

The essential oils to which allusion will now be made, were all prepared by Messrs. J. Bossisto and W. Johnson, at the suggestion of Baron Von Mueller, who also furnished the material from which they were prepared.

I.—ESSENTIAL OILS FROM CERTAIN SPECIES OF THE GENUS MELALEUCA.

These oils in common with those of Eucalyptine origin, are all possessed of medicinal properties. It is more than probable that they will all be found to act as diffusible stimulants, anti-spasmodics, and sudorifics, greatly resembling the oil of eajput^u of commerce (obtained from *Melaleuca leucadendron*) to which they are so closely related botanically.

With regard to the yield of these plants; it will be observed that they far exceed in productiveness *M. leucadendron*, and the difference would be yet more striking could the leaves be operated on alone: owing to the minuteness of the same however, it is necessary to introduce the smaller branches with them into the still, so that the leaves do not constitute more than a fourth of the weight of the material employed.

In illuminating power they compare most favorably with the best American kerosene, in most cases excelling it. They are good solvents for resins, especially the oil of *M. ericifolia* which is not inferior in this respect to those of Eucalyptine origin: this oil ought perhaps to be regarded as the most important of this division inasmuch as the species yielding it, exists in much greater profusion and covers larger tracts of country than all the others taken together.

Melaleuca linariifolia, Smith—one of the Tea-trees, occurs in East Gipps Land, New South Wales and Queensland.

Yield: 100 lbs. fresh branchlets and leaves, gave 28 fluid ounces. The oil is a light straw-colored mobile fluid: odor resembling that of eajput, but less aromatic and pungent: taste singularly agreeable, strongly suggestive of both mace and nutmeg, followed by the usual mint-like after taste, common in a greater or less degree to the myrtaceous oils. Specific gravity 0.903: boiling point 348° the mercury ceasing to rise at 369°: relative illuminating power 0.982, kerosene = 1.000.