Rose oil is a specific essential oil that is produced mainly for the cosmetics industry in a few selected locations around the world.

Rose oil production is a water distillation process from petals of *Rosa damascena* Mill. Since the oil content of the rose petals of this variety is between 0.3–0.4% (w/w), almost 4000 to 3000 kg of rose petals are needed to produce 1 kg of rose oil. Rose oil production is a seasonal activity and takes place during the relatively short period where the roses are blooming. As a result, large quantities of solid waste are produced over a limited time interval. This research aims: (i) to determine the possibilities of aerobic co-composting as a waste management option for rose oil processing waste with caged layer manure; (ii) to identify effects of different carbon sources – straw or sawdust on co-composting of rose oil processing waste and caged layer manure, which are both readily available in Isparta, where significant rose oil production also takes place; (iii) to determine the effects of different C/N ratios on co-composting by the means of organic matter decomposition and dry matter loss. Composting experiments were carried out by 12 identical laboratory-scale composting reactors (60 L) simultaneously. The results of the study showed that the best results were obtained with a mixture consisting of 50% rose oil processing waste, 64% caged layer manure and 15% straw wet weight in terms of organic matter loss (66%) and dry matter loss (38%).