Phalaenopsis orchids and their hybrids have become one of the most popular orchids around the world because of adaptability to room conditions and shapes, size, colour of its beautiful flowers. Phalaenopsis is difficult to propagate vegetatively due to monopodial epiphytic orchid and propagation with tissue culture has been desired. In this study, buds parts, pedicels, shoots and roots of orchid Phalaenopsis were plated on four modified MS solidified culture media supplemented with sucrose (3%), trehalose (3%), 6-benzylaminopurine (BA) and α-naphtalenacetic acid (NAA). MS growth media containing 1.5 mg L$^{-1}$ BA, 1.0 mg L$^{-1}$ NAA with combination of trehalose were found the significantly effective than sucrose (p<0.01). After 6-7 weeks the highest percentages of callus ( friable) induction were obtained from pedicel and bud explants in these media. However, there was no callus induction neither leaf explants nor shoot and root explants on the all modified media. Also, the leaf explants gradually turned brown throughout culture time. Moreover, buds explants enabled direct regeneration without callus formation in sucrose-alone and trehalose-alone media.