NOTE ON TESTING CALCIUM COMPOUNDS.

BY CARL E. SMITH.

This is written to draw attention to a deficiency in the tests of the United States Pharmacopœia for the identification of calcium compounds and for the detection of certain possible contaminations, such as might easily lead to serious results because of the false sense of security the official tests would give. As an example, it might be mentioned that a specimen of strontium carbonate containing several percent of barium carbonate will stand all the tests given in the U. S. P. for establishing the identity and purity of precipitated calcium carbonate.

A sample of powder was recently submitted to the writer for analysis, which, because of a statement accompanying it concerning its uses, was supposed to consist, in greater part at least, of calcium salts. Preliminary tests proved presence of alkaline earth carbonate in large quantity. This led to the tentative conclusion that the powder probably consisted chiefly of calcium carbonate, as there was no reason to suspect presence of barium or strontium salts. Absence of color and complete solubility in dilute acids excluded the presence of elutriated native chalk. It was therefore expected that the U. S. P. tests laid down for precipitated chalk would definitely establish its identity as such and also detect in great probability any impurity or admixture. The sample stood all the tests and conformed also to the description of physical properties given. A little sodium chloride and traces of iron were found and as the U. S. P. lacks a test for magnesia, which is often found in calcium salts to some extent, a test was made in the usual way with phosphate, and a reaction was obtained that apparently indicated presence of a small amount of that impurity. Dependence on the U. S. P. tests, therefore, would have led to the conclusion that the specimen in question not only was calcium carbonate, but a salt of such a degree of purity as to warrant its use in medicinal preparations.

Further examination, however, showed that the sample was *not* calcium carbonate, that it contained neither calcium nor magnesium, but consisted of strontium carbonate contaminated with about 1.5 percent of barium carbonate.

The test upon which the Pharmacopœia relies entirely for the identification of calcium salts is the production of a precipitate on addition, to the neutral solution, of a solution of ammonium oxalate, said precipitate to be soluble in hydrochloric acid, but insoluble in acetic acid. But this reaction is by no means characteristic of calcium alone. It is shared by strontium and to some extent by barium and neither of these latter is excluded or detected by any other test provided. It is true that calcium salts are not liable to contain either barium or strontium as natural impurities, nor are these liable to be introduced in the course of manufacture, but accidental substitution or admixture might readily take place and such contingencies should certainly be guarded against by suitable means.

Examination of the text of the U. S. P. pertaining to other calcium salts show that in no case do the tests adequately differentiate calcium from other alkaline earth compounds. A test for the identification of a substance should be characteristic enough to distinguish it from everything else, beyond all reasonable doubt.

Of course, the remedy for the defects pointed out in this note is self-evident to every competent analyst. It need only be mentioned that a saturated water solution of calcium sulphate would seem to be the simplest means of detecting the presence of either barium or strontium.

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PHARMACOPŒIAL BOTANIC DRUGS OF THE TWENTIETH CENTURY*

By E. N. Gathercoal

Latin plant names	English names	Austrian	Belgian	British	Croatian	Danish	French	German	Hungarian	Italian	Japanese	Mexican	Netherlands	Norwegian	Russian	Servian	Spanish	Swedish	Swiss	U. S. P. VIII	U. S. P. IX
191. **Elaphrium tomentosum, res**	Tacamahaca																X				
192. **Elettaria Cardamomum, ft**	Cardamon	X			X	X		X	X		X	X	X	X	X	X		X	X	X	
193. **Elettaria Cardamomum, s**	Cardamon Seed			X																	X
194. **Embelia Ribes, ft**				X																	
195. **Equisetum arvense, ster. hb**	Scouring Rush	X							X												
196. **Erigeron Canadense, v. o. fm. hb**	Oil of Fleabane																			X	
197. **Eriodictyon Californicum, lv**	Yerba Santa																			X	X
198. **Erythræ Centaurium, fl. hb**	Centaury	X	X		X		X	X	X	X			X		X	X	X		X		
199. **Erythræa Chilense, hb**																	X				
200. **Erythronium Dens-canis, stch. rt**	Adder's Tongue Starch										X										
201. **Erythroxylon Coca, lv**	Coca Leaves						X	X		X	X	X					X		X	X	
202. **Eucalyptus globulus, lv**	Eucalyptus		X		X		X			X	X	X	X			X	X		X	X	X
203. **Eucalyptus globulus, v. o**	Oil of Eucalyptus			X	X		X		X	X	X	X					X			X	X
204. **Eucalyptus rostrata, g**	Red Gum			X																	
205. **Eugenia caryophyllata, fl. bd**	Cloves	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
206. **Eugenia caryophyllata, v. o**	Oil of Cloves			X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X
207. **Eugenia Jambolana, bk**	Jambul												X								
208. **Eugenia Jambolana, s**	Java Plum												X								
209. **Euonymus atropurpureus, rt. bk**	Wahoo			X			X													X	X
210. **Eupatorium perfoliatum, fl. hb**	Boneset																			X	
211. **Euphorbia resinifera, i. m. j**	Euphorbium	X	X		X	X	X	X	X	X		X		X	X	X	X	X	X		
212. **Exogonium purga, tu**	Jalap	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
213. **Fagus sylvatica, emp. o**	Beechwood Tar	X			X				X				X								
214. **Ferula species, g. res**	Asafœtida	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
F. Asafœtida						X	X	X			X	X	X	X			X	X			X
F. fœtida				X			X	X					X				X	X		X	X
F. Narthex		X	X			X	X		X	X	X			X	X		X	X	X		
F. Scorodosma		X	X							X					X						
215. **Ferula species, g. res**	Galbanum	X	X			X	X	X		X	X	X	X	X	X		X	X	X		
F. galbaniflua		X	X			X	X	X		X		X	X	X	X		X	X	X		
F. rubricalis		X	X								X	X		X	X						
216. **Ferula species, rt**	Sumbul											X								X	X
F. Sumbul												X									
217. **Ficus Carica, ft**	Figs																			X	
218. **Fœniculum vulgare, ft**	Fennel	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
219. **Fœniculum vulgare, v. o**	Oil of Fennel	X	X		X	X		X	X		X		X	X	X	X			X	X	X
220. **Fœniculum vulgare, lv**	Fennel Leaves						X														
221. **Fœniculum vulgare, rt**	Fennel Root						X			X							X				
222. **Fragaria vesca, ft**	Strawberries											X					X				
223. **Fragaria vesca, rh. & rt**	Strawberry Root											X					X				

*Continued from page 293, March issue.

224. Fraxinus Ornus, sacch. exud.	Manna	×	×		×	×	×	×	×	×	×	×		×	×	×	×	×	×	×	×
225. Fumaria officinalis, hb.	Fumitory						×					×					×				
226. Galeopsis ochroleuca, fl. hb.	Galeopsis	×																			
227. Garcinia Hanburyi, g. res.	Gamboge	×	×				×	×		×	×	×					×	×	×	×	×
228. Gaultheria procumbens, v. o. lv.	Oil of Wintergreen																			×	
229. Gelidium species, mu.	Agar						×					×			×						×
230. Gelsemium sempervirens, rh. & rt.	Yellow Jasmine			×							×	×							×	×	×
231. Gentiana species, rh. & rt.	Gentian	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
G. lutea		×	×	×		×	×	×	×	×	×	×	×	×	×		×	×	×	×	×
G. Pannonica		×				×		×			×			×	×						
G. punctata						×		×	×		×				×						
G. purpurea						×		×	×		×			×	×						
232. Gentiana scabra, rt.	Japanese Gentian										×										
233. Geranium maculatum, rh.	Cranesbill																			×	
234. Geum urbanum, rh. & rt.	Water-avens					×															
235. Gigartina mamillosa, th.	Irish Moss	×	×			×		×			×		×					×		×	×
236. Glecoma hederacea, lv. or hb.	Ground Ivy						×											×			
237. Glycyrrhiza glabra, rh. & rt.	Spanish Licorice	×	×	×	×		×	×		×		×	×			×	×			×	×
238. Glycyrrhiza glabra, var glandulifera	Russian Licorice	×			×	×	×		×		×		×	×	×	×		×	×	×	×
239. Gossypium species, s. h. cl.	Purified Cotton	×	×	×	×		×	×	×	×	×	×	×		×	×	×	×	×	×	×
240. Gossypium species, f. o. s.	Cotton Seed Oil																			×	×
241. Gossypium species, rt. bk.	Cotton Root Bark			×								×								×	
G. arboreum												×									
G. anomalum												×									
G. Barbadense		×										×			×						
G. herbaceum		×		×								×			×		×			×	×
G. hirsutum															×						
242. Grindelia species, lv. & fl. tp.	Grindelia			×			×					×			×					×	×
G. camporum				×																	×
G. cuneifolia																					×
G. robusta							×					×			×						
G. squarrosa												×								×	×
243. Guaiacum officinale, ht. wd.	Lignum Vitæ	×		×				×		×	×	×		×	×		×		×		
244. Guaiacum officinale, res.	Guiaic	×		×	×		×			×	×	×				×	×	×	×	×	×
245. Gynocardia odorata, f. o. s.	Chaulmoogra Oil										×	×									
246. Hæmatoxylon Campeachianum, ht. wd.	Logwood	×		×								×								×	
247. Hagenia Abyssinica, pistil. infl.	Cusso	×	×	×	×		×	×	×	×	×	×			×		×	×	×	×	
248. Hamamelis Virginiana, bk.	Witchhazel Bark			×								×					×			×	

192. U. S. P. VII—E. repens.
193. U. S. P. IX—E. repens.
194. British—also from E. robusta.
198. Austrian—Centaurium minor.
203. Belgian, Norwegian, Swedish and Swiss recognize eucalyptol instead of volatile oil.
205. Belgian—Caryophyllus aromaticus; German and Swiss—Jambosa caryophyllus; Hungarian and U. S. P. VII and IX—E. aromatica.
206. Austrian, Belgian, Norwegian and Swedish recognize eugenol in place of volatile oil.
212. Belgian, British, Italian, Netherlands, Russian and Servian—Ipomea purga.
218. Danish—F. capillaceum; Russian—F. officinale.
224. Netherlands recognize mannite in place of manna.
227. Belgian and Spanish—G. morellæ.
228 U. S. P. IX—replaced by methyl salicylate.
229. U. S. P. IX—also from species of Gracilteria and Gloiopeltis.
230. British—from G. nitidum.
243. British, German, Italian, Norwegian and Swiss—also from G. sanctum.
244. British, Italian and U. S. P. VII and IX—also from G. sanctum.
247. British—Brayera anthelmintica.

Latin plant names	English names	Austrian	Belgian	British	Croatian	Danish	French	German	Hungarian	Italian	Japanese	Mexican	Netherlands	Norwegian	Russian	Servian	Spanish	Swedish	Swiss	U. S. P. VIII	U. S. P. IX
249. Hamamelis Virginiana, lv	Witchhazel Leaves	X	X	X	..	..	X	..	..	X	X	X	..	X	..	..	X	X	X	X	..
250. Hedeoma pulegioides, fl. hb	Pennyroyal	..	..	..	..	..	..	..	..	..	..	X	..	..	..	..	..	..	..	X	..
251. Hedeoma pulegioides, v. o	Oil of Pennyroyal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	X	..
252. Helleborus niger, rh	Black Hellebore	..	X	..	..	..	..	..	..	..	..	X	..	..	..	..	..	..	..	..	..
253. Herniaria glabra, fl. hb	..	X	..	..	..	..	..	..	..	..	..	..	..	..	..	X	..	..	..	..	..
254. Hevea species, coag. milk-juice	Caoutchouc	X	..	..	..	..	X	X	X	..	X	X	X	..	..	..	X	X	X	X	..
H. Braziliensis	..	X	..	..	..	..	X	..	X	..	..	..	..	..	..	..	..	X	..	..	..
H. guyanensis	..	X	..	..	..	..	..	..	..	..	..	X	..	..	..	..	X	..	..	..	..
255. Hibiscus japonicus, rt	..	..	..	..	..	..	..	..	..	..	X	..	..	..	..	..	..	..	..	..	..
256. Hordeum vulgare, decorticated ft	Pearl Barley	..	..	..	..	..	X	..	..	..	..	..	X	..	..	..	X	..	..	..	..
257. Hordeum vulgare, malted ft	Malt	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	X	X
258. Humulus Lupulus, stro	Hops	..	..	..	..	..	X	..	..	..	..	X	..	..	..	..	X	..	..	X	X
259. Humulus Lupulus, gland, hairs	Lupulin	X	..	..	..	..	..	..	..	X	..	X	X	..	..	..	..	..	X	X	..
260. Hydrastis Canadensis, rh. & rt	Goldenseal	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
261. Hydrocotyle Asiatica, lv	Indian Pennywort	..	..	..	..	..	..	..	..	..	..	X	X	..	..	..	X	..	..	..	..
262. Hyoscyamus niger, lv	Henbane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
263. Hyoscyamus niger, s	Henbane Seed	..	..	..	..	X	X	..	..	..	..	X	..	..	..	..	X	..	..	..	..
264. Hypericum perforatum, fl. hb	St. John's Wort	..	..	..	X	..	X	..	..	..	..	X	..	..	..	X	X	..	..	..	..
265. Hyssopus officinalis, fl. hb	Hyssop	..	..	..	..	..	X	..	..	..	..	..	..	..	..	..	X	X	..	..	..
266. Illicium verum, ft	Star Anise	X	..	..	..	..	X	..	X	X	..	..	..	..	X	..	..	X	X	..	..
267. Illicium verum, v. o	Oil of Anise	..	..	X	..	..	X	..	..	..	..	..	..	..	..	..	..	..	..	X	X
268. Inula Helenium, rt	Elecampane	..	..	..	..	..	..	..	..	..	..	X	X	..	..	..	..	..	..	..	..
269. Ipomœa hederacea, s	Pharbitis Seed	..	..	X	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
270. Ipomœa orizabensis, rt	Mexican Scammony	..	..	X	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
271. Ipomœa Turpethum, rt. & st	Turpeth	..	..	X	..	..	X	..	..	..	..	X	..	..	..	..	X	..	..	..	..
272. Iris Florentina, I Germanica and I pallida, rh	Orris	X	X	..	..	X	..	X	X	X	X	X	X	..	X	..	X	X	X	..	..
273. Jateorrhiza palmata, rt	Calumba	X	X	X	X	X	X	X	X	X	X	X	X	X	X	..	X	X	X	X	X
274. Juglans regia, lv	Walnut Leaves	X	X	..	..	..	..	X	..	..	..	X	..	..	..	..	X	..	X	..	..
275. Juniperus communis, ft	Juniper Berries	X	X	..	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	..	..
276. Juniperus communis, v. o	Oil of Juniper	X	..	X	X	..	X	X	X	X	X	..	..	X	..	X	..	..	X	X	X
277. Juniperus communis wd. rt	..	X	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
278. Juniperus oxycedrus, empy. o	Oil of Cade	X	..	X	X	X	..	..	X	X	X	..	X	X	X	X	X	X	X	X	X
279. Juniperus Sabina, tp	Savin	X	X	..	X	X	X	..	X	X	..	X	X	..	..	..	..	..	X	X	..
280. Juniperus Sabina, v. o	Oil of Savin	..	X	..	..	..	..	..	..	..	X	..	..	..	..	..	..	..	..	X	..
281. Krameria triandria, rt	Rhatany, Peruvian	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	..
282. Lactuca virosa, i. m. j	Lactucarium	..	..	..	..	..	..	..	X	..	..	X	X	..	..	..	X	..	..	X	X
283. Lactuca sativa, hb	Lettuce	..	..	..	..	..	..	..	..	..	..	X	..	..	..	..	X	..	..	..	..
284. Laminaria Cloustonii, ths	Sea-weed Tents	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	X	..	..	..	..
285. Larix decidua, olres	Venice Turpentine	..	X	..	X	X	X	..	X	X	..	..	X	X	X	..	X	X	X	..	..
286. Laserpitium Siler, ft	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	X	..	..	..	..

287. Laurus nobilis, ft	Bayberries	X	X				X	X		X		X			X		X				
288. Laurus nobilis, f. o. ft	Oil of Laurel	X	X		X			X	X	X	X	X	X	X	X	X			X		
289. Laurus nobilis, lv	Bay Leaves											X					X				
290. Lavendula vera, fl	Lavender Flowers	X	X			X		X			X	X		X	X				X		
291. Lavendula vera, fl. tp	Lavender Herb						X			X							X				
292. Lavendula vera, v. o	Oil of Lavender	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
293. Leonurus lanatus, hb	Motherwort								X												
294. Levisticum officinale, rh. & rt	Lovage							X											X		
295. Linum usitatissimun, s	Linseed	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
296. Linum usitatissimun, gr. s	Linseed Meal		X	X			X						X				X				
297. Linum usitatissimun, f. o	Linseed Oil	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X
298. Linum usitatissimun, pressed cake	Flaxseed Cake	X						X													
299. Liquidamber orientalis, balsm	Storax	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
300. Lobelia inflata, fl. hb	Indian Tobacco	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X
301. Lycopodium clavatum, spo	Lycopodium	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
302. Mallotus Philippinensis, gland. hairs	Kamala	X			X			X	X	X	X	X			X			X	X		
303. Malva sylvestris, lv. or hb	Mallow Leaves	X			X			X	X	X		X		X			X		X		
304. Malva sylvestris, fl	Mallow Flowers	X	X				X	X	X	X	X				X	X	X		X		
305. Manihot utilissima, stch. tu	Tapioca											X	X								
306. Maranta arundinacea, stch. tu	Bermuda Arrowroot		X			X						X	X								
307. Marrubium vulgare, fl. hb	Horehound											X								X	
308. Marsdenia Condurango, bk	Condurango	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X		
309. Matricaria chamomila, fl. hd	German Chamomile	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
310. Matricaria chamomila, v. o	Oil of Chamomile									X									X		
311. Melaleuca Leucadendron, v. o. lv	Oil of Cajaput	X		X						X	X		X		X		X		X	X	X
312. Melilotus officinalis, fl. hb	Sweet Clover	X						X		X		X			X						
313. Melissa officinalis, lv	Balm	X	X		X			X	X		X					X			X		
314. Melissa officinalis, fl. hb	Balm					X	X			X				X			X				
315. Melissa officinalis, v. o	Oil of Lemon Balm		X																		
316. Mentha arvensis, var. piperascens, lv	Japanese Peppermint										X										
317. Mentha arvensis, var. piperascens, v. o	Oil of Peppermint										X										
318. Mentha crispa, v. o. lv	Oil of Curled Mint			X											X						
319. Mentha piperita, lv. & fl. tp	Peppermint	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
320. Mentha piperita, v. o. hb	Oil of Peppermint	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
321. Mentha viridis, lv. & fl. tp	Spearmint											X								X	X
322. Mentha viridis v. o. hb	Oil of Spearmint			X																X	X
323. Menyanthes trifoliata, lv	Bogbean Leaves	X			X	X	X	X	X		X		X	X	X	X	X	X			
324. Mercurialis annua, fl. hb							X														
325. Minusops Balata, coag. milk juice	Balata Gum												X								
326. Morus nigra, fr. ft	Mulberry						X					X					X				

253. Austrian and Servian—also from H. hirsuta.
257. U. S. P. VIII—H. distichon.
266. Italian—I. anisatum.
273. Austrian, British, Mexican and Netherlands—J. Calumba; French and Spanish—Chasmanthera palmata; Belgian—Cocculus palmata.
281. British and U. S. P. VIII—also from K. argentea (Para Rhatany) and U. S. P. VIII, also from K. Ixina (Savanilla Rhatany).
282. Spanish and Mexican—also from L. altissima.
285. Belgian, Italian, Netherlands, Russian and Spanish—L. Europæa.
286. Spanish—also from L. latifolium.
290. German and Swiss—L. spica; Austrian and U. S. P. VIII—L. officinalis.
303. Austrian, Norwegian and Spanish—also from M. vulgaris; Swiss—also from M. neglecta; Italian—also from M. Niceensis.
308. Belgian, French, Mexican and Spanish—Gonolobus Condurango.
311. Swiss—M. minor.
312. German—also from M. altissimus.

Latin plant names	English names	Austrian	Belgian	British	Croatian	Danish	French	German	Hungarian	Italian	Japanese	Mexican	Netherlands	Norwegian	Russian	Servian	Spanish	Swedish	Swiss	U. S. P. VIII.	U. S. P. IX.
327. Musa species, lv. wax	Cera Pisang												X								
328. Myristica fragrans, s. kl	Nutmeg	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X
329. Myristica fragrans, v. o	Oil of Nutmeg		X	X							X									X	X
330. Myristica fragrans, f. o	Nutmeg Butter	X					X	X					X						X		
331. Myristica fragrans, seed arillus	Mace	X					X					X			X						
332. Myristica fragrans, v. o	Oil of Mace	X			X			X					X		X	X			X		
333. Myrtus communis, ft	Myrtle Fruit																X				
334. Myrtus communis lv	Myrtle Leaves																X				
335. Nasturtium officinale, fr. hb	Water Cress						X					X					X				
336. Nicotiana Tabacum, lv	Tobacco											X					X				
337. Nyssa silvatica, wd	Tupelo Tents																X				
338. Ocinum Basilicum, fl. hb							X					X									
339. Olea Europæa, f. o. ft	Olive Oil	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
340. Ononis spinosa, rh. & rt	Rest Harrow	X			X			X	X							X			X		
341. Orchis species, tu	Salep	X	X		X			X	X	X	X	X	X	X	X	X		X	X		
342. Origanum dictamnus, fl. tp	Cretan Dittany						X					X					X				
343. Origanum majorana, fl. tp	Marjoram	X					X			X		X	X				X		X		
344. Origanum vulgare, fl. tp	Wild Marjoram	X				X	X					X		X	X		X				
345. Orthosiphon stamineus, lv													X								
346. Oryza sativa, ft	Rice						X														
347. Oryza sativa, stch fm. s	Rice Starch	X	X	X				X					X					X			
348. Ourouparia Gambir, ext. lv	Gambir			X							X		X							X	X
349. Palaquium species, coag. milk-juice	Gutta Percha			X	X		X	X			X		X			X	X	X	X		
350. Papaver Rhœas, pet	Red Poppy Petals	X	X	X			X					X	X				X		X		
351. Papaver somniferum, c. i. m. j	Opium	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
352. Papaver somniferum, unr, ft	Poppy Capsules	X	X		X	X	X		X			X	X		X	X	X		X		
353. Papaver somniferum, lv	Poppy Leaves						X														
354. Papaver somniferum, s	Poppy Seed							X							X						
355. Papaver somniferum, f. o	Poppyseed Oil						X														
356. Paronychia argentea, fl. tp																	X				
357. Paullinia cupana, paste of seeds	Guarana	X							X			X					X		X	X	X
358. Petroselinum sativum, ft	Parsley Fruit																	X	X		X
359. Petroselinum sativum, v. o	Oil of Parsley					X								X							
360. Petroselinum sativum, rt	Parsley Root	X					X										X				
361. Peucedanum graveolens, ft	Dill			X																	
362. Peucedanum graveolens, v. o	Oil of Dill			X																	
363. Peumus Boldus, lv	Boldo Leaves											X					X				
364. Phellandrium aquaticum, ft	Phellandrum									X							X				
365. Physalis Alkekengi, ft	Winter Cherry						X														
366. Physostigma venenosum, s	Calabar Bean		X								X	X					X			X	X

367. Phytolacca acinosa, var. esculenta, rt	Jap. Poke Root										X										
368. Phytolacca decandra; rt	Poke Root											X								X	
369. Picræna excelsa, htwd	Quassia		X	X			X	X		X	X	X	X	X	X		X			X	X
370. Picrorhiza Kurroa, rh				X																	
371. Pilocarpus species, lf	Jaborandi	X	X				X				X	X				X	X		X	X	X
P. Jaborandi	Pernambuco J	X					X									X			X	X	X
P. microphylliss	Maranham J.																			X	X
P. pennatifolius	Rio Jaborandi		X				X					X					X				
372. Pimenta officinalis, ft	Allspice											X					X			X	
373. Pimenta officinalis, v. o	Oil of Allspice																			X	X
374. Pimpinella Anisum, ft	Anise	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
375. Pimpinella Anisum, v. o	Oil of Anise			X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X
376. Pimpinella Saxifraga, rh. & rt	Saxifrage					X		X						X				X	X		
377. Pinites succinifera, fossil res	Amber											X	X								
378. Pinites succinifera, emp. oil	Oil of Amber													X							
379. Pinus species, olr	Turpentine	1,2 3	1		X	1,4	4	1	1,2 3,4 10	1-6	1	1		1	2	X	1,2 11	1,3 4	4	1,6	
380. Pinus species, v. o	Oil of Turpentine	1,2 3	1	1	X	1	4	1	X	1-6	1		1-5 6	1	2	X	1	1,3 4	4	1,6	
381. Pinus species, res	Rosin	1,2 3	1	1	X	1,4	4	1	1	1-6	1	1	1	1	1	X	1,2 11	1	1,6	1,6	1,6
382. Pinus species, emp. o. fm. res		1,2 3				1					X							1,2			
383. Pinus species, emp. prod. fm. wd	Liquid Tar		1	1,2		1	1	1,2		1-6	1	1,2	1	1	1	X	1,2 11	1,2	1	1,6	1,6
384. Pinus species, emp. prod. fm. wd	Solid Tar						1						1		1						
385. Pinus species, v. o. fm. tar	Oil of Tar					1								1				1		1,6	
386. Pinus species, pf. olr	Burgundy Pitch		1		X				4		1				1				4		
387. Pinus species, v. o. lv	Oil of Pine Needles	7		9	X				2	1,2 3,4					2	X			8		9
388. Pinus species, young sprouts							2			X					2		1,2		2		
(1) Pinus species																					
(2) Pinus sylvestris																					
(3) Pinus Laricio																					
(4) Pinus Pinaster																					
(5) Pinus Tæda																					
(6) Pinus palustris																					
(7) Pinus pumilio																					
(8) Pinus montana, var. pumilio																					

343. Austrian and Swiss—Majorana hortensis.
348. British—Uncaria Gambir.
349. Also from Payena species.
357. Austrian and Spanish—P. sorbilis.
360. Austrian—Carum Petroselinum.
369. German, Japanese, Norwegian and U. S. P.—Picrasma excelsa; Japanese—also from Picrasma quassoides.
375. Austrian, Belgian, Japanese and Swedish recognize anethol in place of the volatile oil.
376. Also from P. magna.

(To be continued.)