

"Take of starch, *three drachms*; water, *a pint*. Rub the starch, gradually adding the water to it; then boil till a mucilage be produced."

Starch thus treated forms a strong, insipid, inodorous, opaline-coloured, gelatinous mucilage. In cases of phthisis, hectic fever, and abrasions of the stomach, it is given as a demulcent by the mouth; but it is more generally, and more advantageously exhibited in the form of enema in diarrhœa, dysentery, and abrasions of the rectum. It is the common vehicle for exhibiting opium in the form of enema.

DECOCTA.

DECOCTIONS.

THESE are aqueous solutions of the active principles of vegetables obtained by boiling. They are intended to afford more powerful remedies than can be obtained by the simple infusion of the same substances in cold or even in boiling water; but although by the operation of boiling the solvent power of the water is increased, and a greater quantity of the soluble parts of any vegetable body is consequently taken up by it, yet it does not always follow, that the medicinal virtues of decoctions are greater than those of infusions. On the contrary, if the active principles of a plant be volatile, or if they consist chiefly of extractive matter, this form of preparation often renders the remedy altogether inert, either by dissipating the volatile matters, or by favouring the oxidizement of the extractive, which in a continued temperature of 212° attracts the oxygen of the atmosphere so rapidly, that it is soon converted into a soluble insipid inert matter, and precipitated in the fluid. This is the case with some substances, which are nevertheless ordered to be prepared in this form by the Colleges, and which we shall particularly notice in treating of the individual decoctions.

For making decoctions, the substances employed must be divided, if in the dry state, by pulverization, or, if fresh, by slicing, so as to expose an extended surface to the action of the water; which is thus enabled to take up their soluble principles in a shorter space of time, a circumstance, for the reasons already stated, of much importance in the preparation of decoctions. By covering the vessel in which they are made, the action of the air is prevented from af-

fecting the ingredients; but there is reason for believing, that by long coction in water, even in covered vessels, the constituents of some vegetable bodies re-act upon each other, and produce entirely new compounds, possessed of properties altogether different from those which they previously constituted. On this account decoctions should be quickly made; and when aromatic or volatile ingredients are to enter into them, these should not be boiled with the more fixed substances, but the decoction, after it is made, should be poured over them, and allowed to remain covered up until it is nearly cold, before it be strained. In general, however, it is better to strain decoctions while they are hot: for as boiling water dissolves a larger proportion of vegetable matter than it can retain in solution at a lower temperature, a deposit almost always takes place as the decoction cools; and if this be of active matter, it is lost by deferring the straining; whereas by straining the decoction while hot, the deposit can be mingled, by being shaken, with the clear fluid, when it enters into extemporaneous compositions, or when the dose of it is taken.

Decoctions, from the nature of their constituents, very soon ferment and spoil; consequently, they should be prepared in small quantities only, and never used, particularly in summer, forty-eight hours after they have been made.

DECOCTUM ALOES COMPOSITUM. Lond. *Compound Decoction of Aloes.*

“Take of extract of liquorice, *half an ounce*; subcarbonate of potash, *two scruples*; extract of spiked aloes, powdered, myrrh, powdered, saffron, of each, *a drachm*; water, *a pint*. Boil down to twelve fluid ounces, and strain; then add of compound tincture of cardamom, *four fluid ounces.*”

By the addition of the alkali in this preparation, the water is enabled to hold in solution a greater portion of the aloes than it could otherwise hold, while another portion is suspended by the mucilage of the liquorice and the myrrh. The addition of the tincture prevents any spontaneous decomposition from taking place. The taste of the decoction is extremely nauseous, notwithstanding the bitter of the aloes is in some degree covered by the liquorice. It is decomposed and a flaky precipitate thrown down in it by all the strong acids; corrosive muriate of mercury produces a pale brown precipitate, while tartarized antimony, sulphate of zinc, and superacetate of lead, produce white curdy precipitates: hence

these substances are incompatible in formulæ with this decoction.

Medical properties and uses. — It is gently cathartic and emmenagogue; and is introduced as being analogous to the well-known *Beaume de Vie*. It may be given with advantage in habitual costiveness, dyspepsia, hypochondriasis, jaundice, and chlorosis, in the dose of from fʒss. to fʒij. taken in the morning.

DECOCTUM ALTHÆÆ OFFICINALIS. Edin. *Decoction of Marsh Mallows.*

“Take of marsh mallow root, dried and bruised, *four ounces*; raisins stoned, *two ounces*; water, *seven pounds*. Boil down to five pounds; set aside the strained liquor until the dregs have subsided, and then decant it.”

Marsh mallow roots contain a considerable quantity of mucus, which is thus extracted unaltered by water. The simple decoction of the roots is viscid, of a pale yellow colour, sweetish, and has a peculiar odour resembling that of boiled turnips. In the above preparation the raisins increase its sweetness, and render it more palatable.

Medical properties and uses. — This decoction is a useful demulcent in visceral inflammations, calculous affections, gonorrhœa, strangury, and other diseases of the urinary organs; and is supposed to be particularly indicated in inflammation of the kidneys after the abscess bursts. The dose is a cupful frequently taken; but in inflammation of the urinary organs, and in similar cases, it may be taken *ad libitum*, as common drink.

DECOCTUM ANTHEMIDIS NOBILIS. Edin. *Decoction of Chamomile.*

“Take of Chamomile flowers, dried, *one ounce*; carraway seeds, bruised, *half an ounce*; water, *five pounds*. Boil for a quarter of an hour, and strain.”

DECOCTUM CHAMÆMELI COMPOSITUM. Dub. *Compound Decoction of Chamomile.*

“Take of chamomile flowers, dried, *half an ounce*; fennel seeds, *two drachms*; water, *a pint*. Boil a little, and strain.”

These decoctions contain in solution bitter extractive, and a small portion of essential oil. Were their mode of preparation a matter of any consequence, we would recommend the aromatic seeds not to be added till towards the conclusion of the boiling; but for the purposes of fomentation and glyster, for which they are intended, as much benefit is probably derived from the warm water, as the principles it holds in solution.

DECOCTUM CINCHONÆ. Lond. *Decoction of Cinchona.*¹

"Take of lance-leaved cinchona bark bruised, *an ounce*; water, *a pint*. Boil for ten minutes in a lightly covered vessel, and strain the liquor while it is hot."

DECOCTUM CINCHONÆ LANCEOLATÆ. Edin. *Decoction of Lance-leaved Cinchona.*

"Take of cinchona bark in powder, *one ounce*; water, *one pound and an half*. Boil for ten minutes in a covered vessel, and strain the liquor while it is hot."

DECOCTUM CORTICIS CINCHONÆ. Dub. *Decoction of Cinchona Bark.*

"Take of cinchona bark in coarse powder, *an ounce*; water, *a pint*. Boil for ten minutes in a vessel almost covered, and strain the liquor through a linen cloth while it is hot."

Cinchona bark is one of those substances which suffers by coction with water; and when the boiling is long continued, its virtues are so much impaired as to be nearly destroyed, owing to the oxidizement of the extractive, which is thus converted into an inert resin, and precipitated. Aware of this effect, the Colleges have properly limited the time of boiling to ten minutes, and ordered the vessel to be covered, and the liquor to be strained while it is hot. As the strained decoction cools, it becomes turbid, and lets fall a reddish or yellowish powder, according to the kind of the bark used: this, however, must not be rejected, but diffused through the clear decoction when it is about to be used in compounding extemporaneous mixtures, or when the dose is to be taken.

This decoction is more bitter but less aromatic than the infusion. It is effected by the same re-agents, and used in the same cases, and in similar doses, as the infusion. (See *Infusum Cinchonæ*.)

DECOCTUM CYDONIÆ.² Lond. *Decoction of Quince Seeds.*

"Take of quince seeds, *two drachms*; water, *a pint*. Boil them over a gentle fire for ten minutes, then strain."

Quince seeds abound with mucus, which is extracted by boiling water. It is considerably viscid, transparent, nearly colourless, insipid, and inodorous. It is coagulated by alcohol, acids, and most of the metallic salts, which, therefore, are incompatible in formulæ with it; and it must be

¹ Decoction de Quinquina (F.) Chinadekokte (G.) Decotto di China (I.)

² This title would lead to the inference that the preparation is a decoction of the quince, and not of the seeds. It should have been *Cydoniæ Seminum*.

used as soon as it is made, for it soon spoils, owing perhaps to its containing some of the other constituents of the seeds.

Medical properties and uses. — This is often preferred to the other mucilages as a local demulcent in tenesmus, and in aphthous affections and excoriations of the mouth. A diluted solution of it injected beneath the eye-lids is useful for obviating the acrimony of the discharge in violent inflammations of the eye.

DECOCTUM DAPHNES MEZERII. Edin. *Decoction of Mezereon.*¹

“Take of the bark of mezereon root, *two drachms*; liquorice root bruised, *half an ounce*; water, *three pounds*. Boil with a gentle fire down to two pounds, and strain.”

This decoction is slightly mucilaginous, of a yellowish brown colour; has the sweet taste of the liquorice root with a slight degree of bitterness; and leaves in the mouth a sensation of heat and pungency, which, however, is scarcely felt until a few minutes after the dose has been swallowed.

Medical properties and uses. — This decoction was first made public by Dr. Alexander Russel² as an appropriate remedy for venereal nodes, arising from a thickening of the periosteum; and for removing those nocturnal pains with which venereal patients are afflicted. This opinion, however, has not been supported by experience; and Mr. Pearson³ asserts, that it “has not the power of curing the venereal disease in any one stage, or any one form;” and adds, “except in an instance or two of lepra, in which the decoction conferred a temporary benefit, I have very seldom found it possessed of medicinal virtue, either in syphilis, or in the sequelæ of that disease, in scrophula, or in cutaneous affections.” It has been given with seeming benefit in chronic rheumatism. The dose is from f̄₃iv. to f̄₃vi. three or four times a day.

DECOCTUM DIGITALIS. Dub. *Decoction of Foxglove.*

“Take of foxglove leaves dried, *a drachm*; water, *as much as will afford of strained liquor eight fluid ounces*. Place the vessel over a gentle fire, and as soon as the liquor boils remove it; then digest for a quarter of an hour, and strain.”

This decoction is almost inodorous, and has a bitter nauseous taste. It is affected by the same re-agents as the infusion,

¹ Décoction de Daphne mezereon (F.) Scioblbastrinde-dekokte (G.) Decotto di Daphne Mezereon (I.)

² *Medical Observations and Inquiries*, vol. iii.

³ *Pearson on the Remedies for Lues Venerea*, p. 47.

and used in dropsies with the same intention. (See *Infusum digitalis*.)¹

DECOCTUM DULCAMARÆ. Lond. *Decoction of woody Nightshade.*

"Take of the stalks of woody nightshade sliced, *one ounce*; water, *a pint and a half*. Boil down to a pint, and strain."

This decoction appears to have been introduced into the pharmacopœia merely to fix the proportions of the ingredients. It has a strong unpleasant odour, and a bitter nauseous taste followed by a degree of sweetness.

Medical properties and uses.—It is possessed of diuretic and narcotic properties; and has been found useful in humoral asthma, dropsy, lepra vulgaris and alphas, and pityriasis. The dose is from fʒiv. to fʒj. combined with any aromatic tincture, given three times a day.

DECOCTUM GEOFFRÆÆ INERMIS. Edin. *Decoction of Cabbage-tree Bark.*

"Take of cabbage-tree bark in powder, *one ounce*; water, *two pounds*. Boil with a gentle heat down to one pound, and strain."

This decoction has the colour of Madeira wine, a disagreeable odour, and a bitter mucilaginous taste. It is given to children in doses of fʒij. and to adults to the amount of fʒij. An overdose, or drinking cold water during its use, produces vomiting, fever, and delirium; effects which are to be remedied by castor oil, warm water, and acids. It is seldom employed in this country.

DECOCTUM GUAIACI COMPOSITUM. Edin. *Compound Decoction of Guaiacum.*²

"Take of guaiacum wood rasped, *three ounces*; raisins, *two ounces*; sassafras root sliced, liquorice root bruised, of each, *one ounce*; water, *ten pounds*. Boil the guaiacum wood and the raisins in the water over a gentle fire down to five pounds, adding the roots towards the end of the boiling; then strain."

This decoction derives less of its efficacy from the guaiacum than is generally imagined, a small portion of extractive matter only being taken up by the water. It is, however, supposed to be useful in chronic rheumatism, some cutaneous diseases, and in syphilis during a mercurial course; but, probably, at best it is only serviceable as a demulcent. It may be taken in divided doses, to the amount of ʒj. or ʒij. in the day.

¹ For cases of the successful use of this decoction, in making which, however, the fresh leaves were employed instead of the dried, see *Darwin's Zoonomia*, vol. i. p. 326. 331.

² Decoction de Guajac composée (F.) Guajack-dekokte (G.) Decotto di Guajaco composito (I.)

DECOCTUM HORDEI. Lond. Dub. DECOCTUM HORDEI DISTICHI. Edin. *Decoction of Barley.*¹

"Take of pearl barley, *two ounces*; water, *four pints and a half*, (*five pounds*, Edin.) First wash away any extraneous substances that may adhere to the barley; then, having poured on it half a pint of water, boil for a few minutes. This water being thrown away, let the remainder be added boiling; then boil down to two pints, and strain."

DECOCTUM HORDEI COMPOSITUM. Lond. *Compound Decoction of Barley.*

"Take of decoction of barley, *two pints*; figs sliced, *two ounces*; liquorice root sliced and bruised, *half an ounce*; raisins stoned, *two ounces*; water, *a pint*. Boil down to two pints, and strain."

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"Take of decoction of barley, *four pints*; raisins stoned, figs sliced, of each, *two ounces*; liquorice root sliced and bruised, *half an ounce*. During the boiling add first the raisins, then the figs, and lastly, the liquorice root a short time before it is finished; when it is completed, the strained liquor ought to measure two pints."

The preparation of these decoctions is generally intrusted to nurses and the attendants of the sick-room; but a practitioner ought not to be ignorant of the best manner of making them, as his directions may be occasionally necessary. They are elegant and useful demulcents in cases of fever, phthisis, gonorrhœa, and strangury; and indeed in all acute diseases, given *ad libitum*. A few drops of tincture of opium may be added to the compound decoction, to obviate its laxative effect, where this might prove hurtful. Equal parts of this decoction, and of decoction of bark, form an excellent gargle in *cynanche maligna*.

DECOCTUM LICHENIS.² Lond. DECOCTUM LICHENIS ISLANDICI. Edin. *Decoction of Liverwort.*

"Take of liverwort, *an ounce*; water, *a pint and a half*, (*two pounds*, Edin.) Boil down to a pint, and strain."

DECOCTUM LICHENIS ISLANDICI. Dub. *Decoction of Iceland Liverwort.*

"Take of Iceland liverwort, *half an ounce*; boiling water, *a pint*. Digest for two hours; then boil for a quarter of an hour, and strain the liquor while it is hot."

In these decoctions the bitter principle of the lichen is united

¹ Decoction d'Orge (F.) Gerstedeokotte (G.) Decotto d'Orzo (I.)

² The impropriety of using the generic name only of the plant is here very obvious, particularly as another species of this extensive family, the *Lichen roccella*, is now introduced into the *Dublin Pharmacopœia*.

with its fecula, which is thus rendered extremely nauseous; and although its operation in the stomach may be thus augmented, yet few patients will be persuaded to take it in this form. The dose is from $\text{f}\text{z}\text{iv}$. to $\text{f}\text{z}\text{ij}$. three times a day. We have already stated its use as a demulcent, when freed from the bitter, and the mode of preparing it. (See *Lichen*, Partii.)

DECOCTUM MALVÆ COMPOSITUM. Lond. *Compound Decoction of Mallows.*

“Take of mallows dried, *an ounce*; chamomile flowers dried, *half an ounce*; water, *a pint*. Boil for a quarter of an hour, and strain.”

This decoction is intended for fomentations and enemas, for which purposes it answers sufficiently well.

DECOCTUM PAPAVERIS. Lond. *Decoction of Poppy.*

“Take of the capsules of the white poppy bruised, *four ounces*; water, *four pints*. Boil for a quarter of an hour, and strain.”

In making this decoction, the seeds should not be rejected, as they contain a considerable portion of bland oil, which, added to the mucilage and narcotic principle of the capsule, increases the emollient quality of the decoction. It is a very useful fomentation in painful swellings, and in the excoriations produced by the thin acrid discharge of ulcers, and those common to infants.

DECOCTUM QUERCUS. Lond. **DECOCTUM QUERCUS ROBORIS.** Edin. *Decoction of Oak Bark.*

“Take of oak bark, *an ounce*; water, *two pints*, (*two pounds and a half*, Edin.) Boil down to a pint, and strain.”

From oak bark thus treated the greater part of its astringent matter is extracted. The decoction is nearly inodorous, has a brown colour, and the austere taste of the bark. It reddens tincture of litmus, and is precipitated by solutions of isinglass, infusion of yellow cinchona bark, the carbonates of the alkalis, the aromatic spirit of ammonia, lime-water, and solutions of sulphate of iron, acetate and superacetate of lead, oxymuriate of mercury, and sulphate of zinc, which are, therefore, incompatible in formulæ with it. The precipitates produced by the two last salts do not take place for a considerable time.

Medical properties and uses.—This is the usual form under which oak bark is exhibited. We have already noticed its internal use. (See *Quercus*, Part ii.) As a local astringent it is used as a gargle in cynanche and relaxation of the uvula; as an injection in passive uterine hæmorrhages, in leucorrhœa,

¹ Decoctum pro enemate, P. L. 1787.

² Decoctum pro fomento, P. L. 1787.

and the gleet discharge which often remains after miscarriages. It is also a useful wash in piles and procedentia recti.

DECOCTUM SARSAPARILLÆ. Lond. *Decoction of Sarsaparilla.*¹

“Take of sarsaparilla root sliced, *four ounces*; boiling water, *four pints*. Macerate for four hours in a vessel lightly covered, and placed near the fire; then take out the sarsaparilla, and bruise it. Return it again to the liquor, and macerate in a similar manner for two hours more; then boil it down to two pints, and strain.”

DECOCTUM SMILACIS SARSAPARILLÆ. Edin. *Decoction of Sarsaparilla.*

“Take of sarsaparilla sliced, *six ounces*; water, *eight pounds*. Digest for two hours in a temperature of about 195°, then take out the root and bruise it; in this state put it again into the liquor, and boil it with a gentle fire down to four pounds; then express it, and strain.”

DECOCTUM SARSAPARILLÆ. Dub. *Decoction of Sarsaparilla.*

“Take of sarsaparilla root sliced, *an ounce and a half*; boiling water, *two pints*. Digest for two hours in a moderate heat; then take out the sarsaparilla, and bruise it; return it to the liquor, and again digest for two hours; then boil down to one half, express, and strain the liquor through a linen cloth.”

We have already stated that the claims which sarsaparilla has to the attention of the practitioner as a remedy in syphilis are very trifling. This decoction may be regarded as little more than a solution of mucus, and a simple demulcent, which may be useful during the exhibition of mercury; and is found to be so in dysuria, and incontinence of urine arising from a morbid irritability of the bladder. It affords precipitates with lime-water, solution of muriate of barytes, and of superacetate of lead, which are therefore incompatible in formulæ with it.

DECOCTUM SARSAPARILLÆ COMPOSITUM. Lond. *Compound Decoction of Sarsaparilla.*

“Take of decoction of sarsaparilla boiling, *four pints*; sassafras root sliced, guaiacum root rasped, liquorice root bruised, of each, *an ounce*; bark of mezereon root, *three drachms*. Boil for a quarter of an hour, and strain.”

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“Take of sarsaparilla root sliced and bruised, *one ounce and a half*; raspings of guaiacum wood, bark of sassafras root, liquorice root bruised, of each, *two drachms*; bark of mezereon root, *a drachm*; boiling water, *three pints*. Digest the sarsa-

¹ Decoction de Sarsaparille (F.) Sarsaparille-dekokte (G.) Decotto di Sarsaparilla (I.)

parilla, the guaiacum, and the sassafras, in the water, with a moderate heat for six hours; then boil down to one half, adding towards the end of the coction the liquorice and the mezereon; finally, strain."

This decoction is an imitation of the once celebrated *Lisbon Diet-drink*. Its efficacy depends chiefly on the mezereon root bark, the quantity of which, therefore, ordered by the Dublin College is undoubtedly too small. It operates as a diaphoretic and alterative, and is found to be useful in the treatment of secondary syphilis, chronic rheumatism, and in lepra, and some other cutaneous affections. The dose is from $\text{f}\bar{\text{z}}\text{iv}$. to $\text{f}\bar{\text{z}}\text{vj}$. taken three or four times a day.

DECOCTUM SENEGÆ. Lond. DECOCTUM POLYGALÆ SENEGÆ. Edin. *Decoction of Seneka*.¹

"Take of seneka root, *an ounce*; water, *two pints*. Boil down to a pint, and strain."

This decoction is of a brownish olive colour, inodorous, and has a hot pungent taste. Its virtues have been already discussed under the account of the root. (*Part ii*.) The dose is from $\text{f}\bar{\text{z}}\text{jss}$. to $\text{f}\bar{\text{z}}\text{ij}$. taken three or four times a day.

DECOCTUM ULMI. Lond. Dub. DECOCTUM ULMI CAMPESTRIS. Edin. *Decoction of Elm Bark*.

"Take of fresh elm bark bruised, *four ounces*; water, *four pints*, (*five pints*, Edin.) Boil to two pints, and strain."

This decoction is thick, slightly mucilaginous, and of a brown colour; has a faint odour and a bitterish taste. Alcohol added to it produces a precipitate of light brown flakes; tinctures, therefore, in any considerable quantity, are inadmissible in formulæ with it. Its medicinal properties have been already noticed. (See *Ulmus*, *Part ii*.) The dose is from $\text{f}\bar{\text{z}}\text{iv}$. to $\text{f}\bar{\text{z}}\text{vj}$. taken twice or three times a day.

DECOCTUM VERATRĪ. Lond. *Decoction of White Hellebore*.

"Take of white hellebore root bruised, *an ounce*; water, *two pints*; rectified spirit, *two fluid ounces*. Boil the hellebore root with the water down to a pint, and strain; then, when the decoction is cold, add the spirit."

This decoction is stimulant, acrid, and cathartic; but its operation is too violent for internal use. As a lotion it often proves beneficial in scabies, tinea capitis, and other cutaneous eruptions; but it requires to be used with caution even as an external remedy.

¹ Decoction de Polygale Senega (F.) Senegawurzel-dekokte (G.) Decotto di Poligala Senega (I.)