

## Section on Practical Pharmacy and Dispensing

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### OIL OF EUCALYPTUS GLOBULUS AND THE SOLUBILITY TEST.

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Eucalyptus globulus is the only variety of the eucalyptus growing in the State of California in quantities sufficient to distill oil from. This being a fact, all eucalyptus oil distilled in the State of California must be a true oil of Eucalyptus glob.

I have made a particular effort to get oils of eucalyptus that have been distilled from various parts of the state, and have carefully applied the 70% alcohol solubility test, but have found none that will form a clear solution with three volumes of 70% alcohol U. S. P.

The oil will not form clear solution with three volumes, either in its crude state or after it has been refined.

I have tried fractional distillation, to determine which fractions are and which are not soluble in 70% alcohol. The distilling was carried on in 10% fractions, taking a small portion from each 10% fraction. I find that the first six fractions will not form a clear solution, and that the 7th, 8th, 9th and 10th fractions will form clear solutions.

Thus it can be seen that one can make an oil of the eucalyptus glob. that will stand the solubility test, providing he is willing to waste 60% of his product, which surely would not be a profitable undertaking.

The oil of California Eucalyptus Globulus, when carefully distilled, will stand every test of the Pharmacopoeia with the one exception of the solubility test.

Eucalyptol content appears to me to be the most important matter in any eucalyptus oil. The globulus oil will at all times show a eucalyptol content as high as 60% and 70%, which is above the U. S. P. requirements.

I hardly think that the solubility test has any advantage in enabling one in determining the eucalyptol content, as the fractions that do not stand the solubility test contain the larger portions of the eucalyptol in those that I have taken, yet the oils we have in this market coming from Australia will stand the 70% alcohol test when they contain just enough eucalyptol to pass the U. S. P. requirements.

Oils of eucalyptus respond differently to the 70% alcohol test as to the variety from which they are obtained, some being soluble in one and one half volumes, others in 2 volumes and 3 volumes. It hardly seems fair to California if this 70% test must be adhered to.

I submit herewith samples of oil of eucalyptus. Sample No. 1 is an Australian

oil of eucalyptus, and the one generally sold by the jobber. This oil has a faint citronella-like odor, and is a mixed oil of eucalyptus.

Sample No. 2 is an oil taken from an original package and is labeled eucalyptus globulus. This has an odor resembling that of campho-phenique, an odor that is not found in the globulus oil.

Sample No. 3 is a first distilled oil of the Eucalyptus glob, and one in which the aldehydes predominate. These aldehydes are present always in the globulus oils, by which they are very easily distinguished.

Sample No. 4 is a triple-distilled oil and highly refined, has the aldehydes extracted therefrom, and is a true oil of the California Eucalyptus globulus.

I have yet to find any authority either in a commercial way or from the Australian government but that readily admits that the amount of true Eucalyptus globulus distilled in Australia is so very small that there is great doubt whether any of it ever finds its way to this market.

If we are to conform to the 70% solubility test, then California will have to leave the market to the foreign oil.

It is admitted that the foreign oils will conform to the U. S. P. requirements, but nature does not in the Eucalyptus globulus, produce an oil that will form a clear solution with the 3 volumes of 70% alcohol.

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#### AMERICAN VERSUS EUROPEAN TRAINING IN MEDICINE.

The American doctors still throng the schools of Europe. Many of them imbibe little beyond floods of German beer and a snobbish contempt for their own country. Many go over simply for the *eclat* that is supposed to attach to the man who has studied abroad. Some others find in the methods and men of the Old World much that is really valuable, and some, we hope, also learn to look with pleasure on the achievements of their own countrymen. But, taken all in all, we have more than a suspicion, in truth a deep impression, that nine out of ten of these medical votaries of Europe would learn very much more of the things that would make them better doctors right here in America.

Let us summarize the matter by saying that the doctor should go to Europe when he has learned all that America has to teach him. There is not in all the wide areas between Queenstown and the Urals a therapist whose teachings are so much superior to ours as to justify the expense of a steerage ticket. There are some specialists who are allowed preeminence because they are "foreign." There is not a department of medicine in which American instructors may not be found equal or even superior, in the training of English-speaking men, to the best abroad. Nine-tenths of the money spent on European "study" by medical men is wasted—or should be charged to advertising account.—*Clinical Medicine.*