

## The Effect of Ethylene Glycol on Cryopreserved Bovine Oocytes

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**Abstract :** In the embryo transfer program, to address the limited production of embryos in vivo, in vitro embryo production has become an alternative approach that is relatively inexpensive. One potential source of embryos that can be developed is to use immature oocytes then conducted in vitro maturation and in vitro fertilization. However, obstacles encountered were oocyte viability mammals have very limited that it cannot be stored for a long time, so we need oocyte cryopreservation. The research was conducted to know the optimal concentration use of ethylene glycol as a cryoprotectant on oocytes freezing. Material use in this research was immature oocytes; taken from abattoir which was aspirated from follicle with diameter 2-6 mm. Concentration ethylene glycol used were 0,5 M, 1 M, 1,5 M and 2M. The freezing method used was conventional method combined with a five-step protocol washing oocytes from cryoprotectant after thawing. The result showed that concentration ethylene glycol have the significant effect ( $P < 0.05$ ) on oocytes quality after thawing and in vitro maturation. It was concluded that concentration 1,5 M was the best concentration for freezing oocytes using conventional method.

**Keywords :** bovine, conventional freezing, ethylene glycol, oocytes

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