# Oil from the Flowers and Leaves of Lantana Camara.*

*(By Dorab Dinsha Kanga, M. A., F. C. S.)*

Lantana Camara belongs to the natural order "Verbenaceae"; it was originally a native of Tropical America and was introduced into Southern India by an Australian some years back, as a hedge shrub. It has since become a naturalized exotic run wild all over India, and a veritable pest in Southern India. It is known on the Bombay side as *Ghaneri* and also sometimes popularly known as the Heliotrope of the plains. It has square prickly stems and flowers of many shades of colour in the same plant.

The flowers were collected in the months of August and September from places in the neighbourhood of the Institute, dried in air and distilled with steam.

The leaves were also locally collected in the month of January 1912, powdered and extracted with warm alcohol for the determination of the constituents; the alcoholic extract was steam-distilled when an oil came over along with a little free volatile acid. 28·26 grains of the fresh flowers tost 22·2 grams of water on drying at 110°C. Hence moisture is

The yield of the oil from the air-dried flowers was 0·07 , while that from the leaves was 0·2%.

The table on page 95 gives physical properties and some chemical constants of the oils.

When subjected to fractional distillation under a pressure varying from 45 to 55 mm., the following fractions were collected from the oil from the leaves and the refractive index of each fraction determined :—

| Fractions | B. P. | $n_D^{31\cdot5^\circ}$ |
|---|---|---|
| 1. | 145°—154° | 1·48395 |
| 2. | 154°—165° | 1·48914 |
| 3. | 165°—180° | 1·49485 |
| 4. | above 180° | 1·49703 |

* The same paper has appeared in German in the April Number (1914) of Archiv der Pharmazie, Berlin.

Oil from the leaves of tho South American plant (Messrs Schimmel & Co's. lleport).

| Fractions | B. P. | $n_D^{20}$ |
|---|---|---|
| 1. | 125 — 130° (12mm) | 1·4892 |
| 2. | 130 — 1.40° (11mm) | 1·4970 |

The results obtained are very similar to those recorded for the oil from the leaves of ths South American plant (Philippines).

My sincere thanks are duc to my Professor Dr. J. J. Sudborough for his help during the investigation.

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| | Oil from the dried flowers | Oil from the fresh flowers | Oil from the leaves | Oil from the leaves of the South American Plant according to Messrs. Schimmel & Co's. Report October 3909 |
|---|---|---|---|---|
| Colour | Yellow | Yellow | Yellow | Pale yellow |
| Odour | Powerful, persistent and pleasant, reminding of sage. | Powerful, persistent and pleasant, reminding of sage. | Powerful, persistent and pleasant, reminding of sage. | Pleasant, reminding of sage |
| Yield | 0·07% by weight | ... ... | 0·2% by weight | Varying greatly according to age. One yield was 0·07% and another 0·245% by volume. |
| Specific gravity | $D\frac{26°}{15°}$ 0·915 | ... | $D\frac{24°}{24°}$ 0·92114 | $D\frac{30°}{4°}$ 0·9132 |
| Refractive Index .. | $n_D^{26.5°}$ 1·4987 | $n_D^{26.5°}$ 1·5031 | $n_D^{27°}$ 1·48933 | $n_D^{30°}$ 1·4913 |
| Optical Rotation ... | $[a]$Hg = green +23·9° | ... | $[a]_D$ +1·96° | $[a]_D^{30°}$ +11·5° |
| Saponification Value | 10 | ... | | |
| Acetyl Value | 43·6 | ... | ... | ... |