Pengaruh Penambahan Antioksidan Alfa Tokoferol pada Medium Slow Freezing terhadap Kualitas Oosit Domba Garut (Ovis aries) = The Effect of Addition Alpha Tocopherol Antioxidant on Slow Freezing Medium to The Quality of Garut Sheep Oocyte (Ovis aries)

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Abstrak

ABSTRAK
Penelitian dilakukan untuk mengevaluasi penambahan antioksidan alfa tokoferol dalam media pembekuan lambat terhadap kualitas oosit domba garut hingga kriopreservasi menggunakan metode pembekuan lambat. Sebanyak 226 oosit kualitas A dan B dimatangkan sebelumnya pada media pematangan TCM-199 dengan penambahan alfa tokoferol 150 M, kemudian diawetkan dalam media pembekuan lambat dengan penambahan alfa tokoferol 0 M (KK), 100 M (KP1), 150. M (KP2), dan 200 M (KP3). Dalam media pembekuan lambat, etilen glikol 10% dan sukrosa 0,1 M juga ditambahkan. Evaluasi oosit dilakukan setelah 7 hari disimpan dalam nitrogen cair (-196 oC), meliputi morfologi oosit dan viabilitas oosit menggunakan pewarna Hoechst dan Propidium Iodide (PI). . Berdasarkan hasil yang diperoleh, persentase oosit normal pasca kriopreservasi adalah 0 M (67,86%), 100 M (68,42%), 150 M (74,58%), dan 200 M (61,11%). Persentase oosit hidup setelah kriopreservasi adalah 0 M (76,79%), 100 M (80,70%), 150 M (86,44%), dan 200 M (70,37%). Hasil penelitian menunjukkan bahwa penambahan antioksidan alfa tokoferol tidak berpengaruh terhadap kualitas oosit pasca kriopreservasi, namun terdapat kecenderungan peningkatan kualitas seiring dengan peningkatan dosis alfa tokoferol. Pada penelitian ini penambahan 150 M alfa tokoferol dalam media pembekuan lambat merupakan dosis terbaik dalam menjaga kualitas oosit hingga pasca kriopreservasi, walaupun tidak signifikan.

ABSTRACT
The study was conducted to evaluate the addition of alpha tocopherol antioxidants in slow freezing media on the oocyte quality of arrowroot sheep until cryopreservation using the slow freezing method. A total of 226 oocytes of A and B quality were pre-ripened on the TCM-199 ripening medium with the addition of 150 M alpha tocopherol, then preserved in slow freezing media with the addition of alpha tocopherol 0 M (KK), 100 M (KP1), 150. M (KP2) , and 200 M (KP3). In slow freezing medium, 10% ethylene glycol and 0.1 M sucrose were also added. Oocyte evaluation was carried out after 7 days of storage in liquid nitrogen (-196 oC), including oocyte morphology and oocyte viability using Hoechst and Propidium Iodide (PI) stains. . Based on the results obtained, the percentage of normal oocytes after cryopreservation were 0 M (67.86%), 100 M (68.42%), 150 M (74.58%), and 200 M (61.11%). The percentage of live oocytes after cryopreservation was 0 M (76.79%), 100 M (80.70%), 150 M (86.44%), and 200 M (70.37%). The results showed that the addition of alpha tocopherol antioxidants did not affect the quality of post-cryopreservation oocytes, but there was a tendency to increase in quality along with the increase in alpha tocopherol doses. In this study, the addition of 150 M alpha tocopherol in slow freezing medium was the best dose in maintaining oocyte quality until post cryopreservation, although it was not significant.