

INTISARI

EVALUASI KADAR NATRIUM DAN KLORIDA DALAM DARAH PADA SAPI PERAH LAKTASI DAN SAPI PERAH NON LAKTASI DI KEBUN PENELITIAN DAN PENGEMBANGAN PERTANIAN UNIVERSITAS GADJAH MADA YOGYAKARTA

Arumdini Astuti

Natrium dan klorida merupakan unsur makromineral esensial yang sangat dibutuhkan untuk fisiologis ternak. Penelitian ini bertujuan untuk mengevaluasi kadar natrium dan klorida pada sapi perah non-laktasi dan laktasi di KP4 UGM. Delapan belas (18) ekor sapi perah digunakan dalam penelitian ini yang terdiri dari kelompok sapi non-laktasi (6 ekor) dan sapi laktasi (12 ekor). Setiap sapi diambil sampel darah sebanyak 5 ml melalui vena jugularis. Sampel darah yang diperoleh disentrifugasi selama 10 menit dengan kecepatan 8000rpm, kemudian natrium dan klorida dianalisis di laboratorium komersial di wilayah Yogyakarta.

Hasil pemeriksaan kadar natrium dalam serum sapi perah non-laktasi dan sapi perah laktasi yaitu $129,5 \pm 9,5$ mmol/L dan $134,6 \pm 6,0$ mmol/L. Kadar klorida sapi perah non-laktasi dan sapi perah laktasi yaitu $87,6 \pm 7,6$ mmol/L dan $94,4 \pm 3,1$ mmol/L. Sapi perah laktasi menunjukkan 75% (9 ekor) memiliki kadar natrium normal dan 25% (3 ekor) di bawah normal, sedangkan pada sapi perah non-laktasi 16,67% (1 ekor) memiliki kadar natrium normal dan 83,33% (5 ekor) di bawah normal. Sapi perah laktasi menunjukkan 91,7% (11 ekor) memiliki kadar klorida normal dan 8,33% (1 ekor) di bawah normal, sedangkan pada sapi perah non-laktasi 66,67% (4 ekor) memiliki kadar klorida normal dan 33,33% (2 ekor) di bawah normal. Secara statistik hasil analisis menggunakan *t-test independent* menunjukkan bahwa tidak ada perbedaan signifikan kadarnatrium dan klorida antara sapi perah non-laktasi dan sapi perah laktasi di KP4 UGM. Penurunan kadarnatrium dan klorida pada sapi perah non-laktasi dan sapi perah laktasi di KP4 UGM tidak berpengaruh terhadap gambaran fisiologis.

Kata kunci: sapi perah, non-laktasi, laktasi, natrium, klorida

ABSTRACT

EVALUATION LEVEL OF BLOOD SODIUM AND CHLORIDE IN LACTATING AND NON-LACTATING DAIRY CATTLE FROM KEBUN PENDIDIKAN PENELITIAN DAN PENGEMBANGAN PERTANIAN UNIVERSITAS GADJAH MADA

Arumdini Astuti

Sodium and chloride are essential macromineral elements that needed for physiological processes in animal. This study was conducted to evaluate the levels of sodium and chloride in non-lactating and lactating dairy cows in KP4. Eighteen dairy cows used in this study consists of 6 non-lactating cows and 12 lactating cows. Each cow was taken about 5 ml blood from jugular vein. Blood samples were centrifugated 8000 rpm for 10 minutes, then sodium and chloride were analyzed in commercial laboratories in the region of Yogyakarta.

The results of the examination of serum sodium levels in non-lactating and lactating dairy cows were $129,5 \pm 9,5$ mmol/L and $134,6 \pm 6,0$ mmol/L. Chloride serum levels on non-lactating and lactating dairy cows were $87,6 \pm 7,6$ mmol/L and $94,4 \pm 3,1$ mmol/L. The lactating dairy cows showed that the normal sodium levels were 75% (9 cattles) and under normal were 25% (3 cattles), whereas in non-lactating dairy cows normal sodium levels were 16,67% (1 cattle) and under normal were 83,33% (5 cattles). The lactating dairy cows showed that the normal chloride levels were 91,7% (11 cattles) and under normal were 8,33% (1 cattle), whereas in non-lactating dairy cows, the normal chloride levels were 66,67% (4 cattles) and under normal were 33,33% (2 cattles). Levels of sodium and chloride in cattle is still in the normal range. Statistic analytical using *t-test independent* showed that there is no significant differences in the levels of sodium and chloride in non-lactating and lactating dairy cows in KP4. The decreased levels of sodium and chloride in non-lactating dairy cows and lactating dairy cows in KP4 UGM has no effect on physiological status.

Keywords: *dairy cattle, non-lactating, lactation, sodium, chloride*