

A series of botanical tables, and tables of the materia medica, designed for the use of students preparing for examination at Apothecaries' Hall : illustrated with numerous engravings on wood, and four coloured medico-botanical maps of Europe, Asia, Africa, and America, showing the geographical situation of all the plants of the Pharmacopœia / by W. K. Toase.

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A SERIES

OF

BOTANICAL TABLES,

AND

TABLES OF THE MATERIA MEDICA,

DESIGNED FOR THE

USE OF STUDENTS PREPARING FOR EXAMINATION AT APOTHECARIES' HALL.

ILLUSTRATED

WITH NUMEROUS ENGRAVINGS ON WOOD,

AND FOUR COLOURED MEDICO-BOTANICAL MAPS OF EUROPE, ASIA, AFRICA, AND AMERICA,

SHOWING THE

GEOGRAPHICAL SITUATION

OF

ALL THE PLANTS OF THE PHARMACOPEIA.

BY

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&c. &c.

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ERRATA IN THE MAPS.

EUROPE.

France, *for galica* *read gallica*
Austria, — apoponax — opoponax

ASIA.

Asia Minor, *for Stryax* *read Styra*
Persia, — Modrus — Morus
Hindoostan — Pterocarpus — Pterocarpus
Ceylon — cassia — cassia
Sumatra — beuzoin — benzoin

AFRICA.

Egypt, *for usitalissimum* *read usitatissimum*
Senegambia, — Plerocarpus — Pterocarpus

AMERICA.

United States, *for marylandica* *read marilandica*
Peru, — triandria — triandra

INNÆUS has divided all plants into two grand classes, namely, those bearing conspicuous flowers, or *Phanerogamous* plants; and those without conspicuous flowers, or *Cryptogamous* plants. The last, or 24th class of his system, comprehends the latter; while, to the former division, belong all the preceding 23 classes.

Now, to understand these, a knowledge of the sexual organs of plants is necessary; these are the *Stamens*, and *Pistils*, which are situated immediately within the centre of the flower. To illustrate them, let us take an example from a perfect flower,—the *Nicotiana tabacum*, or Tobacco plant (fig. 1.) The parts of this flower are (a) the calyx, or most external envelope, surrounding (b) the corolla, or blossom, which, in its turn



encloses (c) the *Stamens*, these being arranged around the most central part of the flower (d), the *Pistil*. The *Pistil* (fig. 2) is the female organ of reproduction, and consists of three parts; 1st, the *Stigma*, or summit, (fig. 2. a.); 2nd, the *Style* (fig. 2. b.) supporting the Stigma; and 3rd, the *Germen* or *Ovary* (fig. 2. c.) which ultimately becomes the seed vessel of the plant. The *Stamen* (fig. 3.) or male organ, consists of two parts; 1st, the *Anther* (fig. 3. a.) which contains a fine dust, called the *Pollen*, or fructifying principle; and 2nd, the *Filament*, (fig. 3. b.) or thread which supports the anther.—These parts being understood, the Student is prepared to comprehend the Linnæan Classification, which may be arranged as follows.

CLASS I.—MONANDRIA.
FIG. 4.—Flowers having one stamen (fig. 4. a.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
1. Curcuma longa.
2. Eleteria cardamomum.
3. Zingiber officinale.

CLASS II.—DIANDRIA.
FIG. 5.—Flowers having two stamens (fig. 5. a.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
4. Gratiola officinalis.
5. Olea europæa.
6. Rosmarinus officinalis.
7. Salvia officinalis.
ORDER 3. TRIGYNIA.
With three pistils (fig. 5. b.)
8. Piper cubeba.
9. — longum.
10. — nigrum.

CLASS III.—TRIANDRIA.
FIG. 6.—Flowers having three stamens (fig. 6. a.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
11. Crocus sativus.
12. Iris florentina.
13. Valeriana officinalis.
ORDER 2. DIGYNIA.
With two pistils (fig. 6. b.)
14. Avena sativa.
15. Hordeum distichon.
16. Saccharum officinarum.
17. Secale cornutum.
18. Triticum hybernium.

CLASS IV.—TETRANDRIA.
FIG. 7.—Flowers having four stamens (fig. 7.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
19. Dorstenia contrajerva.
20. Krameria triandra.
21. Rubia tinctorum.

CLASS V.—PENTANDRIA.
FIG. 8.—Flowers having five stamens (fig. 8. a.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
22. Anchusa tinctoria.
23. Atropa belladonna.
24. Bomplandia trifoliata.
25. Cephaelis ipecacuanha.
26. Cinchona cordifolia.
27. — lancifolia.
28. — oblongifolia.
29. Capsicum annuum.
30. Chironia centaurium.
31. Convolvulus jalapa.
32. — scammonia.
33. Datura stramonium.
34. Diosma crenata.
35. Hyoscyamus niger.
36. Menyanthes trifoliata.
37. Nicotiana tabacum.
38. Rhamnus catharticus.
39. Solanum dulcamara.
40. Spigelia marilandica.
41. Strychnos nux vomica.
42. Vitis vinifera.
43. Viola odorata.

ORDER 2. DIGYNIA.
With two pistils (fig. 6. b.)
44. Anethum graveolens.
45. — feniculum.
46. Angelica archangelica.
47. Bubon galbanum.
48. Carum carui.
49. Conium maculatum.
50. Coriandrum sativum.
51. Cuminum cyminum.
52. Daucus carota.
53. Ferula assafoetida.
54. Gentiana lutea.
55. Heracleum gummiiferum.
56. Pastinaca opoponax.

57. Pimpinella anisum.
58. Ulmus campestris.
ORDER 3. TRIGYNIA.
With three pistils (fig. 5. b.)
59. Rhus toxicodendron.
60. Sambucus nigra.
ORDER 5. PENTAGYNIA.
With five pistils (fig. 8. b.)
61. Linum catharticum.
62. — usitatissimum.

CLASS VI.—HEXANDRIA.
FIG. 9.—Flowers having six stamens (fig. 9.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
63. Acorus calamus.
64. Allium cepa.
65. — porrum.
66. — sativum.
67. Aloe spicata.
68. — vulgaris.
69. Scilla maritima.

ORDER 2. DIGYNIA.
With two pistils (fig. 6. b.)
70. Rumex acetosa.
ORDER 3. TRIGYNIA.
With three pistils (fig. 5. b.)
71. Colchicum autumnale.

CLASS VII.—HEPTANDRIA.
FIG. 10.—Flowers having seven stamens (fig. 10.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
72. Æsculus hippocastanum.

CLASS VIII.—OCTANDRIA.
FIG. 11.—Flowers having eight stamens (fig. 11.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
73. Amyris elemifera.
74. — gileadensis.
75. Daphne mezereum.
ORDER 3. TRIGYNIA.
With three pistils (fig. 5. b.)
76. Polygonum bistorta.

CLASS IX.—ENNEANDRIA.
FIG. 12.—Flowers having nine stamens (fig. 12.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
77. Laurus cassia.
78. — cinnamomum.
79. — camphora.
80. — nobilis.
81. — sassafras.
ORDER 3. TRIGYNIA.
With three pistils (fig. 5. b.)
82. Rheum palmatum.
83. — undulatum.

CLASS X.—DECANDRIA.
FIG. 13.—Flowers having ten stamens (fig. 13.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
84. Arbutus uva ursi.
85. Boswellia serrata.
86. Cassia fistula.
87. — senna.
88. Copifera officinalis.
89. Guaiacum officinale.
90. Hamamelis virginica.
91. Myroxylon peruiferum.
92. Pyrola umbellata.
93. Quassia excelsa.
94. — simaruba.
95. Rhododendron chrysanthum.
96. Ruta graveolens.
97. Styra benzoin.
98. — officinale.
ORDER 5. PENTAGYNIA.
With five pistils (fig. 8. b.)
99. Oxalis acetosella.

CLASS XI.—DODECANDRIA.
FIG. 14.—Flowers having from twelve to nineteen stamens (fig. 14. a.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
100. Asarum europæum.
101. Canella alba.
102. Lythrum salicaria.
ORDER 3. TRIGYNIA.
With three pistils (fig. 5. b.)
103. Euphorbia officinarum.

CLASS XII.—ICOSANDRIA.
FIG. 15.—Flowers having twenty or more stamens, which are inserted either upon the calyx or corolla (fig. 15.)
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
104. Amygdalus communis.
105. Eugenia caryophyllata.
106. Myrtus pimenta.
107. Prunus domestica.
108. — lauro-cerasus.
109. Punica granatum.

ORDER 5. PENTAGYNIA.
With five pistils (fig. 8. b.)
110. Pyrus cydonia.
ORDER 8. POLYGYNIA.
With many pistils (fig. 14. b.)
111. Geum urbanum.
112. Rosa canina.
113. — centifolia.
114. — gallica.
115. Tormentilla erecta.

CLASS XIII.—POLYANDRIA.
FIG. 16.—Flowers having many stamens, all of which are inserted upon the Receptacle (fig. 16.)
N.B. The Receptacle is where all the different parts of the flower unite.
ORDER 1. MONOGYNIA.
With one pistil (fig. 4. b.)
116. Dryobalanops camphora.
117. Papaver somniferum.
118. — rhoeas.

ORDER 3. TRIGYNIA.
With three pistils (fig. 5. b.)
119. Aconitum napellus.
120. Delphinium staphisagria.
ORDER 6. POLYGYNIA.
With many pistils (fig. 14. b.)
121. Helleborus foetidus.
122. — niger.

CLASS XIV.—DIDYNDRIA.
FIG. 17.—Flower with four stamens, two of which are longest (fig. 17.)
ORDER 1. GYNOSPERMIA.
FIG. 18.—Having naked seeds, generally four in number, situated at the bottom of the calyx (fig. 18.)
124. Lavandula spicata.
125. Hyssopus officinalis.
126. Marrubium vulgare.
127. Melissa officinalis.
128. Mentha piperita.
129. — pulegium.
130. — sativa.
131. Origanum majorana.
132. — vulgare.

ORDER 2. ANGIOSPERMIA.
FIG. 19.—Having the seeds enclosed in a seed vessel (fig. 19.)
133. Digitalis purpurea.
134. Scrophularia nodosa.

CLASS XV.—TETRADYNIA.
FIG. 20.—Flowers with six stamens, four of which are longest (fig. 20.)

ORDER 1. SILIQUOSA.
FIG. 21.—The seed vessel being a short round pod (fig. 21.)
135. Cochliaria armoracea.
ORDER 2. SILIQUOSA.
FIG. 22.—The seed vessel being a long tapering pod (fig. 22.)
136. Cardamine pratensis.
137. Sinapis alba.
138. — nigra.

CLASS XVI.—MONADELPHIA.
FIG. 23.—Flowers with the stamens united into one bundle by their filaments (fig. 23.)
ORDER 1. TRIANDRIA.
Having three stamens (fig. 6. a.)
139. Tamarindus indica.
ORDER 6. POLYANDRIA.
Having many stamens (fig. 16.)
140. Althæa officinalis.
141. Malva sylvestris.

CLASS XVII.—DIADELPHIA.
FIG. 24.—Flowers with their stamens united into two bundles (fig. 24.)
ORDER 3. OCTANDRIA.
Having eight stamens (fig. 11.)
142. Polygala senega.
ORDER 4. DECANDRIA.
Having ten stamens (fig. 13.)
143. Astragalus verus.
144. Dolichos puriens.
145. Glycyrrhiza glabra.
146. Geoffroya inermis.
147. Pterocarpus erinacea.
148. — santalinus.
149. Spartium scoparium.

CLASS XVIII.—POLYADELPHIA.
FIG. 25.—Flowers with their stamens united into three or more bundles (fig. 25.)
ORDER 3. ICOSANDRIA.
Having twenty or more stamens attached to the calyx or corolla (fig. 15.)
150. Citrus aurantium.
151. — medica.
152. Melaleuca cajuputi.

CLASS XIX.—SYNGENESIA.
FIG. 26.—Compound flowers having their anthers united into a tube (fig. 26.)
ORDER 1. POLYGAMIA ÆQUALIS.
Each floret bearing both stamens and pistils (fig. 26.)
153. Aretium lappa.
154. Lactuca sativa.
155. — virosa.
156. Leontodon taraxacum.

ORDER 2. POLYGAMIA SUPERFLUA.
FIG. 27.—The florets in the centre of the flower bearing stamens and pistils, while those round the circumference bear pistils only (fig. 27.)
158. Anthemis nobilis.
159. — pyrethrum.
160. Arnica montana.
161. Artemisia absinthium.
162. — chinensis.
163. — santonica.
164. Inula helenium.
165. Tussilago farfara.
166. Tanacetum vulgare.

CLASS XX.—GYNDANDRIA.
FIG. 28.—Flowers with their stamens united with the pistil (fig. 28.)
ORDER 4. HEXANDRIA.
Having six stamens (fig. 9.)
167. Aristolochia serpentaria.

CLASS XXI.—MONŒCIA.
FIG. 29.—Having the stamens in one flower, and the pistils in another, but both on the same plant (fig. 29.)
ORDER 4. TETRANDRIA.
With four stamens (fig. 7.)
168. Morus nigra.
ORDER 7. POLYANDRIA.
With many stamens (fig. 16.)
169. Arum maculatum.
170. Quercus infectoria.
171. — pedunculata.

ORDER 8. MONADELPHIA.
With the stamens united into one bundle (fig. 23.)
172. Croton cascarilla.
173. — tiglium.
174. Cucumis colocynthis.
175. Momordica elaterium.
176. Pinus abies.
177. — balsamea.
178. — larix.
179. — sylvestris.
180. Ricinus communis.

CLASS XXII.—DICECIA.
FIG. 30.—Having the stamens in one flower, and the pistils in another, but each on separate plants (fig. 30.)
ORDER 2. DIANDRIA.
With two stamens (fig. 5.)
181. Salix caprea.

ORDER 5. PENTANDRIA.
With five stamens (fig. 8.)
182. Humulus lupulus.
183. Pistacia lentiscus.
184. — terebinthus.
ORDER 6. HEXANDRIA.
With six stamens (fig. 9.)
185. Smilax sarsaparilla.

ORDER 10. DODECANDRIA.
With from twelve to nineteen stamens (fig. 14.)
186. Cocculus palmatus.
ORDER 13. MONADELPHIA.
With the stamens united into one bundle (fig. 23.)
187. Juniperus communis.
188. — sabina.
189. Myristica moschata.

CLASS XXIII.—POLYGAMIA.
FIG. 31.—Having three kinds of flowers, some with stamens only, others with pistils, and a third with both, which may either be all situated on the same plant, or scattered on different ones (fig. 31.)
ORDER 1. MONŒCIA.
With male and female flowers on the same plant (fig. 29.)
190. Acacia catechu.
191. — vera.
192. Stalagmites cambogioides.
193. Veratrum album.

ORDER 2. DICECIA.
With male and female flowers on different plants (fig. 30.)
194. Ficus carica.
195. Fraxinus ornus.

CLASS XXIV.—CRYPTOGAMIA.
FIG. 32.—Plants having their parts of fructification distinct (fig. 32.)
ORDER 1. FILICES.
Ferns (fig. 32.)
196. Aspidium filix mas.
ORDER 3. A.G.E.
FIG. 33.—Flags (fig. 33.)
197. Fucus vesiculosus.
198. Lichen islandicus.

MEDICAL PLANTS.

PLANTS are naturally divided, according to their structure, into two grand divisions, namely, CELLULAR and VASCULAR, or ACOTYLEDONOUS and COTYLEDONOUS plants. Acotyledonous, or cellular plants, are the same as the Linnæan Cryptogamous; while Cotyledonous, or vascular, represent Phanerogamous plants.

Cellular plants are so named from their structure being entirely cellular, and devoid both of woody fibre and spiral vessels. If a transverse section (a) be made of a cellular plant, no regular succession of bark, woody fibre, and pith, is observed, as in Dicotyledones (c), but the whole structure seems analogous to the pith or central medulla of those plants; consequently their leaves, when present, are untraversed by nerves, being destitute of spiral vessels (b).

Vascular plants, on the contrary, are composed of cellular tissue, spiral vessels, and woody fibre; consequently their leaves are traversed by nerves: and another distinguishing feature is, that they all bear perfect flowers, that is, flowers furnished either with stamens or pistils, or both.

Vascular plants are divided into MONOCOTYLEDONES and DICOTYLEDONES.

The Cotyledons (g, h) are the seed leaves of the embryo, which involve, and for some time assist, in the nutrition of the young plant.

Monocotyledonous plants (g) are those which have but one of these seed leaves, or cotyledones.



- a. A transverse section of the stem of an Acotyledonous plant.
b. A leaf of an Acotyledonous plant.
c. A transverse section of the stem of a Monocotyledonous plant.
d. A leaf of a Monocotyledonous plant.
e. A transverse section of the stem of a Dicotyledonous plant.
f. A leaf of a Dicotyledonous plant.
g. A Monocotyledonous seed beginning to sprout.
h. A Dicotyledonous seed beginning to sprout.

Dicotyledonous (h), those which have two or more: it is quite unnecessary, however, to dissect the seed of a plant to ascertain whether it is Mono- or Di-cotyledonous, for both may be easily and accurately distinguished by their anatomical structure.

In Monocotyledones there is no distinction between wood and bark, the cellular tissue and woody fibre being mingled together without any distinct circular layers (c). Again, there are no radiations to be seen in a transverse section of a monocotyledonous stem, as in a dicotyledonous (c, e); and moreover, in the former, the veins or nerves of the leaves are unbranched (d), and pass in parallel directions from the base to the apex; while, in the latter, they are branched (f), and form various angles, with the midrib or central prolongation of the petiole, or leaf stalk.

Thus then are distinguishable three grand classes in the natural arrangement of plants; viz. DICOTYLEDONES, MONOCOTYLEDONES, and ACOTYLEDONES.

Dicotyledonous plants, being by far the most numerous, are subdivided into 1st, those bearing flowers with both a calyx and corolla, (DICHLAMYDEÆ); 2nd, those in which the calyx and corolla are not distinct, (MONOCHLAMYDEÆ); and, 3rd, those in which the flowers are destitute of both calyx and corolla, (ACHLAMYDEÆ). The former sub-division is again still further divided according to the relative situation of the stamens; so also are Monocotyledonous plants; as may be seen in the following Table.

VASCULARES.

I.—DICOTYLEDONES.

DIV. I. DICHLAMYDEÆ.

Plants bearing flowers with both a calyx and corolla.

SUB-DIV. I. THALAMIFLORE.

Having their stamens situated on the receptacle under the Pistil.

RANUNCULACEÆ.

1. Aconitum napellus.
2. Delphinium staphisagria.
3. Helleborus foetidus.
4. — niger.
5. Ranunculus acris.
6. — flammula.

MENISPERMEÆ.

7. Cocculus palmatus.

PAPAVERACEÆ.

8. Papaver rhoeas.
9. — somniferum.

CRUCIFERÆ.

10. Cardamine pratensis.
11. Cochlearia armoracia.
12. Sinapis alba.
13. — nigra.

VIOLARIÆ.

14. Viola odorata.

POLYGALÆ.

15. Krameria triandra.
16. Polygala senega.

CARYOPHYLLÆ.

17. Dianthus caryophyllus.

LINEÆ.

18. Linum catharticum.
19. — usitatissimum.

MALVACEÆ.

20. Althæa officinalis.
21. Malva sylvestris.

HIPPOCASTANÆ.

22. Esculus hippocastanum.

GUTTIFERÆ.

23. Dryobalanops camphora.
24. Stalagmites cambogioides.

VINIFERÆ.

25. Vitis vinifera.

OXALIDÆ.

26. Oxalis acetosella.

ZYGOPHYLLÆ.

27. Guaiacum officinale.

MELIACEÆ.

28. Canella alba.

AURANTIACEÆ.

29. Citrus aurantium.
30. — medica.

RUTACEÆ.

31. Diosma crenata.
32. Ruta graveolens.

SIMARUBÆ.

33. Bomplandia trifoliata.
34. Quassia excelsa.
35. — simaruba.

SUB-DIV. 2. CALYCIFLORE.

Having their stamens situated on the calyx.

RHAMNÆ.

36. Rhamnus catharticus.

TEREBINTHACEÆ.

37. Amyris elemifera.
38. — gileadensis.
39. Boswellia serrata.
40. Pistacia lentiscus.
41. — terebinthus.
42. Rhus toxicodendron.

LEGUMINOSÆ.

43. Acacia vera.
44. — catechu.
45. Astragalus verus.
46. Cassia fistula.
47. — senna.
48. Copaifera officinalis.
49. Dolichos pruriens.
50. Geoffroya inermis.
51. Glycyrrhiza glabra.
52. Hæmatoxylon campechianum.
53. Myroxylon peruiferum.
54. Pterocarpus santalinus.
55. — erinacea.
56. Spartium scoparium.
57. Tamarindus indica.

ROSACEÆ.

58. Agrimonia eupatoria.
59. Amygdalus communis.
60. Geum urbanum.
61. Prunus domestica.
62. — lauro-cerasus.
63. Pyrus cydonia.
64. Rosa canina.
65. — centifolia.
66. — gallica.
67. Tormentilla erecta.

SALICARIÆ.

68. Lythrum salicaria.

MYRTACEÆ.

69. Eugenia caryophyllata.
70. Melaleuca cajuputi.
71. Myrtus pimenta.
72. Punica granatum.

CUCURBITACEÆ.

73. Cucumis colocynthis.
74. Momordica elaterium.

UMBELLIFERÆ.

75. Angelica archangelica.
76. Anethum graveolens.
77. — foniculum.
78. Bubon galbanum.
79. Carum carui.
80. Cicuta virosa.
81. Coriandrum sativum.
82. Conium maculatum.
83. Cuminum cyminum.
84. Daucus carota.
85. Ferula assafoetida.
86. Heracleum gummiferum.
87. Pastinaca opoponax.
88. Pimpinella anisum.

CAPRIFOLIACEÆ.

89. Sambucus nigra.

RUBIACEÆ.

90. Rubia tinctorum.

CINCHONACEÆ.

91. Cinchona lancifolia.
92. — cordifolia.
93. — oblongifolia.
94. Coffea arabica.
95. Cephaelis ipecacuanha.

VALERIANÆÆ.

96. Valeriana officinalis.

COMPOSITEÆ.

97. Anthemis nobilis.
98. — pyrethrum.
99. Arnica montana.
100. Arctium lappa.
101. Artemisia absinthium.
102. — chinensis.
103. — santonica.
104. Centaurea benedicta.
105. Inula helenium.
106. Lactuca sativa.
107. — virosa.
108. Leontodon taraxacum.
109. Tussilago farfara.
110. Tanacetum vulgare.

ERICEÆ.

111. Arbutus uva-ursi.
112. Pyrola umbellata.
113. Rhododendron chrysanthum.

SUB-DIV. 3. COROLLIFLORE.

Having their stamens situated upon the corolla.

EBENACEÆ.

114. Styx benzoin.
115. — officinale.

OLEACEÆ.

116. Fraxinus ornus.
117. Olea europæa.

APOCYNÆÆ.

118. Strychnos nux vomica.

GENTIANÆÆ.

119. Chironia centaurium.
120. Gentian lutea.
121. Menyanthes trifoliata.
122. Spigelia marilandica.

CONVOLVULACEÆ.

123. Convolvulus scammonia.
124. — jalapa.

BORAGINÆÆ.

125. Archusa tinctoria.

SOLANÆÆ.

126. Atropa belladonna.
127. Capsicum annuum.
128. Datura stramonium.
129. Hyoscyamus niger.
130. Nicotiana tabacum.
131. Solanum dulcamara.

SCROPHULARINÆÆ.

132. Digitalis purpurea.
133. Gratiola officinalis.
134. Scrophularia nodosa.

LABIATÆ.

135. Hyssopus officinalis.
136. Lavandula spicata.
137. Marrubium vulgare.
138. Melissa officinalis.
139. Mentha piperita.
140. — pulegium.
141. — sativa.
142. Origanum vulgare.
143. — majorana.
144. Rosmarinus officinalis.
145. Salvia officinalis.

DIV. II. MONOCHLAMYDEÆ.

Plants bearing flowers with but one floral envelope.

POLYGONÆÆ.

146. Rumex acetosa.
147. Rheum palmatum.
148. — undulatum.
149. Polygonum bistorta.

LAURINÆÆ.

150. Laurus cassia.
151. — camphora.
152. — cinnamomum.
153. — nobilis.
154. — sassafras.

MYRISTICÆÆ.

155. Myristica moschata.

THYMELEÆ.

156. Daphne mezereum.

ARISTOLOCHIÆÆ.

157. Aristolochia serpentaria.
158. Asarum europæum.

EUPHORBIAÆÆ.

159. Croton cascarilla.
160. — tiglium.
161. Euphorbia officinarum.
162. Ricinus communis.

URTICÆÆ.

163. Dorstenia contrajerva.
164. Ficus carica.
165. Humulus lupulus.
166. Morus nigra.

ULMACEÆ.

167. Ulmus campestris.

PIPERACEÆ.

168. Piper cubeba.
169. — longum.
170. — nigrum.

DIV. III. ACHLAMYDEÆ.

Plants bearing flowers destitute of both calyx and corolla.

AMENACEÆÆ.

171. Salix caprea.

CUPULIFERÆÆ.

172. Quercus infectoria.
173. — pedunculata.

CONIFERÆÆ.

174. Pinus abies.
175. — balsamea.
176. — larix.

177. Pinus sylvestris.
178. Juniperus communis.
179. — sabina.

II.—MONOCOTYLEDONES.

DIV. I. MONOEPHYGNEÆ.

Plants bearing flowers having their stamens epigynous, i. e. situated above the seed organ.

SCITAMINÆÆ.

180. Elettaria cardamomum.
181. Curcuma longa.
182. Zingiber officinale.

IRIDÆÆ.

183. Crocus sativus.
184. Iris florentina.

DIV. II. MONOPERIGYNEÆ.

Plants bearing flowers having their stamens perigynous, i. e. situated around the seed organ.

ASPHODELEÆÆ.

185. Allium sativum.
186. — porrum.
187. — cepa.
188. Aloe spicata.
189. — vulgaris.
190. Scilla maritima.

SMILACEÆÆ.

191. Smilax sarsaparilla.

MELANTHACEÆÆ.

192. Colchicum autumnale.
193. Veratrum album.

PALMEÆÆ.

194. Cocos butyracea.

DIV. III. MONOHYPGYNEÆ.

Plants bearing flowers having their stamens hypogynous, i. e. situated under the seed organ.

GRAMINÆÆ.

195. Avena sativa.
196. Hordeum distichon.
197. Secale cornutum.
198. Saccharum officinarum.
199. Triticum hybernium.

AROIDÆÆÆ.

200. Acorus calamus.
201. Arum maculatum.

CELLULARES.

III.—ACOTYLEDONES.

FILICES.

202. Aspidium filix-mas.

ALGÆ.

203. Fucus vesiculosus.

LICHENES.

204. Lichen islandicus.

FUNGI.

205. Boletus ignarius.

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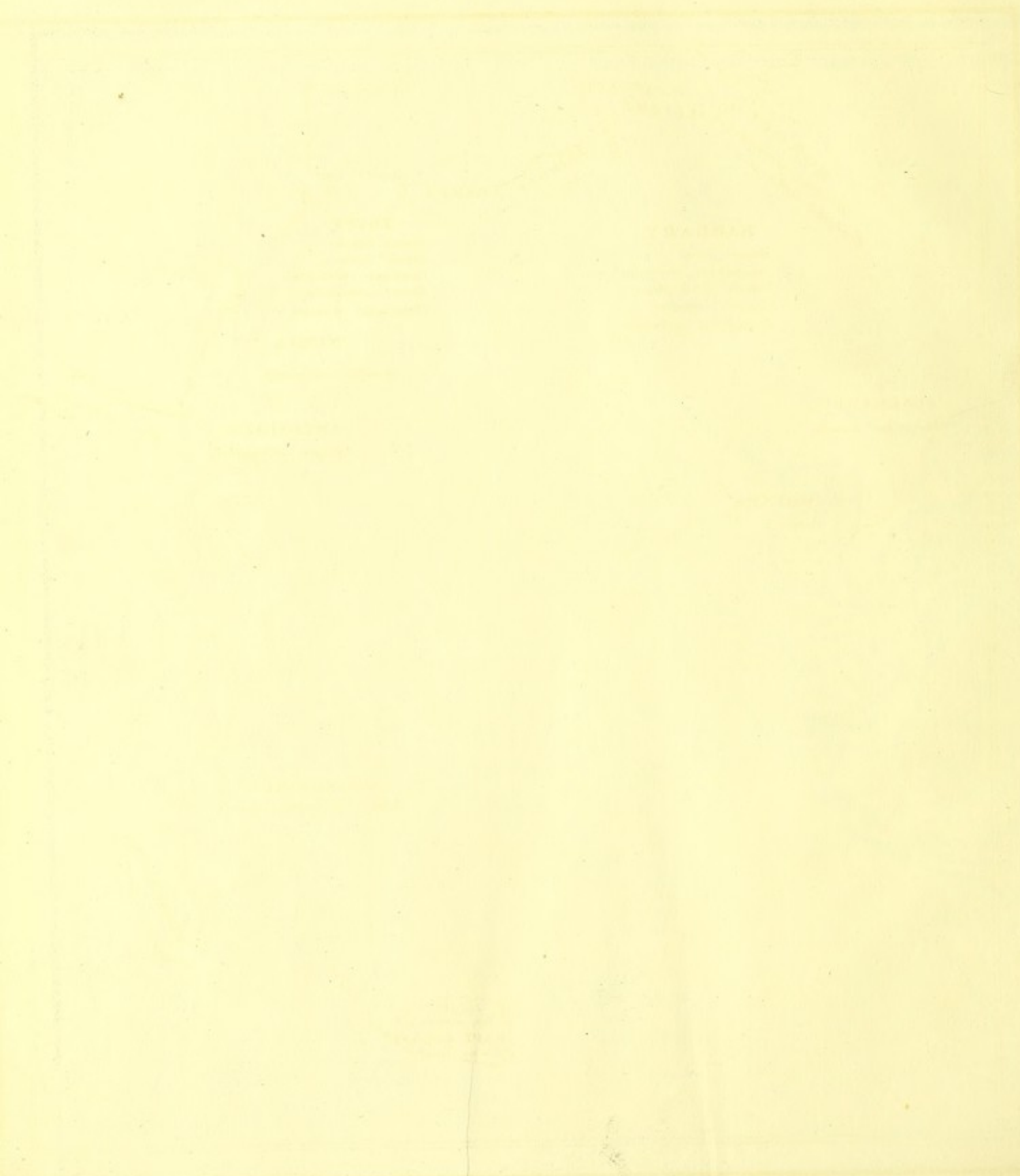
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MEDICO-BOTANICAL CHART OF ASIA.



MEXICO BOTANICAL CHART OF

1852



MEDICO-BOTANICAL CHART OF AFRICA.



MEDICO-BOTANICAL CHART OF AMERICA.



FORMS OF EXHIBITION OF MEDICAL PLANTS, WITH A REFERENCE TO THEIR LINNEAN AND JUSSIEUAN CLASSIFICATION.

Name of Plant.	Lin.	Jus.	Part used.	Properties.	Dose.	Active principle.	Pharmaceutical Preparations, and Forms of Exhibition.
<i>Cia catechu</i>	190	44	Extract	Astringent	gr. x.—5ij.	Tannin	Inf. catechu. Tinct. catechu.
— vera	191	43	Gum	Demulcent	Ad libitum	Mucilage	{ Muc. acaciae. Mist. cretae, cornu. usti, guaiaci, et moschi. Pulv. cretae co., et trag. co. Conf. amygdalarum.
<i>nitum napellus</i>	119	1	Leaves	Narcotic	gr. j.—iv.	Aconita	Extractum aconiti.
<i>rus calamus</i>	63	200	Rhizoma	Aromatic and tonic	5j.—5j.	Volatile oil and bitter matter.	Given in the form of powder or infusion.
<i>culus hippocastanum</i>	72	22	Bark	Tonic	5j.—5j.	Not known	Given in powder.
<i>um cepa</i>	64	187	Bulb	Stimulant and diuretic	5a.—5ij.	Volatile oil	Given in substance.
— porrum	65	186	Bulb	Stimulant and diuretic	5a.—5ij.	Volatile oil	Given in the form of expressed juice.
— sativum	66	185	Bulb	Stimulant and diuretic	5a.—5ij.	Volatile oil	Given in substance, or in the form of expressed juice.
<i>le spicata</i>	67	188	Extract	{ Stimulating purgative	gr. v.—gr. xv.	Resin	{ Decoct. aloes co. Tinct. aloes, aloes co., et benzoini co. Vin. aloes. Pil. aloes c. myrrha, et cambogiae co. Pulv. aloes co.
— vulgaris	68	189	Extract				{ Ex. aloes pur., et colocynthidis co.
<i>hrea officinalis</i>	140	70	Leaves and root	Demulcent	Ad libitum	Mucilage	Syrupus althaeae.
<i>ydalus communis</i>	104	39	Kernel	Demulcent	Ad libitum	Fixed oil	Ol. amygdalae. Mist. amygdalae. Conf. amygdalae.
<i>rys elemifera</i>	73	37	Resin	Stimulant	Used externally.	Resin and volatile oil	Unguentum elemi comp.
— gileadensis	74	38	Liquid resin	Stimulant	Not used	Volatile oil	Not used.
<i>chusa tinctoria</i>	22	125	Root	Colouring	Colouring matter	Colouring matter	Used for colouring oils and ointments.
<i>ethum foniculum</i>	45	77	Seeds	Carminative	5j.—5j.	Volatile oil	Aqua foniculi. Spiritus juniperi comp.
— graveolens	46	76	Seeds	Carminative	5j.—5j.	Volatile oil	Aqua anethi.
<i>celica archangelica</i>	44	75	Seeds and root	Carminative	5j.—5j.	Volatile oil	Given in substance.
<i>hemis nobilis</i>	158	97	Flowers	Tonic and carminative	5j.—5j.	Piperina and volatile oil	Inf. anthemidis. Extr. anthemidis. Ol. anthemidis.
— pyrethrum	159	98	Root	Stimulant	gr. v.—x.	Fixed oil	Chewed, to excite the flow of saliva.
<i>etus uva-ursi</i>	84	111	Leaves	Astringent	5j.—5j.	Tannin and Gallic acid	Given in powder.
<i>tium lappa</i>	153	100	Seeds and root	Diuretic	5j.—5j.	Inuline	Given in powder.
<i>stochia serpentaria</i>	167	157	Root	Stimulating tonic	gr. x.—5a.	Volatile oil and resin	Tinct. serpentariae, et cinchonae comp.
<i>ica montana</i>	160	99	Flowers and root	Narcotic and stimulant	gr. v.—x.	Cytisina and resin	Given in powder or infusion.
<i>emisia absinthium</i>	161	101	Leaves and tops	Tonic and anthelmintic	gr. j.—5ij.	Volatile oil and resin	Given in powder or infusion.
— chinensis	162	102	Leaves	Counter irritant	5j.—5j.	Moxa	Used for preparing Moxa.
— santonica	163	103	Seeds and tops	Anthelmintic	5j.—5j.	Volatile oil and resin	Given in powder or infusion.
<i>rum europaeum</i>	100	158	Leaves	Errhine	gr. ij.—v.	Cytisina and volatile oil	Snuffed up the nose.
<i>idium filix-mas</i>	196	202	Root	Astringent and anthelmintic	5j.—5ij.	Volatile oil and tannin	Given in powder.
<i>ragalus verus</i>	143	45	Gum	Demulcent	gr. x.—5j.	Cerasin	Pulv. tragacanthae comp.
<i>opa belladonna</i>	23	126	Leaves	Narcotic	gr. j.—x.	Atropia	Extractum belladonnae.
<i>ena sativa</i>	14	195	Seeds	Demulcent	Ad libitum	Fecula	Used for preparing grits.
<i>plandia trifoliata</i>	24	33	Bark	Stimulant and tonic	gr. x.—5a.	Volatile oil and resin	Infusum cuspariae.
<i>wellia serrata</i>	85	39	Gum resin	Stimulant and diaphoretic	gr. v.—5j.	Volatile oil and resin	Used to perfume sick rooms.
<i>bon galbanum</i>	47	78	Gum resin	Stimulant and anti-spasm	gr. x.—5a.	Gum-resin	Pilulae galbani comp. Emplastrum galbani comp.
<i>ella alba</i>	101	28	Bark	Stimulant and tonic	gr. x.—5a.	Volatile oil and resin	Vinum aloes.
<i>icum annuum</i>	29	127	Fruit	Stimulant	gr. v.—x.	Fixed oil	Tinctura capsici.
<i>amine pratensis</i>	136	10	Flowers	Diuretic and anti-spasm	5a.—5ij.	Acrid oil	Given in powder.
<i>um carui</i>	48	79	Seeds	Carminative	gr. x.—5j.	Volatile oil	{ Tinct. sennae, et cardamomi co. Ol. carui. Aqua carui. Sp. carui, et juniperi co. Conf. opii, et rutae. Emp. cumini.
<i>ia fistula</i>	86	46	Pulp of the pods	Laxative	5ij.—5j.	Sugar and mucus	Confectio cassiae, et sennae.
— senna	87	47	Leaves	Purgative	5j.—5j.	Cathartine	{ Tinc. sennae, Inf. sennae, Conf. sennae, Syr. sennae, Pulv. sennae co.
<i>haelis ipecacuanha</i>	25	95	Root	Expectorant and emetic	gr. a.—5a.	Emetina	Vin. ipec. Pulv. ipec. co.
<i>roia centaurium</i>	30	119	Flowering tops	Tonic	5j.—5j.	Bitter resin	Given in powder.
<i>chona cordifolia</i>	26	92	Bark	Tonic	5a.—5ij.	Quinia	{ All the pharmaceutical preparations are made with the Cin- chona lancifolia, Inf. cinchonae, Decoc. cinchonae, Ex. cin- chonae, et cinchonae resinosum. Tinct. cinchonae, et cin- chonae co.
— lancifolia	27	91	Bark	Tonic	5a.—5ij.	Cinchonia	
— oblongifolia	28	93	Bark	Tonic	5a.—5ij.	Quinia and cinchonina	
<i>ras aurantium</i>	150	29	Rind of the fruit	Tonic and stomachic	5j.—5j.	Bitter principle & volatile oil	{ Inf. aurantii co., et gent. co. Tinct. aurantii, cinchonae co., et gent. co., Conf. aurantii, Sp. armoraciae co. Syr. aurantii.
— medica	151	30	{ Juice of the fruit { Rind of the fruit	Refrigerant Tonic and stomachic	Ad libitum 5j.—5j.	Citric acid Bitter principle & volatile oil	Acidum citricum. Syr. limonum.
<i>culus palmatus</i>	186	7	Root	Tonic	gr. x.—5j.	Colombina	Inf. calumbae. Tinct. calumbae.
<i>chlearia armoracia</i>	135	11	Root	Stimulant and diuretic	5j.—5j.	Volatile oil	Inf. armoraciae co. Sp. armoraciae co.
<i>chicum autumnale</i>	71	192	{ Bulb { Seeds	{ Narcotic and purgative	gr. ij.—gr. viij.	Veratria	{ Acet. colchici. Vin. colchici. { Sp. colchici ammoniacus.
<i>olum maculatum</i>	49	82	Leaves				Extractum conii.
<i>nvolvulus jalapa</i>	31	124	Root	Cathartic	gr. x.—5a.	Resin	Tinctura jalapae. Ex. jalapae.
— sammonia	32	123	Gum resin	Cathartic	gr. v.—5j.	Resin	Pulv. scammi co., et sennae co., Conf. scammi. Ex. colocynth. co.
<i>paifera officinalis</i>	88	48	Liquid resin	Diuretic and stimulant	M. x.—5a.	Volatile oil	Given in substance.
<i>randrum sativum</i>	50	81	Seeds	Carminative	5j.—5j.	Volatile oil	Confectio sennae.
<i>ocus sativus</i>	11	183	Stigmas	Stimulant	gr. x.—5a.	Volatile oil and polychroite	{ Tinct. aloes co., cinchonae co., rhei, et rhei co. Pil. aloes c. myrrha, Syr. croci. Conf. aromatica. Decoc. aloes co.
<i>ston cascarrilla</i>	172	159	Bark	Tonic	5j.—5j.	Volatile oil	Inf. cascarrillae. Tinct. cascarrillae.
— tiglium	173	160	Oil of the seeds	Drastic cathartic	M. j.—M. ij.	Fixed oil	Given in substance.
<i>cumis colocynthis</i>	174	73	Pulp of the fruit	Drastic cathartic	gr. ij.—gr. vj.	Colocynine	Ex. colocynthidis, et colocynthidis comp.
<i>minum cyminum</i>	51	83	Seeds	Carminative and stimulant	5j.—5j.	Volatile oil	Emplastrum cumini.
<i>reuma longa</i>	1	181	Root	Carminative and tonic	gr. x.—5a.	Volatile oil	Given in powder.
<i>phne mezereum</i>	75	156	Bark of the root	Stimulating diaphoretic	gr. j.—gr. x.	Daphnin	Decoctum sarsaparillae co.
<i>tura stramonium</i>	33	128	Leaves and seeds	Narcotic	gr. a.—gr. x.	Daturia	Extractum stramonii.
<i>ucus carota</i>	52	84	Seeds	Carminative	5j.—5j.	Volatile oil	The root is used in the form of poultice.
<i>iphinium staphisagria</i>	120	2	Seeds	Cathartic	gr. ij.—gr. x.	Delphinia	Rarely used, excepting to destroy Pediculi.
<i>italis purpurea</i>	133	132	Leaves	Diuretic and sedative	gr. j.—gr. ij.	Digitaria	Tinct. digitalis. Inf. digitalis.
<i>soma crenata</i>	34	31	Leaves	Tonic and diuretic	5j.—5j.	Volatile oil and extractive	Given in the form of infusion.
<i>liches pruriens</i>	144	49	Hairs of the pods	Anthelmintic	gr. v.—gr. x.	Mechanical	Given in substance.
<i>stenia contrajerva</i>	19	163	Root	Tonic and sudorific	gr. x.—5j.	Acrid principle	Pulvis contrajervae comp.
<i>yobalanops camphora</i>	116	23	Camphor	Stimulant and diaphoretic	gr. ij.—gr. x.	Camphor	{ Tinct. camph. co., Mist. camph., Sp. camph., Lin. camphorae, camphorae co., saponis co., et hydrargyri.
<i>ettaria cardamomum</i>	2	180	Seeds	Carminative	gr. v.—5j.	Volatile oil	{ Tinct. card. co., card. co., cinnam. co., gent. co., rhei, et sennae. Sp. Aethris aromat., Ex. colocynthidis co., Conf. aromatica, Pulv. cinnam. co.
<i>igenia caryophyllata</i>	105	69	Flower buds	Stimulant and aromatic	gr. v.—5j.	Volatile oil	{ Inf. caryoph., et aurant. co. Vinum opii. Conf. aromat., et scammoniae.
<i>phorbia officinarum</i>	103	161	Gum resin	Errhine	gr. j.—gr. ij.	Acrid resin	Snuffed up the nose.
<i>rula assafoetida</i>	53	85	Gum resin	Anti-spasm and expectorant	gr. v.—5j.	Gum resin	{ Tinct. assafoetidae. Mist. assafoetidae. Sp. ammon. foetidus, Pil. galbani co.
<i>cus carica</i>	194	164	Fruit	Demulcent	Ad libitum	Sugar	Decoctum hordei co. Conf. sennae.
<i>axifus ornus</i>	195	116	Manna	Laxative	5a.—5j.	Sugar	Confectio cassiae.
<i>cus vesiculosus</i>	197	203	Whole plant	Deobstruent	gr. x.—5ij.	Iodine	The burnt plant given in powder.
<i>astiana lutea</i>	54	120	Root	Tonic	gr. x.—5j.	Bitter extractive	Tinct. gentianae co., Inf. gentianae co., Ex. gentianae.
<i>soffroya inermis</i>	146	50	Bark	Anthelmintic	5j.—5a.	Resin	Given in powder.
<i>um urbanum</i>	111	60	Root	Astringent	5a.—5j.	Tannin	Given in powder.
<i>pyrrhiza glabra</i>	145	51	Root	Demulcent	5j.—5j.	Sarcocoll	Decoct. sarsapa. co., Inf. lini, Ex. glycyrrhizae, Conf. sennae.
<i>atiola officinalis</i>	4	133	Herb	Cathartic	gr. x.—5a.	Bitter principle	Given in powder.
<i>alsicum officinale</i>	89	27	Resin	Diaphoretic	gr. x.—5a.	Guaiac	{ Tinct. guaiaci, et guaiaci ammon., Decoct. sarsapa. co., Mist. guaiaci, Pil. hyd. submur. co., Pulv. aloes co.
<i>ematoxylon campechia</i>	90	52	Wood	Astringent	5j.—5j.	Tannin	Extractum haematoxyli.
<i>eleborus foetidus</i>	121	3	Leaves	Anthelmintic	gr. v.—gr. xv.	Acrid principle	Given in powder.
— niger	122	4	Root	Cathartic	gr. v.—5j.	Acrid principle	Tinctura hellebori nigri.
<i>traleum gummiferum</i>	55	86	Gum resin	Stimulating expectorant	gr. x.—5a.	Gum resin	{ Mist. ammoniaci, Pil. scillae co., Emp. ammoniaci, et ammo- niaci c. hydrargyro.

TABLE, No. 4, (continued.)

Name.	How obtained.	Composition.	Properties.	Dose.	Pharmaceutical Preparations, and Practical Remarks.
Potassæ sulphas	{ Prepared from the residue after the distillation } { of Nitric acid..... }	{ 1 Potassa = 48 } { 1 Sulphuric acid = 40 } 88.....	Cathartic	gr. x.—5j.	Pulvis ipecacuanhæ compositus.
— supertartaras.....	Purified Tartar, <i>vide</i> Tartarum	{ 1 Potassa = 48 } { 2 Tartaric acid = 132 } 180	Purgative	5ij.—5vj.	{ Acidum tartaricum, Ferrum tartarizatum, Potassæ tartaras, Sodæ tartarizata, Antimonium tartari- zatum.
Potassa impura.....	{ By lixiviating the ashes of land plants, and eva- } { porating the solution to dryness	Impure carbonate of potassa	Not used		Potassæ subcarbonas.
Sapo durus	{ By boiling olive oil with Barilla, and a small } { quantity of quicklime..... }	{ Margaric and Oleic acids, with } { soda	Laxative	gr. v.—5ss.	{ Pil. saponis c. opio, et scillæ co., Emp. saponis, Ceratum saponis, Lin. saponis co., Ex. colocyn- thidis co.
Sapo mollis	By boiling fat or oil with potassa.....	Margaric & Oleic acids, with potassa	Used externally..		Used in frictions to sprains and bruises.
Sevum	The suet obtained from the Ovis aries	Elaine and Stearine	Used externally..		Sevum præparatum, Emplastra et Unguenta varia.
Sodæ murias	A natural production	{ 1 Sodium = 24 } { 1 Chlorine = 36 } 60	{ Tonic	gr. x.—5j.	{ This salt is strictly a Chloride of sodium.
— subboras	{ A natural production, found in Persia and Thi- } { bet; and imported into this country under the } { name of <i>Tincal</i> }	{ 1 Soda = 32 } { 2 Boracic acid = 48 } 80	Detergent	gr. x.—5ss.	{ Mel boracis. This salt is strictly a Bi-borate of soda.
Soda impura	{ By burning marine plants, with a sufficient de- } { gree of heat to cause the ashes to enter into } { a state of semifusion	Impure carbonate of soda	Not used		Sodæ subcarbonas.
Spiritus rectificatus.....	From sugar, by exciting the vinous fermentation ...	{ 1 Oxygen = 8 } { 2 Carbon = 12 } 23.....	Stimulant	Not used	{ Alcohol, Sp. camph., ammon., ammon. arom., ammon. succin., cinnam., menth. p., menth. v., et lavand., Tinct. aloes, aloes co., assafoetid., benzoini co., castor., ferri. mur., gualaci, myr- rhæ, et zingiberis, Liq. hydrarg. oxymuriatis.
— tenuior	{ By mixing 4 parts, by measure, of rectified spi- } { rit, with 3 of water				{ All the Tinctures and Spirits which are not pre- pared with rectified spirit.
Spongia	Found in the Mediterranean and Red Seas.....	Principally gelatine and albumen	Deobstruent	5ss.—5ij.	Spongia usta, its properties depending on Iodine
Stannum	Found native, and mineralized	Atomic weight, 59	Anthelmintic	5j.—5ij.	Stanni limatura.
Succinum	Found on the coast of the Baltic.....	{ Volatile oil, Succinic acid, Re- } { sin, and Bituminous matter }	Not used		Oleum succini.
Sulphur	Found native, and mineralized	Atomic weight, 16	Laxative	5ss.—5ij.	{ Sulphur lotum, sublimatum, et præcip., Ol. sul- phur., Potassæ sulphur., Ung. sulphur. et sul- phur. co., Hydrarg. sulphur. nigrum, et rubrum.
Tartarum	Deposited on the sides of wine casks	{ Impure supertartrate of po- } { tassa, <i>vide</i> Potassæ super- } { tartaras	Not used		Potassæ supertartaras.
Testæ	The shells of the <i>Ostrea edulis</i>	{ Carbonate of lime, and animal } { matter	Antacid	5j.—5ij.	Testæ præparatæ.
Zincum	From the native Carbonate, or Sulphuret.....	Atomic weight, 34	Not used		Zinci sulphas.

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