Chemical composition of cones of 11 species from Pinaceae family and 3 species from Cupressaceae family were studied. In the study, cell-wall components such as holocellulose, alpha cellulose and klason lignin from 14 different cones were analyzed. Other phenolic compounds in cones, except lignin, could affect total amount of klason lignin. Thus, klason lignin experiments were done both at only extracted samples with ethyl alcohol and extracted with alkali after ethyl alcohol extraction. In addition, solubility of cold and hot water, ethyl alcohol and 1 % NaOH were also determined. The holocellulose was determined between 40.08-62.81 %, α-cellulose 22.54-31.72 %, klason lignin 31.70-48.34 % and 26.16-39.29 %. Besides, solubility in hot water was between 6.41-26.20 %, cold water 1.53-14.96 % ethyl alcohol 7.00-23.77 %, 1 % NaOH 10.58-56.14 %. The amount of ash was also carried out on cone samples and found between 0.50 and 3.93 %.