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 laboratoryscale 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%).