Summer Linden (Tilia platyphyllos Scop.) is one of the woody plants, whose production and consumption is widespread in the world which has a long history of culture. In this study, some morphological features and volatile components of the flowers and leaves of summer linden (Tilia platyphyllos Scop.) were investigated. Samples were collected from Yeniserbademli, Aksu, Belence and Kasımlar villages. To detect morphological properties of this species, measurements were made in leave, flower and brace samples. In the end of measures, it was found leaf height with 4.2-10.8 cm (mean 7.72 cm), leaf width with 4.2-10.2 cm (mean 6.8 cm), leaf petiole length with in the range of 2.8-6.2 cm, 4.42 cm in average, brace length with 4.2-13 cm (8.07 cm), the width of the braces with 1.0-2.5 cm, the average width of the braces with 1.67 cm, the bracelets with 0.1-1.7 cm, average as 0.72 cm, and the number of flowers is at least 2 pieces and the maximum number of flowers is 3. In order to determine the essential oil constituents of summer linden, the leaves, flowers (braces) were dried at room temperature and determined by HS-SPME / GC-MS analysis. As a result of the findings, a total of 113 components were found in the volatile components of the flowers and 62 components were found in the volatile component of the leaves. The most effective components in the volatile components of flowers: (26.66%) (E)-2-Hexenal molecular structure C6H10, (35.52%) 1-Undecyne molecular structure C11H20, (14.88%), n-Hexanal C6H12O, (10.11%), 1Dodecyne C12H22 molecular structure were found. The most common volatile components of the leaves are 2-Hexenal molecular structure (64.84%) C6H10O 1-Decyne molecular structure C10H18 (22.73%).