remove the acid. This evaporation, coagulation, crystallisation, and sieving must be done in several stages, very carefully (so as

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[34] Frater Albertus mentioned these sands in his book ‘The Alchemist of the Rocky Mountains’, as my teacher had obtained some for him to experiment with.

not to burn the oil). When (almost) all the water is gone, and (almost) all the acid is re-crystallised and removed, we will have *relatively* clean oil. By this method it is really hard to remove all the acid. So I recommend adding back more distilled water and repeating the evaporation-crystallisations.

When we think we have the oil as clean as we can get it (relatively free of the acid and the water), we should then add some dry ethanol. My recommendation is ethanol-to-oil at a ratio of 1:3. Stir the mixture, then seal the jar and leave it. If the artist has carried out the process exactly as I have explained, effectively, then he will see something occur in the jar, after a couple of days, that … if he is wise in the workings of nature and alchemy, will show him that the old Adepts indeed knew of extremely fast methods of completing the Great Work, with the minimum of effort. A careful smell of the end result will say volumes to the artist familiar with the Acetate Path to the Great Stone.

Distilling the Oil

> “Philosophy I have read, and thoroughly understood, the utmost depth of my teachers' knowledge have I sounded. This God graciously granted to me, giving me a heart to understand wisdom.”
>
> (Book of Lambspring - Nicholas Barnaud 1599)

Valentine recommends, in both the case of oils by acetic and by alkali, to distil the final product before it is in its best condition. A few quick words on this subject need to be added, before we move on to our next chapter.

The rule is, in all things alchemical, that any final product is not truly philosophic (to be of use in alchemy), until it has *passed the still head*. That means, that it has been distilled (for liquids), or sublimated (for solids). A product that has passed the still head is thus free of all its terrestrial grossness, and is as pure and volatile as we can make it, and … has touched heaven, and received there a subtle and philosophic character that is the signature of alchemical products. This is important from an energetic point of view, and, in the Great Work, from the view of a substance’s ability to form homogene relationships with other substances native to it.

There are two ways of distilling metallic oils, both of which are tricky, and require care and experience. Each method is used for different reasons, and we should discuss them both so that we can be quite sure of what we are doing when we use them to prepare our final product.

The first method is what I call the *wet* method. The pure (clean) oil is dissolved in ethanol (or sometimes glacial acetic acid), and then placed in a boiling flask attached to a distillation train, with a Liebig condenser; or in to a retort. The liquid (solvent) is then distilled off, per balneum. The water bath will stop the oil from burning when we reach the point where all of the liquid is gone, and only the oil remains. Once this point is reached the operation is halted. Then we return the distillate back to the boiling flask and repeat the distillation. This *rotation* of the solvent over the oil will eventually lift the oil up, bit-by-bit, until it suddenly comes over the still head entirely.

When we use this method the oil that is pulled over the still head is essentially the same oil that we had in the boiling flask, minus a few particles of caput mortem.

The second method is what I call the *dry* method. The oil is placed in the boiling flask but no solvent is added. The flask is then heated until the oil decomposes and 'flies'. When the oil decomposes it will break down in to four substances: (1) water, (2) a smoke-like gas, (3) a blood-red oil, and (4) the caput mortem (black salt).

The oil we obtain by the dry distillation is not the same oil we started with. When the original oil is heated to the point of decomposition, its molecules break down, re-shuffle (during the gas phase), then as they cool (on their entrance to the condenser) the bits and pieces of molecules re-link together, but in many different and new combinations. Some of the new substances formed may not be safe for ingestion, so this form of oil distillation is not used to produce ingestible Sulphurs. It is used for more advanced processes which I will discuss in the next volume in this series. This second method (dry distillation) is often referred to as destructive distillation, or pyrolytic distillation.

Kerckringer's Menstruum

> "They [alchemists] don't seek the impossible, as is commonly said, but simply confirmation of that which is described in the old treatises that the Masters have left us, with a view to the obtaining of the Universal Medicine, also known as the Philosophers Stone."
> (Rubellus Petrinus – The Great Alchemical Work, 1999)

Basil Valentine's book *The Triumphal Chariot of Antimony*, provides us with a third secret concerning the preparation of metallic oils. Valentine himself does not give away this secret, but we receive it from a gentleman by the name of Theodore Kerckringius, who has attached an extensive commentary to Valentine's original text, in the form of a series of endnotes.

The comment Kerckringius makes, that we are most interested in here, is the preparation of a special solvent which today is referred to as Kerckringer's Menstruum (or 'KM' for short). But first a little bit of background on this matter.

My teacher instructed me in this process at the end of my secunda tuition. It was, she insisted, the proper place to explain this work, as her teacher had done for her, before me. This work not only rounds-out the fundamental concepts concerning metallic oils, but it also provides us with information which opens the door to the next, or third, work.

Theodore Kerckring (1638-1693) was a Dutch anatomist and chemical physician. In the second half of the 1650s he was a pupil at the Latin School in Amsterdam, of Franciscus van den Enden (at the same time as the philosopher Spinoza), before studying medicine at Leiden University under Franciscus Sylvius. Detail about his early life is lacking, but it is known that he spent much of his medical career before 1675 in

Amsterdam. Eventually he travelled throughout continental Europe, and settled in Hamburg in 1678. Kerckringer is remembered for his *Spicilegium anatomicum*, which is an anatomical atlas of clinical observations, medical curiosities, and autopsy discoveries along with general anatomical information[35]. (He is also remembered, as I have said, (by alchemists primarily), for the annotative commentary he made of Valentine's *Triumphal Chariot*, around 1671.)

On page 46 of *The Chariot*[36] Valentine begins his explanation of how we might make a preparation called the glass of Antimony (vitrified Antimony), a work well known to many practical alchemists. On page 47, at the end of his description of the making of this glass, Valentine then tells us "*The redness of this Antimony may be extracted by means of the spirit of wine.*" That is, that the red oil (Sulphur) of the powdered glass may be 'extracted' with ethanol.

Kerckringius then completes this statement with addition of his 19th annotation, which reads … "*Not common spirit of wine, which would be useless for this operation, but that of the Sages, which is prepared as follows for the extraction of the tincture: Take four ounces of thrice-sublimated salt of ammonia; of spirit of wine distilled over the salt of tartar, so that it is quite clear – ten ounces; place a phial over digestive fire till the spirit of wine is filled with the fire or sulphur of the salt of ammonia, distil thrice in the alembic, and you have our true menstruum, whereby the red colour is extracted out of the glass of Antimony. The tincture of this glass is also extracted by means of its own vinegar, and thence, in this last operation, is obtained a most excellent medicine.*"

Kerckringius is of course entirely correct. The Sulphur of

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[35] http://en.wikipedia.org/wiki/Theodor_Kerckring. (2011)

[36] Holmes Publishing Group, 1992, edition.

Antimony cannot be 'extracted' from its glass with common ethanol. This was the first point proved to me by my teacher after we had completed the first of many batches of this glass. Nevertheless, as the 19th annotation clearly explains, if we alter ethanol by adding to it the essence of the Sulphur of ammonia, we then will discover that this solvent will easily produce a tincture by means of the glass[37].

This special solvent, Kerckringer's menstruum, is something Frater Albertus referred to as a bridging solvent. That is, its origin is part vegetable (ethanol), and part animal-mineral (ammonia), and that its new condition (a wedding between ethanol and the Sulphur of ammonia), allows the ethanol to do something it could not do, alone, previously.

Curiously Kerckringer himself, in expanding on Valentine's original statement, also does not tell us the entire secret of the production of the menstruum. He leaves out one tiny but very significant fact. When I was being taught this process my own teacher insured, first, that I had read the instruction frequently enough to be entirely familiar with every word Kerckringer had penned, in the 19th annotation. Then we worked together on the production of the solvent. During the final operation I was then asked to simply sit back and watch my teacher complete the work. When all was done she then turned to me and asked … "*did you notice anything I did that was not in Kerckringer's instruction*?" Which, of course, I had, and I confirmed with a nod. She then raised her index finger to her lips, making the ancient sign of silence, and concluded … "*that*

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[37] I might add, here, that the tincture (Sulphur) produced by this method is unlikely to be a catalytic reaction, as described earlier. I make this claim based on the fact that we can clearly see that the *tincture* itself is already present *in the glass* before the KM is applied to it. Therefore, in this way, the tincture is effectively extracted by the KM, and is (curiously) produced within the glass during its fusion.

is the whole secret of the solvent's power, there."

The work in itself is very simple. We take, for example, a kilogram of salt of ammonia. It is placed in a sublimatory device (a device that allows us to heat the ammonia to the point where it will convert from a solid to a gas, and reform on a colder upper surface as 'flowers' of ammonia). The set up we used was made simply from a Pyrex pie dish, about three fingers deep. The raw (unsublimated) ammonia salts are placed in the bottom, the lid is returned to the dish, and the dish is placed directly on an electric element. Not much heat is required to sublimate the salt, which turns to a thick smoke (gas), and fills the container quickly. When the smoke clears (after all the salt is sublimated) we can clearly see the fluffy crystals of ammonia (its 'flowers') covering the entire underside of the lid.

This process is repeated three times with the same salt, and each time we see the sublimate turn increasingly deep yellow-orange in colour. The sublimation 'opens' the salt, and its Sulphur is then freed. (This Sulphur is then of the *second class*, not produced from organic solvents, but produced by sublimation of a substance).

We then prepare some fully dry ethanol (chemically dried with potassium carbonate). Then we digest the sublimated salt in this ethanol, so that the ethanol pulls the Sulphur from its Salt. The ethanol, of course, becomes tinctured. The solution is then carefully filtered through a fine mesh filter, to remove sediment[38].

Finally the alcohol his distilled, very carefully, in a closed system (distillation train or retort), until the residue Sulphur is bone-dry. This must be done with great care otherwise the flask

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[38] Again, this Sulphur of ammonia is not produced catalytically, but by extraction, since the 'oil' is visibly present in the sublimated ammonium. It is, therefore, a class of Sulphur quite different than that produced by the kind of catalytic reaction I discussed concerning the acetic, alkali and citric paths.

will crack, and the work will be ruined. The distillate is then returned to the dry residue, in the boiling flask, and re-distilled two more times. On the final distillation after all the Sulphur-impregnated ethanol has come over the still head, heat is continued, and increased, until *nothing else* comes over, and the burnt black caput mortem is all that remains.

If my instruction is followed *exactly* you will see for yourself the real secret of Kerckringer's menstruum.

Conclusion

> "The First Key is that which opens the dark prisons in which the Sulphur is shut up."
>
> (The Six Keys of Eudoxus)

I have defined three classes of mineral-metallic Sulphur. The first class is that which we might call *vegetable* mineral-metallic Sulphurs, because they are produced via a catalytic reaction between a mineral-metallic Salt, and an organic solvent. The second class of Sulphurs are produced by the pyrolytic distillation of substances, such as the first class of Sulphurs (for example, oils produced via the acetate process). The third class of Sulphurs are produced through the heating of mineral Salts resulting in a sublimation or fusion of the mineral, and a subsequent emergence of the oil (as in the example of the production of the KM, and the glass of antimony). I suspect this third class is related to the second class, and so I do not recognise it as a distinct order of mineral-metallic oil on its own. There is a fourth class of metallic-mineral Sulphur, called *Philosophic*, produced via the action of Philosophic Mercury on a mineral-metallic Salt, which I have not discussed here. (I refer to this as the third order of mineral-metallic oils). That subject will form a key part of the discourse in the next, fourth, book in this series. This last form of Sulphur has extreme psycho-somatic medicinal virtue, and is a key facet of metallic transmutation agents.

In order to master knowledge of mineral-metallic Sulphurs examples of each class must be discovered and experimented with until everything possible that can be understood about them, is understood. Only then will the key that opens and shuts the door to the secret place, where the omphalos of the alchemical Temple is hidden, be in your possession.

It is of the utmost importance to make a clear distinction between the three alchemic Principals in their *inner* (non-physical) state, and the Principals as they appear and are manipulated at the physical level, in the laboratory. Without an understanding of the non-physical side of the Principals, the manual labour is most likely to come to naught. It is my hope that, as one of the primary underlying themes of this work, this point has not gone unnoticed. It is necessary to not only think in terms of empirical mechanics in alchemical lab experience, but also in more metaphysical terms. If the physical side of the equation was all that was important for success, then some student of alchemy who is an expert in modern chemistry and physics (of which there are a good number), would have solved the enigma long ago.

At the same time, and in a similar fashion, it is important to grasp and understand just what the Principals *are*. The technical definitions for these prime ingredients in the structure and mechanics of our reality are fundamental to any successful working understanding of alchemy. The moment we ignore just what the Principals really are, or casually attribute to them names, definitions and descriptions which do not belong to them, then little else but confusion can follow when attempting to apply your understanding manually. For the average student of alchemy the task of trying to distinguish between the various descriptions of the Principals, and their definitions, in classic alchemical literature, can be a difficult task. It is a common ruse for the old alchemists to describe alchemical operations in such a way that they confuse the labels and definitions given to the different Principals. Descriptions of clear definitions are also rare. The problem is compounded by the fact that most modern authors, who are often poorly informed, comment on the subject in an era where it is fashionable to cross-fertilize labels and definitions from traditions and systems other than the Western hermetic (which are also often poorly understood). When many students of alchemy are already misinformed about the proper usage of terminology native to the Western alchemical tradition, attempting to overlay descriptors from other systems has resulted in almost irresolvable confusion. If we cannot identify each Principal and then understand how they manifest and evolve through each stage of any alchemical operation, we will never get far at all in our work.

The most fundamental of all procedural instructions tells us ... to *separate*, *purify* and *homogenize* these Principals, and nothing else. Nothing is added, the substance of the work has all that is sufficient within it to *complete* the operation. The secret of this ancient understanding begins *not* with the corrupted view of the ancient Greek grasp of the concept of the four Elements, as understood by modern academia, but the accurate view had by Hermetic (alchemic) Philosophers since the time of the ancient Egyptians.

When considering how to approach the separation, isolation and purification of the Principals in the mineral-metallic realm, the easiest and most logical place to begin is with Sulphur. With that one should enter this work with the intention of discovering everything he can about the subject. In this the attentive student will discover that, naturally, knowledge of the other two Principals will emerge from his work on Sulphur. For the three Principals are tied closely together, and where one is found and investigated, the other two will also be discovered. In a short time knowledge of Sulphur alone will expand into an understanding of the other Principals, and the all important relationship the three have together, as a dynamic unit in every living system.

Many of the more learned students of alchemy – those who have any idea at all of the core issues involved in solving the deeper enigmas of the advanced work – will agree that at the heart of the alchemical mystery is *energy* – that is *alchemic Sulphur*. If there is to be any truth in the affirmation that metallic transmutation (and biological rejuvenation), under ambient conditions, is possible, as alchemical philosophy insists, then the key to that achievement is a special knowledge concerning energy (and secondarily, intelligence).

The use of organic solvents in the production of the first class of mineral Sulphur is of key importance. There is a great deal of research yet to be done on this subject, which is little investigated and less understood I the mainstream today – preference tending to be placed on the investigation of the alleged usefulness of mineral solvents in alchemy. The choice of the solvent, the condition of the mineral when set to dissolution, and the way in which the product of that dissolution is treated are all essential to a productive outcome.

Alternatively, lye (alkaline solutions), as a solvent, has of equal importance, especially when considering techniques used in the production of high-end mineral Sulphurs, and quintessences (which are a the fourth class of Sulphur).

In the realm of alchemical medicine it will be discovered that a number of basic vegetable class mineral Sulphurs have little value. But the moment we take our game up a notch, and start to produce mineral Sulphurs with more specialised solvents, such as Kerckringer's menstruum, a noted difference is immediately found. In my early years of experiment with the production and ingestion of metallic Sulphurs I had a lot of disappointment, where medicinal value was concerned. But the aromatic oil of Antimony, produced from its glass via Kerckringer's menstruum, showed me that the old Adepts certainly knew that there were Sulphurs, and then there were *Sulphurs*.

The reality of metallic transmutation taken for granted, (for the sake of argument), we have to accept that the ancient alchemists, who had not conceived of the idea that transmutation must be impossible (as modern science insists it must be), set themselves to the task of succeeding in that Great Work. In doing so they discovered something entirely outside the realm of the modern scientific paradigm concerning what energy is, how it can be manipulated and how it can produce effects yet unheard of outside of the cabal of alchemical Mastery, without the aid of modern technology. A fact that infuriates the priests of modern science.

It is all too common, today, for individuals who approach the study of alchemy to simply read recipes and attempt to follow them, in the same manner that they might follow a recipe for baking bread. There is no realisation that all accurate alchemical processes must follow specific formulæ, formulæ which are not always implicit in the recipes themselves, but which the authors know a classically trained student will be familiar with. So many operations are carried out, with much expense, that have no relationship to alchemy at all. Similarly, no understanding is had at all concerning where the line is drawn between cold chemistry and living alchemy. So when reading literature on the subject no grasp of how to tell authentic descriptions of alchemical work from badly manufactured fakes, or unintentionally deluded chemistry, is possible.

Begin with the most basic ideas and techniques, learn and understand them well. Then with perseverance, over time, it will be discovered that more advanced operations which once seemed complex in their mystery, and well hidden, will be revealed to be nothing more than adaptations of the simple core processes that make alchemy what it is. Simplicity is the key, when attempting to grasp understanding. The more complex a thing is, the further from the truth it will be. The truth ... the core truths, are always simple; simple in theory and simple in practice. Remember what I have said earlier in this work considering the kinds of conditions the earliest alchemists must have worked under. Attempt to emulate the environment they themselves worked in. The enigmas of alchemy are difficult enough to solve without having to unnecessarily make things more complicated for ourselves than they already are.

As we begin our journey into the realm of mineral-metallic alchemy, we quickly realise that less and less well established facts are communicated about the work. It becomes more and more difficult to find individuals who can speak about alchemical processes and substances with any real degree of authority. To a greater degree we find the same old ideas moving as if on a carousel, occasionally dressed in new clothing, but remaining under the covers the same erroneous concepts. When will the merchants and consumers of those ideas learn that the lesson to be had from them is that they fail, with repeatable reliability? Because of this lack of real alchemical knowledge we can recognise that a number of well known persons, whose comments on the subject are given a lot of credence by less well informed students, are filling in extensive gaps in their knowledge with pseudo-chemistry ... which they dress up in alchemical language, in order to hide the real nature of their ideas. When will it be accepted that chemistry is not the saviour of alchemy, but is its illegitimate child? It is therefore worth our while to learn to enumerate a clear line of demarcation in our understanding, between what is known chemistry, that which is *actual* alchemy and the refuse that floats in between them disguising itself as hermetic philosophy.

While a certain amount of knowledge is had about substances we refer to as alchemical Sulphurs, by those who are spellbound by chemistry, there is a lot of research that needs to be done by qualified students of alchemy on this subject. As I hope I have made clear here, even at the lowest level in the

Sulphur hierarchy, a good amount of misunderstanding and straight forward falsehoods are had concerning this subject. Never ... *never* ... accept the argument that certain aspects of alchemical work are invisible, *and therefore cannot be analysed in the laboratory*. This attitude is a fable, perpetuated by individuals who need a ‘back door’ through which they can sneak outrageously inaccurate ideas. If it is true that such invisible states exist, that have no manifest vehicle in the physical realm, then how did the original alchemists, or anyone studying *our* science since them, discover that these things exist? All things that are invisible have a corresponding physical vehicle, through which their invisible nature can be weighed and calculated by observing their effects and symptoms. *As above, so below*, for the benefit of the One.

R.Salfluĕre

Glossary of Terms

Acetate: The state of a metal when it reacts with acetic acid – sic: iron acetate, formed by immersing iron oxide in dilute acetic acid.

Acetic (acid): Also ethanoic acid and carboxylic acid. Produced in wine when ethyl alcohol is oxidized, which occurs most commonly when the bacterium *acetobacter* metabolises the alcohol in wine. (See *vinegar*).

Acid: (pH) The chemical definition of an acid is any substance which donates a hydrogen proton to its environment.

Alkali: From Arabic. See *base*.

Base: (pH) The modern name for an alkali. The chemical definition of a base is any substance which accepts an hydrogen proton from its environment,

Catalyst: A substance which changes the rate of a chemical reaction. Catalysts are not consumed by the catalytic reaction. Catalysts that speed the reaction are called positive catalysts. Substances that interact with catalysts to slow the reaction are called inhibitors (or negative catalysts).

Glacial (acetic): Acetic acid that is produced synthetically and is at maximum concentration (99.99 percent acid). It is termed *glacial* because it forms crystals, that look like ice, at close to room temperature. Acetic acid is an organic compound, and a weak acid. (See *acetic* and *vinegar*).

Kerckringer's menstruum: A philosophic solvent described in *The Triumphal Chariot of Antimony* (by Basile Valentine), in the 19th footnote, By Kerckringer. The solvent is made by circulating over and distilling-off ethyl alcohol from sublimated salt of ammonia.

Life: A condition that arises when the three alchemical Principals unite to form a living system.

Lye: An alkaline solution that has solvent properties.

Mercury: (philosophic). One of the three alchemical *Principals*. Is often a volatile, clear liquid. It is information and the vehicle of that information in a living system.

Pelicanisation: The rotation (circulation) of a solution in a closed system (a circulatory or pelican). Sometimes called pelicanisation (after the equipment used to perform the operation).

Philosophic: A substance or process which is said to directly contribute to the alchemical (esoteric) nature of a thing. A substance is said to be *philosophic* when it possesses properties that are not recognised or known by modern chemistry, and which, when used in alchemical operations, produces unusual reactions. A philosophic operation is one which produces philosophic substances, or uses them.

Prima: Refers to the Plant Work, which is considered the *first work* in the series of instructions in traditional laboratory alchemy training.

Principal: (Alchemic). There are three alchemical *Principals*, and they are commonly termed Mercury, Sulphur and Salt, which are (in modern language) Information, Energy and Structure, respectfully. All living systems (and all physical matter) are said to be composed of these Principals.

Putrefaction: The death of a living system. All alchemical operations are said to be begun with the putrefaction of their crude matter. Putrefaction causes a generation of the alchemical chaos, and a separation of the Elements (and Principals). Putrefaction involves the natural or artificial separation of the three alchemic Principals of a living system.

Quintessence: The fifth state of Elemental matter. Sic: Q-state. The quintessence arises when the four common Elements are separated, purified and reunited, alchemically. The new state of unity of the Elements is referred to as a quintessence (fifth state) because it did not exist before.

Rectified: To be purified. Often used in relation to the rectification of liquids, such as ethyl alcohol, where all foreign substances (especially water) are removed from the alcohol.

Rotation: (sic: circulation). To distil, condense and redistill a liquid repeatedly in a closed system. Often the liquid has solids immersed in it, (and sometimes dissolved in it), and the rotation is used to volatise the solid portion.

Salt: (philosophic). One of the three alchemical *Principals*, the mineral body of a living system, which is responsible for its form and structure.

Secunda: The *second* level of instruction given a student of alchemy. Used to involve tuition in the way alchemy was applied to animal substances. Today it is rarely referred to. In the system taught by the Heredom Group, instruction in the production of metallic and mineral Sulphurs.

Spagyric: (Spagyria). The mechanism by which alchemy, in nature, effects itself. The spagyric formula tells us to *separate, purify and recombine* the Principals of a living system, in order to produce a quintessence. Often mistakenly used as a term for a type of inferior alchemy.

Sublimation: The distillation of a solid body. That body will convert to a gas and then re-condense into mineral crystals, in a more pure state, leaving impurities behind.

Sulphur: (philosophic). One of the three alchemical *Principals*, the Element of Fire in a living system. Usually manifests physically as a fatty or oily substance, and is the vehicle for the energy (fuel) of a living system.

Tertia: Refers to the third level of instruction in alchemy, covering the subject of advanced mineral and metallic alchemy, specifically the *Great Work* of the confection of the Philosopher's Stone.

Transmutation: The *rapid evolution* of a living system from a base state to a higher state, often with the application of a transmutation agent which is confected by an alchemist.

Vinegar: In common use, dilute acetic acid, commonly obtained from the acetic fermentation of wine. In less common use, by alchemists, can refer vaguely to some obscure solvent used in philosophic processes in the mineral-metallic work, or more specifically to *vinegar of antimony* – a solvent made from the ore of antimony extracted with distilled water, by circulation.

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