In this study, production of microcapsules containing fragrance oil obtained from plants was aimed. Production of microcapsules was carried out by complex coacervation of natural polyelectrolyte polymers. Pine (Pinus sylvestris) oil was used as fragrance. Gelatin as poly-cation and sodium alginate as poly-anion were used to form microcapsule shell materials. Morphology of microcapsules was analyzed by optical microscopy and SEM (scanning electron microscopy) and chemical structure of them was analyzed by FTIR spectroscopy. Average particle size and particle size distributions of microcapsules were calculated by using optical microscopy images. Microcapsules were applied to the cotton fabric by exhaustion method and microcapsule presence on the fabric was analyzed by optical microscopy images of fabrics.