

solution of shellac was obtained. Further experiments, for instance, with sulphate of baryta, did not give a better result. When such a solution is made on a large scale it would be best filtered through felt.

Notwithstanding that the object of the author had thus been attained, one or two other experiments were tried. To three parts of the above-mentioned shellac solution one part of petroleum ether was added, and the mixture was vigorously shaken. After standing a few moments the liquid separated in two layers; the upper light coloured layer was the petroleum ether with the wax dissolved in it, the lower yellow brown layer was a clear solution of shellac with only a little petroleum ether adhering. Upon allowing the petroleum ether to evaporate spontaneously, the wax that had been dissolved out of the shellac was obtained as a white residue. By using a stronger alcohol (95 per cent.) to dissolve the shellac, and subsequently adding petroleum ether a perfectly clear solution was obtained that only separated into two layers after the addition of water. Consequently an alcohol weaker rather than stronger than 90 per cent should be used.

The shellac solution obtained by means of petroleum ether, however, has the disadvantage that the shellac is left after the evaporation of the petroleum in a somewhat coarser form and easily separates; this may be obviated by the addition of one to three per cent. of Venice turpentine.

Further experiments showed that the petroleum ether could be replaced by the ordinary commercial benzine.

ADULTERATION OF ESSENTIAL OILS.*

Before proceeding into details, we wish to call special attention to the outrageous frauds which are constantly practised in the sale of essential oils. Many of these are daily huckstered about among the dealers and consumers in the larger cities by a class of itinerant vendors who have their stock in trade with them, and who dispose of their wares for almost any offer that they can obtain. Their oils are usually largely and clumsily adulterated, though it is not always possible to prove the admixture by positive chemical tests. One of these New Jersey distillers frankly admitted to the writer that all the commercial oils of cedar, hemlock, and spruce, made by him and his acquaintances, are prepared by putting the branches of the respective trees into the still with an amount of turpentine proportioned to the price they expected to realize. He prided himself not

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