The objective of the present study was to compare cryoprotective solutions such as Ethylene Glaycol (EG), Dimethyle-Sulfoxide (DMSO) and Ficoll 70 with different combination ratios for vitrification of mature bovine oocytes and embryos produced in vitro. In addition to the demonstration of the effect of the straw diameter on post thawing viability of the thawed matured oocytes and embryos.