

A

BOOKE OF SECRETS:

Shewing diuers waies to make and prepare all
sorts of Inke, and Colours: as Blacke, White,
Blew, Greene, Red, Yellow, and other Colours.

Also to write with Gold and Silver, or any kind of Metall
out of the Pen: with many other profitable secrets,
as to colour Quills and Parchment of
any colour: and to graue with
Strong Water in Steele
and Iron.

Necessarie to be knowne of all Scriueners, Painters,
and others that delight in such Arts. Translated out of
Dutch into English, by *W. P.*

Hereunto is annexed a little Treatise,
intituled, *Instructions for ordering of Wines:*
Shewing how to make Wine, That it may continue
good and faint not, Neither become sower, nor loose colour. And
how you may remedie faint Wine, take away the hoari-
nesse, with other instructions for the pre-
seruation of the same.

*Written first in Italian, and now newly translated
into English, by W. P.*

Ja.

Jove



LONDON,
Printed by Adam Islip for Edward
White, and are to be sold at his shop
at the little North dore of Pouls,
at the signe of the Gun.

1596.

¶ A Booke of Secrets, shewing di-
uers waies to make and prepare all
sorts of Inke and colours.

And first to make Inke in diuers maners.

It is first to bee vnderstood that if you will make a great quantitie of Inke together, you must encrease the waight, and measure, according to the proportion you meane to make, as for example, if you will make ten quarts of Inke, then take foure quarts of water, and sixe quarts of bingeger and wine, that is, thzee of each sort, which together with the water make ten quarts, and so must you doe with other quantities, either more or lesse. The like must you doe in the waight of your other stufte that belongeth therevnto, as for a pint of water, sixe ounces of gaul, foure ounces of victriall, and foure ounces of gum, and if you take foure quarts of water (which is eight pints) if you giue to euery pint his proportion, then multiplying eight by sixe they make fortie eight, so many ounces of gaul must you put to ten quarts, mixed as afore said with wine, bingeger, & water, and of victriall and gum, of each xxxii ounces, according to the first proportion, and so must you obserue your quantities, of waight and measure in each proportion, as you are minded to encrease.

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creafe the same, as in this treatise you shal read,

To make Inke to write vpon paper.

Take halfe a pint of water, a pint wanting a quarter of wine, and as much vineger, which being mixed together make a quart & a quarter of a pint more, then take six ounces of gauls beaten into small powder, and sifted through a siue, put this powder into a pot by it selfe, and poure halfe the water, wine, and vineger into it, take likewise foure ounces of victriall, and beat it into powder, and put it also in a pot by it selfe, wherinto put a quarter of the wine, water, & vineger that remaineth, and to the other quarter, put foure ounces of gum Arabike beaten to powder; that done, couer the three pots close, and let them stand three or foure daies together, stirring them euery day three or foure times, on the first day set the pot with gauls on the fire, and when it begins to seeth, stir it about till it be thoroughly warme, then straine it through a cloath into another pot, and mixe it with the other two pots, stirring them well together, and being couered, then let it stand three daies, till thou meanest to vse it, on the fourth day, when it is settled, poure it out, and it will be good inke. If there remaine any dregs behind, poure some raine water (that hath stand long in a tub or vessell into it, for the older the water is, the better it is, and keepe that untill you make more inke, so it is better the clean water.

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To make Inke for parclument.

Make it in all points like to the inke aforesaid, only take a pint of water, 7 of vineger and wine a pint more, that is. of each halfe a pint.

Another sort of Inke.

Take a quart of cleare water, and put it in a glasse, put into it thirteene ounces beaten vitriall, let it stand thre daies, and stir it thre or foure times every day, then take thirteene ounces of beaten gauls, and put them into a new earthen pot, that is wel leaded, poure into them a quart of cleane water, that done, set it on the fire, and let it seeth till it consumeth about a finger deepe, but suffer it not to seeth so fast that it seeth ouer the pots brim, then strain it through a wolle cloath, into another pot, that is leaded, poure into the cloath a cup full of good vineger, and strain it through likewise, that done, if there remaineth any thing in the cloath, cast it away, then put into the matter, foure or fve ounces of beaten gum, and stir them well together, then againe straine them through a cleane wollen cloath, and poure into it a cup full of good vineger, and straine it through the cloath, and let it stand till it be coole, then put it into a straight-necked glasse, stop both the glasses well, till you haue occasion to vse them, then take of each water a little quantitie, and mix them together, so haue you good inke.

Another of the same sort, but easie to make.

Take

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Take the beaten gauls, and put them in the water doe the like with the victriall in a pot by it self let those two waters stand, and when you haue cause to vse inke, poure out of each pot a like quantitie, and it will be blacke, then put into it a little beaten gum, & it will bee good inke.

Another.

Take a quart of strong wine, put it into a new pot, and set it on a soft fire till it be hote, but let it not seeth, then put into it foure ounces of gauls, two ounces and a halfe of gum Arabike, and two ounces of victriall, al beaten into smal powder, and sifted through a sieue, stire it with a wooden sticke, and it will be good inke.

Another.

Take an ounce of beaten gaule, thye or foure ounces of gum Arabicke, put them together in a pot with raine water, and when the gum is almost consumed, strain it through a cloath, and put into it almost halfe a cup of victriall beaten to powder.

Another.

Take a pint of beere, put into it an ounce of gauls beaten to powder, let it seeth till it seeme somewhat red, then put to it three quarters of an ounce of greene victriall, in small powder, and let it seeth againe, when you take it off the fire,
cast

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cast into it three quarters of an ounce of gum,
and a small peece of alum, both in powder, and
stir them all together till it be cold.

Another.

Take two handfull of gauls, cut each gaul
either into thzee or four peeces, poure into them
a pint of beere or wine, (which you boil) then let
it stand eight houres, straine it from the gauls,
and put victriall therein, and to the victriall a
thurd part of gum, set it on the fire to warm, but
let it not seeth, and it will bee good inke: and of
those gauls you may make inke foure or fve
times more.

To make inke vpon a suddaine, to
serue in an extremitie.

Take a wax candle, and light it, hold it vn-
der a cleane bason or a candellsticke, till the
smoke of the candle hangeth thereon, then put a
little warme gum water into it, which tempe-
red together will be good inke.

To keepe Inke that it sinketh not into the
paper neither that it come not off,
and that moths nor mice
hurt not the paper.

Take the shels of hazell nuts, and put them
into the inke, and it will not sinke through the
paper.

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And that it may not come off, put a little salt into it.

To keepe that neither Mice nor eat or fret the paper, put a little wormewood water into the inke.

To write without inke, that it may not be seen, vnlesse the paper be wet with water.

Take powder of vitriall, and put it into a cleane iukehorne, put a little cleane water to it, when the vitriall is Dissolued, write with it either vpon paper or parchment, and let it drie, and it cannot bee read: when you will read it, take halfe a pint of water, and put thereto an ounce of powder of gaules, mix them well together, then straine them through a linnen cloath into a cleane pot, then draw the paper through the water, and the writing will be blacke, as if it had ben written with inke.

To take Inke out of paper or parchmen^t.

Take Colofoniam, which is called pix græcum, beat it small, and cast it on the paper that is written, then wet a cloath, and lay it on the Colofoniam, vpon the cloath lay some fresh horse dung, & vpon that set a smooth tile stone, then if it be in winter let it stand a whole night, but if it bee summer, let it stand but from morning till nine of the clocke.

Otherwise.

Take Salarmoniacke, and alum, still it in a limbeck,

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lönbeck, and with this water wet the writing
and it will goe out.

Of red colour, and first of Brasill.

You must take care when you seeth Brasill,
that you do it when the element is clear, with-
out clouds, raine, or wind, otherwise it will not
be good. you must make it thus:

Take quicklime, poure raine water vpon it,
let it stand all night, in the morning poure the
water softly from the lime, or straine it through
a cloath, & for a quart of water, take an ounce
of Brasill, let it seeth till it be halfe consumed,
then put into it one ounce of beaten alum, one
ounce of gum Arabike, two ounces of gum of a
Cheritree, or else two ounces of cleane glue,
straine it from the wood: you may likewise put
into it some chalke beaten to powder.

To seeth Brasill another way.

To an ounce of Brasill, take the third part
of a quart of beere, wine, or vineger, put it in a
new pot, let it stand a night, in the morning set
it on the fire, and let it seeth till it be halfe consu-
med, then for every ounce of Brasill, take two
penny worth of alum, beaten to powder, and as
much beaten gum Arabike, stir them wel toge-
ther, and let them seeth againe, but if you desire
to haue it somewhat darke, then scrape a little
chalke into it: when it seeth, let it not seeth
ouer the pot, and being cold, strain it through a
cloath, and put it into a glasse well stopped.

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Another red colour.

Mingle salt and honny together in a bason, let it stand eight daies, then seeth it, and it will be a red colour.

Purple colour.

Take two pound of blew Hedlebet, two ounces of alum, one ounce of ashes of copper, which you may haue at the braziers, a pint of water, put them into a kettle, let it seeth till it consume two fingers deepe, when it is cold, straine it through a clout, in a cleane glasse or pot, let it stand a while, then straine it into another pot, and let it stand till it be thicke enough.

To make Rosin.

Take strong vineger, or wine, and put powder of alum therin, when the alum is dissolved, then make a strong and thicke lee with quicke-lime, and take foure times as much Brasill as your alum woieth, put it in a clout, and hang it in the lee, and let it stand a day & a night, then straine it, and hang the Brasill again in the lee, and let it stand as long as it did the first time, which doe in like manner three or foure times, when you haue done so let it stand and drie, and it is perfect.

Another Rosin.

Take two parts red lead, one part white lead,

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lead, and mingle them together, or take Auripigmentum and red lead, of each a like quantitie, and mingle them together.

Fire colour.

Take sout of a chimney, and a little alum, let them boile, then take gineper, granded with water, and temper it together, with alum and gum Arabike.

Tawny colour.

Take blacking, and mingle it with red lead and gum Arabike.

Yellow colour.

Take hauthorne berries, gather them eight daies after Saint Laurence day, bruse them and put a little beaten alum vnto them, stirre them well together, and let them stand one night, and it will be a faire yellovo.

Another good yellow.

Take the barke of a tree, cut off the outside, and throvo it away, cut the rest in small peeces, and poure water vnto them, let them seeth two or threer times, then put powder of alum into it, stirre them well together, and let them seeth againe.

Another yellow.

Mix saffron with the yolke of an eg, and it maketh a faire shining colour.

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Otherwife.

Put saffron and alum into a clout, and put vineger into it, and stram it out: or take saffron, the yolke of an eg, gum Arabike and alum, and mix them together.

Auripigmentum.

Take gaule of Ecles, or of other great fishes, or ore gaule, put some vineger to it, and a little chalke, and make a paste thereof.

Greene colour.

Take the blacke berries that grow on the hauthorne tree, and gather them eight daies after Michaelmas day, bruse them, poure water vnto them, and put therein a little beaten alum, stir them well together, and let them stand two daies and a night, & it will be good greene.

A faire greene colour.

Take honie, put a little quantitie of vineger moze then the honie is, into it, mingle it well in a leaded or a copper pot, stop it well, and set it twelue daies vnder another pot, and put thereto a little chalke.

Also take copper plates, put them in a copper pot, and put stilled vineger to them, set them in a warme place, till the vineger become blew, then put it into another leaded pot, poure vine-
ger

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get into it againe, let it stand so till it become blew, this doe so many times, till you thinke you haue inough, then let it stand till it be thick.

To temper or prepare Verdigrece.

Grind it with wine, and put two or thre drops of honny to it.

To make good greene.

Take copper plates, let them lie six months in vineger in a warme place, then take them out, and dye them in the sun, and the flower you find vpon the plates, scrape it of, for that is the colour.

Blew colour.

Grind chalke with the iuice of the elder berries, straine it through a clout, put a little alum water vnto it, let it dye, and keep it til you need.

In the same sort you may make colour of the blew cozne flowers.

Also the iuice of the blew cozn flowers alone, with alum and gum tempered together, is a good blew.

Also mulberies boyled with alum.

Also take blew cozn flowers that are not too much blowne, and gather them in a morning befoze the sun riseth, plucke the blew leafe, and let not any of the white come among them, and put them into a copper kettle, and hang it in sec-

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thing water, till they be drie, keepe them in a glasse well couered. When you wil make colour of them, then take some of the blew leaues, and put them into a drinking glasse, poure water into them, till it be thicke like Dowe, let it stand couered twelue houres, then presse the liquor through a cloath into another glasse, and put a little glue into it, and set it in a warme place, or else in whote water, vntill it bee drie and thicke to vse.

To make Azure.

Take one ounce of white lead, nine ounces of Indicum, pour good vineger vnto it, put them in a leaded dish, let them seeth well, and that which swimmeth on the top is the colour.

Or take two parts of chalk made of eggshels, one part of Verdigreece, one part of Salarmoniacke, mingle them together with strong vineger, put them in a new pot, stop it well, that no aire issue forth, set it in a warme place for a month long, and it will be Azure.

To temper or prepare Azure.

Wash it wel in cleane water, and that swimmeth on the top, cast it away, and that which lieth in the bottome, is good, doe so thzee or four times one after another, and let the water bee cleane poured from it, then take whitc of egs, that are well beaten, put thereto a little beaten gum Arabike, and let it stand till the gum is dissolved,

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Dissolued, then put the Azure into it, and mingle them well together, straine it through a linnen cloath into an inkechozne, and vse it when you will.

A faire blew.

Grind the Azure with faire water very well vpon a stone, then put it in a horne or shell, and pour water theron, stir them wel together, then let them stand half a day, then pour out the water, and take the gaule of a great fish, and grind it with gum and the white of eggs, and vse it when you thinke good.

White colour.

To write with chalke out of a pen vpon blacke tables or paper.

Grind quicklime, egshels, and chalke, together with the milke of a goat.

To make chalke of egshels.

Take egshels, and let them lie three daies in vineger, then wash them well in faire water, drie them in the sun, and beat them to powder, then grind them vpon a stone.

A good white colour.

Take white glasse wel beaten to powder, put thereto some hymsione in powder, and keepe it

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in a pot wel couered, set it vpon a soft fire, til it be red hote, then let it coole, and grind it on a stone.

Gold colours.

To make Aurum Muncum.

Take one ounce of Salarniack, one ounce of quick siluer, one ounce of Contersein, halfe an ounce of bzimstone, bruse the bzimstone, set it on the fire, but let it not be ouer hote least it burneth, or become black, then take the Salarmoniack, & the quick siluer, being in powder, mix them wel together, then mingle them with the bzimstone, stir them well & quickly with a sticke, till the bzimstone becommeth hard, then let it cool, grind it on a stone, and put it in a glasse with a long neck wel stopped with luttum, and set it in a pan with ashes, make a fire vnder it, and let it stand halfe a day; in such maner, not ouer hote, till a yellow smoke riseth vpon it, and when the yellow smoke is gone, then it is prepared.

Otherwise.

Take an ounce of Cin, melt it in a pot, put thereto it half an ounce of Tartarum, & one ounce of quick siluer, stir them together, till it bee hard, & congealed into a cake, then grind it well vpon a stone, put to it one ounce of beaten Salarmoniack, mix them wel together, then melt one ounce of bzimstone, but make it not too hote, poure the ground powder into it, stirre it well vntill it bee hard, let it coole, and doe as befoze is said.

You must temper it thus.

Grind it well, wash it wel in clean water out
of

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of one mussell shell into another, till it bee very cleane, then put it into a pewter pot, put some gum water therein, stir it about, and write therewith, let it drie, and polish it.

Argentum Melicum.

Melt an ounce of Tin, & put thereto an ounce of Tartarum, an ounce of quick silver, stirre it well till it be cold, beat it in a mortar, then grind it on a stone, temper it with gum water, & write therewith, then polish it.

To write a gold colour.

Take a new laid hens eg, make a hole at the one end of it, and let the substance out, then take the yolk of an eg, without the white, and four times as much in quantity of quick silver, grind them well together, stop the hole of the egshell with chalke & the white of an eg, then lay it under a hen that sitteth with six eggs more, let hir sit upon it three weekes; then breake it up & write therewith, some say it must bee laid vnder three several hens, and vnder each hen three weekes.

To write with gold out of a pensill.

Take hony & salt a like quantity, grind them well, put to it a leaf of gold with a little white of an eg, put it into a mussell shell, and let it purifie, temper it with gum water, & write therewith, let it drie, and polish it with a tooth.

Or grind saltstone well with the white of an eg, put into it a leaf or two of gold, and write therewith as before.

Or grind a leaf of siluer or gold very smal with gum water, and wash it in a mussell shell as aforesaid.

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To write all mettals out of the pen.

Grind cristall well, temper it with gum water, or the white of an eg. write with it, then let it drie, then take the mettall which you wil, and rub it vpon the letters written, till the letter bee well coloured with the coloz of the mettall, then polish it with a tooth.

Or take cristall and pomestone, both ground very small, put thereto a little verdigreene, beaten likewise to powder, and put them all into a leaded pipkin, set it vpon a soft fire, but let it not bee too hote, let it not stand so long on the fire, that it becommeth as blacke as a coale, then grind it on a stone, temper it with gum water, write with it as aforesaid.

A good gold colour.

Take linseed oile, put into it a little Aloe Epaticum, and alum, let them seeth well in a leaded pot.

To lay gold vpon any thing.

Take red lead, temper it with linseed oile, write with it, and lay gold vpon it, so let it drie, and polish it.

Or lay gum Arabike in vineger, so long til it waxeth white, take it out and put it into the white of eggs, till it melteth, write with it, when it is almost drie, lay the gold vpon it, then let it stand one night, and polish it.

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To lay gold vpon glasse.

Grind chalke, and red lead in like quantity together, with linseed oile, lay it on, when it is almost drie, lay your gold vpon it, and being well dried, polish it.

End of the colours.

How to graue in yron and steel, or in other mettals with strong water.

For as much as that every man in this our age, is giuen to write, learne, and practise all manner of arts, I am of opinion it will not be vnprofitable vnto such as are desirous to learn, if I set somewhat before them that may teach them to write letters, and graue any other thing in steele, yron, or other mettals, which I willingly present vnto them, although it be but a small matter, if it be profitable vnto them, I wish them to vse it.

Take two parts of verdigreene, one part of common salt, beat it in a mortar, put thereto sharpe vineger, and when you will graue, anoint your plate first with red lead tempered with linseed oile, let it drie, this substance lay vpon the plate, and the warmer the place is, when it lieth, the sooner it will eat in, and when it is drie, take away the powder, and make the plate cleane againe.

Or take two parts victriall, one third part

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Salarmoniack, grind it together vpon a stone with
vine, and lay it on as aforesaid, but lay it cold
vpon the place where you graue, and let it in a
seller four or five hours.

Another way to graue with water.

Take verdigreece, Mercurie, sublimated vic-
triall, & alum. of the one as much as the other,
beat them all to powder, put them into a glasse,
let them stand so half a day, & stir it often about,
then lay wax mingled with linsced oile, or red
lead with linsced oile, and write in it that you
mean to graue, then put the water vpon it, & let
it remaine so halfe a day; if you will haue it very
deepe, then let it stand longer, if you will graue
any other worke as images, &c. Then lay the
wax vpon the yron or Steele very thynly on, and
draw what you will therein with your instru-
ment, that it may touch the mettall; then put
water into the strokes; and it will be grauen.

Another way, but more piercing.

Take one ounce of verdigreece, half an ounce
of Alum plumosum, halfe an ounce of Salarmoni-
ack, halfe an ounce of Tartarum, halfe an ounce
of victriall, and halfe an ounce of common salt, all
beaten to powder, mingle them together, & pour
strong vineger vnto them, let them stand one
houre, and when you will graue, write vpon the
yron or Steele with linsced oile and red lead, & let
it drie, then heat the water aforesaid in a leaded
pan, & let it stand on the fire, & hold the yron or
steel ouer the pan, poure the hote water vpon it
with a spoon, and let it run again into the pan,
which

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which doe for the space of a quarter of an houre, then rub it off with albes or vnsleact lime, but be sure that the places you will cut into be all well couered with red lead,

To colour quilz and parchment of diuers colors.

Take the quilz, & cut away the fethers, and rub the wool with a wollen cloath, that the skin go clean off, that the quil may be smooth, which must alwaies be done before you die the, cut off a little of the end of the quil that the colour may enter into the, lay them in alum water, for halfe a day, take them out & drie them, then die them, when they are died, as I wil teach you, let them be well dried, and strike them ouer with a cloath betweene two fingers, then stick them in a board that is full of holes, and let euery one haue space betweene it, that they touch not together, and drie them in the air.

To die quilz greene.

Take two parts verdigreene, a third part Salarmoniacke, grind them well together, scepe them in strong vineger, and put the quilz into it, and couer them close, let them lie therein till they be green as you desire to haue the: you may die likewise bones & wood in the same manner, lay the quilz, wood, or bones; in a leaded pot, poure vineger vpon them, wherein Greekish green is mixed, couer it, and set it seuen daies or more vnder warme horse dung. You may also temper verdigreene with vineger, till it bee so: crobat drie, put the quilz into it, let them lie long therein, then take them out, & put them in

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boarin horse dung, & let them continue therein eightene daies together: you may die red quilts in that sozt and make them greene, also take strong vineger, put it in a coppet pot, oz kettle, put verdigreec into it, let it stand til it be green, put the quilts into it, & let thē lie til they be green.

Red quilts.

Seeth thē in Brasil, as befoze you are taught, hauing first laid them in alum water.

Yellow quilts.

Seeth them in yellow colour, as befoze you are taught what you shall do with the barke of aple trees.

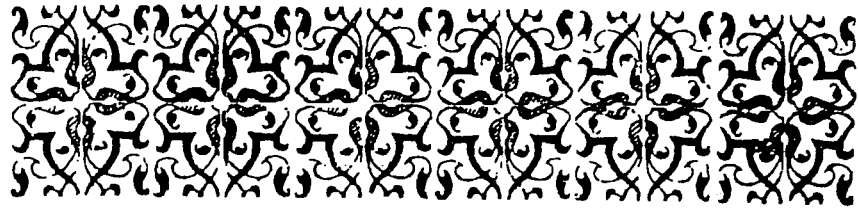
Blackequilts.

Seeth beaten gaules in strong vineger, lay the quilts in it, and let them seeth likewise, then lay them in the white of eggs, and put vnto them the green pills of walnuts, and let them seeth all together.

To colour parchment and velim of diuers colors.

Take as much parchment oz velim as you will, and fasten it at the corners and sides with nailes vnto a bozd, with the smooth side outwards, annoint it then with what colour you will, be it yellow, blew, red oz black, such as you find set down in this booke, let it drie well, then stroke it ouer, and let it drie in a place, where no dust is stirring.

FINIS.



Certain Instructions for ordering of Wines :
Shewing how to make Wine, that it may continue
good and faint not, Neither become lower, nor lose colour. And
how you may remedie faint Wine, take away the hoar-
nesse, with other instructions for the pre-
seruation of the same.

Of the preparation for the Vintage, or gathering
in of the grapes, where Wine is made.

When the time of the Vintage ap-
procheth, you must prepare and
make ready the vessels in the pla-
ces where the vines are used to be
boiled, & the chests, baskets, pres-
ses, and other instruments that are fit for cuery
kind of worke belonging therevnto, according
to the maner and diuersities of the places, the
vessels ought likewise to bee washed and made
cleane, and looke for old rushes that haue beene
long gathered, because they are better, & indure
longer then the new that are in a manner but
halfe growne.

Of the time when the vintage or gathe-
ring of grapes should be.

Some gather grapes before the berries bee
ripe, and thereby make their wine smal, weak e,

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and

Instructions for ordering of Wines.

and not durable, others gather them late, and thereby doe not onely hurt their vines, (their strength and vertue being already come forth) but make their wine of lesse force, & not indure so long as otherwise it would, so that for a generall rule to be obserued, the time to gather grapes is to be knowne, by the sight and tast of the same, for if the kernell of the grape bee not green, but rather blacke, or of another colour, then the grape wherein it groweth doth commonly bring forth, it is a signe that it is ripe, there are some that crush the grape betweene their fingers, and if the kernell come forth clean without any meat sticking vpon it, they say the grape is ripe, and that it should be gathered, but if the kernell come forth with the meat vpon it, they say it is not ripe: some cut a branch out of the stocke of a vine, that is thicke, and when a day or two is past, they looke if the place where the branch grew be in like maner as it was when the branch was taken away, and if the other branches that were about that place be not any thing more growne, they make ready to gather their grapes, but if the place where the branch grew be lesse then it was, they stay gathering their grapes till such time the grapes were riper. Grapes ought to bee gathered when the Moone is in Cancer, Leo, Libra, Scorpion, Capricornus, or Aquarius, but the Moone going out of those signes, they must make hast to gather their grapes. They should bee gathered after three or foure of the clocke, when the dew is all consumed, and dried vp, & that the aire is hote
and

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and cleare, & the wine will be the stronger, and
indure the longer: the grapes that shine and are
not fat, that are not withered, nor rotten in any
part, make the wine stronger, and continueth
better, and the contrarie worke the contrarie ef-
fect. Grapes that are ouer ripe make the wine
the sweeter, but lesse in strength, and continueth
not so long as those that are first gathered. The
grapes that are ouer soure, make the wine so
much the sourer: but those that are indifferent,
make the wine strong, & continue better. Grapes
gathered in the increasing of the Moone make
the wine to continue lesse time, but those gath-
red in the decreasing, make it better: if the black
grapes be boiled in the bottome of the vessel, the
wine will be the redder: if the ripe bee lowest, it
maketh the wine the riper: if the soure, it ma-
keth the wine soure, if they be boiled with hony
it will be sweet: if with sage, it will tast thereof:
and for a generall rule, the wine receiveth the
tast of the thing that is put into it, boiling mo-
derately together for certaine daies. If the
grapes that are gathered lie certaine daies in
heapes together, the wine will be the riper: if
the Must boileth in the tun without grapes, it
will be good and continue long, but it will bee
longer before it waxeth cleare then that which
boileth with grapes.

How grapes should be gathered and dressed
to make wine.

They that put the grapes into the baskets,

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Doc part and chuse out the leaues, and if they find any branches or berries that are bitter, putrified or drie, they cast them away: it is requisit likewise that such as tread the grapes, do take out the leaues, if those that put them in out of the baskets, do chance to forget themselves, the leaues byused with the wine, make it the souer, and sooner to corrupt and become faultie: & of the grapes that are soure, putrified and drie, there proceedeth great damage vnto the wine.

How to purge wine, that is made of soure grapes.

It is good to seperate all the soure grapes, likewise such as are corrupt, and keepe them by themselves from the better sort, and the Must that is made of such grapes, is cured in this manner: seeth raine water till it consumeth half away, and of this sodden water put thereof into the wine, as much as you esteem to be the tenth part of the Must, and then boile it againe with the wine, till the tenth part consumeth in the boiling.

To cure the wine that is faulty by reason of raine water fallen vpon it.

If the grapes growing yet vpon the vine, or after they be gathered, be moist and wetter then they should be, by reason of the water and raine fallen vpon them, if you perceiue the Must be too weake, which is knowne by tasting therof) after

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ter it is put into the vessell, presently after the first boiling, you may poure it out into other vessells, because that all the slime and thicknes by reason of the weight thereof sinketh to the bottom: some boile it vpon the fire til it consumeth the twentie part, putting into it the hundredth part of Gello.

How to put Must into the vessels.

It is good to wash the vessels with pure salt water, and make them cleane with a sponge, & perfume them with insence befoze the Must be put into them, but fill them not too full, nor yet too little, but doe it with a meane, boiling the Must till it rise vp vnto the top, but not run ouer, then with your hands or else with glasses, (when the must is in the vessels) take away the froth, or any other skum that riseth vpo it, & cast it far off from the fat, for if it lieth neere, it ingendzeth hoarines and causeth a filthy smell, which two thinges make the wine to turne, wherfoze it is conuenient that in such places there be a sweet smell.

How you must keepe Must all the yeare.

Befoze the grapes are stamped, put the Must that commeth from them, (the same day it is made) in a vessell by it selfe, which shall be well clenfed both within and without, fill the vessell halfe full, and stop it well with Gello, because the Must may continue sweet a long time, but if

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you put the vessell (being stopped with copper)
into a well, it will continue much longer, because
that not being able to boile, it will alwaies bee
Must.

How to know if there be water in the wine
or Must, and how to seperate the one
from the other.

Put into the Must either peares, or mulbe-
ries, and if there be water in the wine or must,
they will sinke vnto the bottome, and if there
be none, they will swim on the top: others put
the wine into a new earthen pot, not washed, &
let it continue therein for the space of two daies
that the water may distil out of the pot, and no-
thing remaine but the wine: others annointing
a sponge with oile, stop the mouth of the vessell
therewith, and then turne it cleane ouer, and if
there be water in the wine, it will soake into the
sponge. Water is taken from wine in this ma-
ner, put alum into the wine vessell, then stop the
mouth of the vessell with a sponge dipped in
oile, then turn it in such sort, that there may no-
thing but water issue forth.

When you shall draw or rack wine, and
open the vessels.

You must racke wine when the wind is in
the North, vnt neuer when it is in the South,
the weakest in the spring time, the strongest in
the summer, but those wines that grow in drie
places,

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places, shall bee racked after the sunne is in the equinoxiall hiernall. When wine is racked the Moone being in the full, it maketh it sharp: when wine is taken from his lees it maketh it moze subtill and weake: it is necessaric to rack wine when the Moone increaseth, and is vnder the earth, and to obserue the rising of the stars, because the lees (when the stars rise) doth moue & stir vp, especially when roses bud forth, and vines begin to spring, when the vessell is opened, it is good to spend the wine that is on the top of the vessell, and that which is in the bottome, and to keep that which is in the middle thereof, because it is of moze strength, and continueth longest, for the wine that is neer vnto the mouth of the vessell, as being neerest vnto the aire, is weaker, because it casteth forth a vapor from it, & that which is in the bottome, or in the lees, doth soone decay. It is requisite when the wine is drawne into other vessels, not to let it run at the mouth of the vessels, but somewhat lower, that it stop not at the mouth, but haue some aire in the running out, least you feare it will become soure, which if you doubt, let it not take any aire, but make the vent of greene willowes, the barke or outward pcele scraped cleane away: if you open the fat by day, you must beware that the heat of the sun touch not the wine, and if you open it by night, you must keepe the light of the Moone from it, and when the fats are emptie, you must wash them presently with salt water, and ashes, or drie them with clay yearth, if the wine be weake,

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but if it be very strong, it is sufficient to close it
up on all sides, because the smell and strength of
the wine preserveth the vessels.

When and how you shall tast wine.

Some tast wines when the wind bloweth
in the North, but it is better to tast when it
bloweth in the East, because the Eastwind mo-
ueth the wine more, and sheweth what it is. It
is not good to tast wine being fasting, because it
spoilth the tast, neither is it good to tast it af-
ter much meat or drink. Further, he that tasteth
wine, must not haue eaten any bitter or salt
meat, nor haue eaten much, but a little meat,
& that it be digested. Some seeking to deceiue
those that buy wine, take a new vessell, which
they dip into old wine that is good, and hath a
good smell, and then put that wine into it that
they meane to sell, which I set downe to giue
you instructions that you be not deceiued.

How to know wines that will indure and
continue long.

Herein you must haue care oftentimes to
smell vnto your wines, least there bee any alte-
ration in the lees, ingendring hoarines or white
mouldines that groweth vnder the butts, or di-
uers other like things, because that such things
are signes that the wine decayeth, but if no such
things appear, it is to be iudged that the wine
will continue long. Some boie a little wine,
and

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and being cold, they tast it, and as they find
that in the tast, so they esteeme the rest of the
wine will fall out in goodnes. but it is requisite
to tast the wine in the middle of the butt.

Of diuers infections that happen vnto wine.

It happeneth vnto wine by meanes of the
corrupt waterishnes that is in the vines, or in
the vessels, that it infecteth and spoileth by di-
uers meanes, wrought in it by the strange heat
thereof, as you shall perceiue, for if there fall into
it a little lees, or a little wine that hath lees in
it, and bee put into the vessel without opening
it, it will conuert into hoarines, and infect the
wine: besides this, all other wine that is put
into it, is thereby infected. And if any of that
wine be put into a good butt, or be mingled
with other wine, it doth infect it, and conuert-
eth it into the same corrupt nature: further,
wine that is perfect good & strong, & especiallie
that which is sweet aboue measure. When the
weather is hote, the vessel not being full, and not
close aboue, the heat and moistnes thereof issu-
eth forth, the coldnes and drynesse thereof remai-
ning, whereby it turneth to be soure.

At what time wine doth soone change,
and corrupt.

All wines doe oftentimes change in the ri-
sing of Charles waine, and in the Solstitio esti-
nall, and in the dog daies, which commonly are
called Cumma, and generally when the wind
is Westwardly, and in heat, or frost, or in great
tempests,

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tempests, or by ouermuch wind, or by earthquakes, or thunders, or at the springing of roses and of vines.

How to preuent the changing of wine.

Salt burned, and put into wine, doth keep it from changing, and that it boileth not vp more then it should, nor that it riseth with any great scum: put sweet almonds into black grapes, and letting them stand, they conserue the Wine. Grapes being gathered, the kernels takē forth and mixed with sand, and put into the Must, or wine being sodden, maketh it fat, and indure long. Gesso when it is first put into the Wine maketh it bitter, but in time, the bitternesse goeth away, and the Gesso worketh this effect, that the wine indureth a long time, & suffereth it not to change: the quantitie that must bee put in, if the wine bee small and of a humide tast, or troubled with tempests, is the hundredth part of Gesso. But if it bee strong by reason of the strength, the halfe of an hundredth part of gesso will serue. Wines that change being taken from their infected lees, and put vnto the lees of good wine, they will indure long. Some men put into Wine the fruit of the Cedar tree, well brused to powder, and therewith doe mingle gaules likewise brused to powder. Some beating the ashes of a vine being burnt, with fennel seed, mixing them together, doe put them into wine. Others put the wine, that changeth into other vessels, & remoue it into another house, for if it be hurt by reason of heat, they remoue it into a fresher place, and if it spoile by reason of the
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humiditie and coldnes of the place, where it is, they put it in some other place that is drier and hote. Clay put into wine after it hath boyled, doth' purge it, drawing downe with it the infection thereof into the lees, but if it be stamped it maketh the wine of good sauor, and sweet, because the birds that eat of it in winter time, are preserved thereby and lue, for it comforteth the wine and maketh it continue long. A little yuic both white and black put into wine, maketh it continue, the like doth sodden wine, mixing a third part thereof in the must. Wheat flower maketh it durable. The root of the pine tree, keepeth wine from changing.

An excellent infection to preserve wine,
which is called Panaccia.

Take two ounces of Aloes, two ounces of insence, & two ounces of amomo, bind all these fast in a linnen cloath, & put them into the vessel after the wine is therein, and that it hath purged, and of this mixture, put into each vessel a measure called a cluchiero, full, then shake it out of the cloath, & leaue the powder in the wine, and three daies after do it again with roots of canes

To keepe wine from changing.

Let it boile two or three daies in the grapes, & draw it out in the month of february, and of this boile the third part & mix them together, then into twelue cozles of wine put a common pozingerful of salt. Or doe it in this sort, and it will be excellent and pleasant to drinke what wine soeuer it bee: scum the grapes, and

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grapes boile it on the fire, and scum it, and so
put it in the vessell.

How to remedie wine that is changed.

Temper wine that is turned or changed,
with a good quantitie of honny, throving it into
the vessell wherein the wine is. Then stir it in
the butt with a sticke, at the bung, letting it re-
maine so, and the wine will cleare it selfe, by rea-
son the honny maketh the Dregs that are in the
wine to descend into the bottome: it is good to
put into the vessell where the wine is changed,
(at the time when grapes are gathering) di-
uers berries of grapes, which shall lie therein
instead of the mother, because those grapes, af-
ter a certaine time, will turne the wine that is
changed, to his right goodnes and sauor. And
before you doe any thing vnto wine that is
changed, you must draw it forth and take it
from the infected lees. Also put the wine into
vessels out of the which wine hath ben newly
taken forth, that it may clareffe therein, and let
it remaine therein as long as it is needfull, but
if there be any quantitie of wine, it must not be
done all at one time, but a little at once, that the
wine doe not extinguish the heat of the grapes
and hinder not the boiling thereof, wherein it
clarefict, and how little a time the Must con-
tinucth in the grapes, so much the stronger it
worketh. Wine is clareffed & made good when
you beat twentie graines of pepper and twen-
tie pestachie, putting thereto a little wine, then
put

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put afterward thereto six cesteres of wine, hauing first stirred euery thing together, then letting them rest quietly that they may worke, a foggie wine is presently cleare, if in a sexter of wine you put seuen kernels of a pine apple, stirring them often, and then letting them stand, by little and little the wine will clarifie. that you may draw it and vse it. Some clarifie it with white of eggs, and with salt, but take white stones out of a riuer and bake them in an ouen till they begin to cracke, then beat them into powder, take likewise white salt beaten into small powder, and in a vessell of ten measures put six ounces of powder of stones, & foure of salt, and stirring them together, put the wine into the vessell, and if for euery measure you put therein two or three eggs it will be good. This may be done likewise with the same stones not baked, being beaten to small powder, and without salt, and it shall bee good to put therebnto a little hony, because hony that is red, restozeth the colour of white wine that hath lost the colour, and hony is clammy, and heauy, and a preseruer of all liquors. But if the wine bee ouer much troubled and thicke, put thereto a little more of each of the thinges aforesaid, because those things, by reason of the waight, do keepe downe the lees, and driue the thicknesse to the bottome. that it can not so easily rise vp bnt to the top. and it giueth likewise no euill sauour to the wine. But if the wine be so much troubled, that being as it were rank and in a maner fatty like oile, the naturall heat thereof being in a maner

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wholy extinguished, then there is no remedie to be had, no more the for a dead man. It will clarify also in this maner, if you put into a vessell of forty measures, twentic eggs, which you must beat wel in a basen or boule with a clean spoon, the put into them a pozinger ful of Tartarum, & mingle them together, adding thereto a little wine, then put it into the vessell, which done, stir them well at the bung with a clouen woodden stick, & thrust it oftentimes downe into the lces, then put it againe into the vessell, and when it is clear take out al the thick matter on the sides of the vessell: but you must vnderstand, that into white wine you must only put white of eggs, but into claret or red both whites & yolks, and into wine that is much troubled, you must put in more quantitie: further in place of Tartarum, you may put salt, and lastly there is put into the vessell a little clear water. Wine is clarified, and holpen of the ill sauor & changing, if in a vessell of thzee measures, you put halfe a pound of cleare roch alum, & as much sucket of roses, with eight pounds of honny. In this maner, seeth the honny very wel, & skum it, & when it is cold, put the Alum into it, being beaten into small powder, and the sucket dissolued, which mingle all in a measure of wine, then put them into the vessell, & stir them wel with a clouen stick, & the vessell being open, let it stand so till the next day, & the second or thied day it will be cleare: but if the wine bee much troubled & spoiled, put so much the more of the thinges aforesaid: neuertheless you must vnderstand that before you do it, you must draw
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the wine out into another vessell, and take it from the infected lees.

How wine and the vessels are preferred from hoarines.

If wine be hoary or haue any other euil sauor, take a white grapes sprigs with the roots, and set it in the ground vnder the butt, in such sort that the roots may be right against the mouth vpon the butt, & put the branches in the wine a handfull deepe, at the bung aboue the butt, let it stand there three daies, and till it looseth the euil sauor. Some take a white grape branch & put the head of it into the vessell in place of the bung, and set it on the ground, setting it fast that it stirreth not, and so the hoarines daily is- sueth forth by the branch, by which meanes the euil sauor deminsbeth. For the same, take Med- lers that are bitter, being hanged on three or more packthreds, put them in at the bung that they may descend into the wine, letting them re- maine therein fifteene daies or a month, & they remedie the wine & the vessel of the hoarines. It is said likewise it is done, if euery morning and euening there be hanged in the wine a bundle of sage, that toucheth not the wine, and being taken out againe, wash it in water, stopping the bung well. Take likewise a handfull of the hearbe called Nierella or Morella, and be- ing bound with a little string, in the morning put it into the vessell at the bung, that it desc- end not into the wine aboue two fingers deep, and the cord being made fast vpon the ves- sell, stop the vessell hard, and let it hang

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therein the space of one Day, and at night take it out, putting other fresh herbs therein, letting them remaine therein till the next Day in the morning, which you must do for three or foure Daies one after the other. Those vessels that are hoarie are cured in this maner, put a quantitie of slacked lime, into a butt of twelue baskets, and put into the same butt being stopped, either boiled water or wine, & let it bee so well stopped that no aire issue forth. Let it stand a little space, then roule it vp and doone diuers times: that done, open it, and let the liquor that is in it issue forth, & wash the butt againe with cold water. Or otherwise, put gineper (being sodden in a chaldron of wine, and that is seething hote) into the vessels, & do as I said before, and it will bee better, if both the remedies be vsed one after the other, that is, the second after the first. In the same maner the fats are remedied, but because they cannot bee stopped in such sort as the butts may be, they are couered with clothes, so that they cannot send forth any aire: the butts are preserved from mouldinesse, if when they are to be emptied, they stand open vntill there bee but a smal quantitie of wine in them, and that they bee very well dried, and after that well washed with salt water, or wine, or else not emptieng forth that little quantitie of wine that is in them, the butt being wel stopped, that the smell or sent may not issue forth.

FINIS.