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Vitrification of Bovine Embryos with Various Containers

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The objective of this study is to examine an effective cryopreservation method and various vitrification containers on the survival vates of embroys. For the vitrification, in vitro produced embryos at blastocyst stage were exposed to ethylene glycol 5.5 M freezing solution (EG5.5) for 20 sec, loaded on containers such as grid, straw and paper and then immediately plunged into - 196℃ LN_2. The blastocysts were thawed serially in 0.5, 0.25 and 0.125%; P < 0.05). Therefore, this study suggests that bovine embryos can be easily, effectively and successfully cryopreserved by grid, straw, and paper in the presence of freezing solution. Furthermore, vitrification using paper may be used as a ne M sucrose in CR1aa, each for 1 min, and cultured in CR1 aa medium supplemented with 10% FBS. After thawing, there were not significant differences in recovery rates of EM grid, straw and paper as 84.6, 88.3, and 93.7%, respectively (Table 1). However, survival rates of EM grid (78.1%) and paper (77.1%) showed significantly higher than straw (52.1w method for bovine embryos.

Table1. The viability after vitrified-thawed bovine embryos using various container

Container type	No. of embryos examined	No. (%) of embryos			
		recovered	lost	zona broken	survived
EM Grid	735	622 (84.6)	89 (12.1)	32 (4.4)	486 (78.1)[a]
Straw	137	121 (88.3)	16 (11.7)	8 (5.8)	63 (52.1)[b]
Paper	79	74 (93.7)	7 (8.9)	0 (0.0)	57 (77.1)[a]

Different superscripts within columns denotes significant different (P < 0.05)

Key words) ***EG5.5, EM grid, Straw, Paper, Bovine embryos***