Maturasi Oosit Domba secara *In Vitro* tanpa Coz

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ABSTRAK

Penelitian dimaksudkan untuk mengembangkan metode maturasi *in vitro* tanpa CO2 pada ocsit domba. Oosrt domba dikoleksi dari ovarium Rumah Pemotongan HeA-an (RPH) dengan cara aspirasi (penyedotan) dan semprot media menggunakan jarum suntik ukuran 18 gauge. Oosit dibagi ke dalam tiga perlakuan: (T1) Oosit dimaturasi di dalam eppendorf berisi medium IVM (Bikarbonat-199 • 10% FCS + 10 jig/ml FSH + 10 ng/ml hCG + 1 fig/ml Estrogen) dilapisi minyak mineral di atasnya, sebelum ditanam oosrt, medium IVM diekuilibrasi selama + 2 jam di inkubator 5% C02.. (T2) Oosit dimaturasi di dalam drop medium IVM (T1) yang dilapisi dengan minyak mineral di atasnya. (T3) Oosrt dimaturasi di dalam drop medium IVM (T1) dengan minyak mineral di alasnya, sebelum ditanam oosrt, drop IVM diekuilibrasi + 2 jam di inkubator 5% CO2 Pada semua perlakuan, maturasi *in vitro* berlangsung 24 jam pada suhu 38°C dengan humiditss tinggi tanpa CO2. Tahap pernbelanar. meiosis oosit (metaphase I, anaphase i, telophase I, dan metaphase II) diuji setelah dicat dengan lacmoid 1%, dan diamati di bawah *inverted microscope* dengan pembesaran 300 kali. Proporsi oosit muds mencapai metaphase II pada maturasi tanpa C02 tidak berbed? nyata (P>0,05) di antara ketiga perlakuan (39, 29, dan 43%, untuk T1, T2. dan T3). Namun demikian, proporsi masak telur pada T1 dan T3 cenderung lebih tinggi dari pada T2. Penelitian ini menyimpulkan,ada kemungkinan untuk melakukan maturasi *in vitro* oosit domba secara sederhana atau di dalam inkubator mini tanpa C02 selama transportasi berjarak jauh dari RPH ke laboratorium.Kata kunci: Oosit domba, maturasi, tanpa CO2, metaphase I, anaphase I, telophase I,metaphase II.

ABSTRACT

The aim of this study was to develop a method of *in vitro* maturation (IVM) for ovine oocytes in the absence of CO2. Oocytes from abattoir ovaries were collected by methods of aspiration and spraying of media using a 18 gauge needle. Collected oocytes were divided into 3 treatments: (T1) Oocytes were cultured in an eppendorf containing IVM medium (Bicarbonate-199 + 10% FCS + 10 pg/ml FSH + 10 pg/ml hCG + 1 pg/ml Estradiol) overlaid with mineral oil. The IVM medium was equilibrated in a humidified incubator at 38°C with 5% C02 for two hours prior to culture. (T2) Oocytes were matured in IVM medium (as T1) drops overlaid with mineral oil. (T3) Oocytes were matured in IVM medium (as T1) drops overlaid with mineral oil, the IVM drops were equilibrated in a humidified incubator at 38°C with 5% CO2 for two hours prior to culture of the oocytes. All treatments were maintained at 38°C in a humidified incubator without COj for 24 hours. Oocytes were assessed for the stages of meiosis division (metaphase 1,anaphase I, telophase I, and metaphase II) under an inverted microscope at x 300

magnification after staining with 1% lacmoid. In the absence of C02, the proportion of 452 *Margauxiti* et a**!**.: *Maturasi Oosil Domba secara* In Vi**l**ro *tanpa CC):*immature oocytes achieved metaphase II (matured oocytes) was not significantly difference (P>0.05) among the treatments (39, 29, 48% for Tf^T2r >T3 respectively).However, the proportion of matured oocytes derived from T1 and T3 tended higher than T2. This study concludes that there is a possibility to mature ovine oocytes in a simple method or in a portable incubator without C02 during a longer transportation from abattoirs to the laboratory.

Keywords: Ovine oocyte, maturation, without CO;, metaphase I, anaphase I, telophase I, metaphase II.