The essential oils isolated by hydrodistillation from Sphaeranthus suaveolens (Forsk) D.C. (0.47%) and S. bullatus Mattf. (0.5%) were analyzed by GC and GC-MS. Seventy eight compounds consisting about 95% of the oil of S. suaveolens were identified while 97 constituents accounting for about 83% were identified from the leaf oil of S. bullatus, The major constituents of the leaf oil of S. suaveolens was cis-pinocamphone (63.5 %) while those of S. bullatus oil were thymol (22.0%), bornyl acetate (8.1%) and germacrene-D (7.9%).