Vitrification is now regarded as a possible alternative to the cryopreservation method. This record investigated the effects of exposure time using ethylene glycol to preserve viability of mice embryo post thawing. Embryos at zygote stage vitrified by placing them in vitrification medium containing 10% ethylene glycol (EG) and phosphate buffer saline (PBS). Exposure time used 5, 10, and 15 minutes. Embryos were kept in mini straw 0.5 ml, and then plunged into liquid nitrogen rapidly. After that, the frozen embryos thawed in a 30 water bath and washed twice in 0.5 M sucrose. Viability of embryos examined using inverted microscope. The viability of embryos was assessed the basis of the intact morphology, blastomere compact and dense, zone pellucid doesn’t shrink or ripped, and there are no debris of cells. The result showed that there were no significant differences (p > 0.05) for survival embryos among treatment of exposure time 5, 10, and 15 minutes (69.22%, 81.81%, 75% respectively). In conclusion, can be selected exposure time 10 minutes to initiated vitrification, because by shortening the length time of exposure, embryos will be spared from the toxic effects, and 10 minutes sufficient to provide infiltration of cryoprotectants.

**Keyword:** ethylene glycol, exposure time, vitrification