

Table S1 – Mean values and standard error of the mean for the number of Red Blood Cells obtained, expressed in $\times 10^6 \text{mm}^3$, from Nellore calves during the first month of life and grouped according to type of birth (elective cesarean section without labor induction, elective cesarean section with labor induction and spontaneous vaginal calving).

| Time of life (hours or days) | RED BLOOD CELLS $\times 10^6 \text{mm}^3$ | | | P-Values |
|---|---|---|--|-----------------|
| | Elective cesarean section without inducing labor | Elective cesarean section with labor induction | Spontaneous vaginal calving | |
| | | | | |
| 0 Hours | 7.77 ± 0.29 | 8.27 ± 0.25 | 8.39 ± 0.44 | 0.2170 |
| 3 Hours | 7.36 ± 0.36 | 8.02 ± 0.28 | 8.66 ± 0.48 | 0.0735 |
| 6 Hours | 7.20 ± 0.34 | 7.84 ± 0.30 | 8.18 ± 0.45 | 0.1303 |
| 12 Hours | 6.75 ± 0.31 | 7.54 ± 0.34 | 7.59 ± 0.37 | 0.0294 |
| 1 Day | 6.45 ± 0.31 | 7.22 ± 0.33 | 7.32 ± 0.42 | 0.1401 |
| 2 Days | 6.27 ± 0.30 | 7.07 ± 0.33 | 7.21 ± 0.38 | 0.0654 |
| 3 Days | 6.50 ± 0.36 | 7.23 ± 0.32 | 7.06 ± 0.45 | 0.2172 |
| 5 Days | 6.48 ± 0.37 | 7.46 ± 0.33 | 7.10 ± 0.43 | 0.0582 |
| 7 Days | 6.62 ± 0.31 | 7.59 ± 0.34 | 6.84 ± 0.46 | 0.0456 |
| 10 Days | 7.17 ± 0.33 | 8.09 ± 0.37 | 7.70 ± 0.38 | 0.0602 |
| 15 Days | 7.07 ± 0.28 | 7.88 ± 0.31 | 8.04 ± 0.31 | 0.0480 |
| 30 Days | 7.75 ± 0.43 | 8.14 ± 0.46 | 9.06 ± 0.30 | 0.2913 |

A, B, C - different letters on the line mean statistically significant difference compared with Tukey's test.

Table S2 – Mean values and standard error of the mean obtained for Hemoglobin, expressed in g/dL, of Nellore calves during the first month of life and grouped according to type of birth (elective cesarean section without labor induction, elective cesarean section with labor induction and spontaneous vaginal calving).

| Time of life (hours or days) | HEMOGLOBIN g/dL | | | P-Values |
|---|---|---|--|-----------------|
| | Elective cesarean section without inducing labor | Elective cesarean section with labor induction | Spontaneous vaginal calving | |
| | | | | |
| 0 Hours | 11.29 ± 0.37 | 11.36 ± 0.46 | 11.10 ± 0.56 | 0.4641 |
| 3 Hours | 10.54 ± 0.49 | 11.08 ± 0.50 | 11.25 ± 0.59 | 0.4681 |
| 6 Hours | 10.33 ± 0.46 | 10.63 ± 0.48 | 10.65 ± 0.50 | 0.5407 |
| 12 Hours | 9.71 ± 0.44 | 10.41 ± 0.52 | 9.91 ± 0.52 | 0.2887 |
| 1 Day | 9.36 ± 0.39 | 10.05 ± 0.52 | 9.54 ± 0.56 | 0.3607 |
| 2 Days | 9.06 ± 0.38 | 9.67 ± 0.54 | 9.26 ± 0.61 | 0.2652 |
| 3 Days | 9.19 ± 0.46 | 9.878± 0.53 | 9.28 ± 0.76 | 0.3344 |
| 5 Days | 9.17 ± 0.50 | 10.22 ± 0.50 | 9.98 ± 0.73 | 0.1736 |
| 7 Days | 9.05 ± 0.41 | 10.35 ± 0.51 | 10.01 ± 0.55 | 0.0648 |
| 10 Days | 9.33 ± 0.41 ^B | 10.76 ± 0.57 ^A | 11.59 ± 0.36 ^A | 0.0023 |
| 15 Days | 9.02 ± 0.42 ^B | 10.22 ± 0.55 ^A | 11.66 ± 0.22 ^A | 0.0002 |
| 30 Days | 9.41 ± 0.46 ^B | 10.19 ± 0.51 ^A | 12.19 ± 0.20 ^A | 0.0019 |

A, B, C - different letters on the line mean statistically significant difference compared with Tukey's test.

Table S3 – Mean values and standard error of the mean obtained for hematocrit, expressed in %, of Nellore calves during the first month of life and grouped according to type of birth (elective cesarean section without labor induction, elective cesarean section with labor induction and spontaneous vaginal calving).

| Time of life (hours or days) | HEMATOCRIT | | | P-Values | |
|---|---|--------------------------------|---------------------------|-----------------|--|
| | % Elective cesarean section without inducing labor | | | | |
| | Elective cesarean section with labor induction | Spontaneous vaginal calving | | | |
| 0 Hours | 37.65 ± 1.15 | 39.01 ± 1.73 | 36.89 ± 1.69 | 0.1350 | |
| 3 Hours | 35.50 ± 1.61 | 37.52 ± 1.68 | 37.86 ± 2.10 | 0.4125 | |
| 6 Hours | 34.64 ± 1.54 | 36.41 ± 1.81 | 35.80 ± 2.10 | 0.0384 | |
| 12 Hours | 32.11 ± 1.44 | 34.60 ± 1.54 | 33.02 ± 1.88 | 0.2234 | |
| 1 Day | 30.59 ± 1.43 | 32.79 ± 1.79 | 31.34 ± 1.97 | 0.4015 | |
| 2 Days | 29.02 ± 1.28 | 31.83 ± 1.89 | 30.12 ± 1.97 | 0.1566 | |
| 3 Days | 29.25 ± 1.61 | 32.00 ± 1.76 | 29.54 ± 2.39 | 0.2624 | |
| 5 Days | 28.56 ± 1.68 | 32.73 ± 1.70 | 31.70 ± 2.23 | 0.0829 | |
| 7 Days | 28.46 ± 1.36 ^B | 33.01 ± 1.72 ^{AB} | 32.54 ± 1.56 ^A | 0.0386 | |
| 10 Days | 29.61 ± 1.43 ^B | 33.91 ± 1.78 ^A | 37.35 ± 1.03 ^A | 0.0022 | |
| 15 Days | 28.16 ± 1.35 ^C | 32.15 ± 1.71 ^B | 38.11 ± 0.68 ^A | 0.0001 | |
| 30 Days | 28.21 ± 1.57 ^B | 30.79 ± 1.92 ^B | 38.18 ± 0.65 ^A | 0.0040 | |

A, B, C - different letters on the line mean statistically significant difference compared with Tukey's test.

Table S4 – Mean values and standard error of the mean obtained for Mean Corpuscular Volume (MCV), expressed in fL, of Nellore calves during the first month of life and grouped according to type of birth (elective cesarean section without labor induction, elective cesarean section with labor induction and spontaneous vaginal calving).

| Time of life (hours or days) | MCV | | | P-Values | |
|------------------------------------|--|--|--------------------------------|----------|--|
| | fL | | Spontaneous vaginal calving | | |
| | Elective cesarean section without inducing labor | Elective cesarean section with labor induction | | | |
| 0 Hours | 48.76 ± 0.80 | 47.04 ± 1.10 | 44.51 ± 1.80 | 0.0520 | |
| 3 Hours | 48.50 ± 0.80 ^A | 46.78 ± 1.03 ^{AB} | 44.14 ± 1.76 ^B | 0.0417 | |
| 6 Hours | 48.63 ± 0.76 ^A | 46.36 ± 1.03 ^{AB} | 44.04 ± 1.72 ^B | 0.3862 | |
| 12 Hours | 47.79 ± 0.78 ^A | 45.79 ± 0.98 ^{AB} | 43.80 ± 1.73 ^B | 0.0184 | |
| 1 Day | 47.59 ± 0.73 ^A | 45.39 ± 1.07 ^{AB} | 43.10 ± 1.64 ^B | 0.4015 | |
| 2 Days | 46.56 ± 0.79 ^A | 44.82 ± 0.98 ^B | 41.81 ± 1.52 ^B | 0.0114 | |
| 3 Days | 45.74 ± 0.79 ^A | 44.13 ± 0.95 ^{AB} | 41.70 ± 1.32 ^B | 0.0379 | |
| 5 Days | 44.22 ± 0.68 | 43.86 ± 0.90 | 44.68 ± 1.34 | 0.9492 | |
| 7 Days | 43.08 ± 0.73 ^B | 43.50 ± 0.89 ^B | 48.60 ± 2.22 ^A | 0.0165 | |
| 10 Days | 41.42 ± 0.66 ^B | 41.99 ± 1.19 ^B | 49.41 ± 2.25 ^A | 0.0012 | |
| 15 Days | 39.81 ± 0.74 ^B | 40.66 ± 1.05 ^B | 48.03 ± 1.76 ^A | 0.0002 | |
| 30 Days | 36.70 ± 0.96 ^B | 37.90 ± 0.79 ^{AB} | 42.62 ± 1.32 ^A | 0.0031 | |

A, B - different letters on the line mean statistically significant difference compared with Tukey's test.

Table S5 – Mean values and standard error of the mean obtained for Mean Corpuscular Hemoglobin (MCH), expressed in pg, of Nellore calves during the first month of life and grouped according to type of birth (elective cesarean section without labor induction, elective cesarean section with labor induction and spontaneous vaginal calving).

| Time of life (hours or days) | MCH | | | P-Values | |
|------------------------------------|--|--|--------------------------------|----------|--|
| | pg | | Spontaneous vaginal calving | | |
| | Elective cesarean section without inducing labor | Elective cesarean section with labor induction | | | |
| 0 Hours | 14.56 ± 0.31 | 13.64 ± 0.25 | 13.39 ± 0.74 | 0.1925 | |
| 3 Hours | 14.31 ± 0.25 | 13.74 ± 0.26 | 13.11 ± 0.61 | 0.0983 | |
| 6 Hours | 14.34 ± 0.24 ^A | 13.48 ± 0.22 ^{AB} | 13.10 ± 0.52 ^B | 0.0493 | |
| 12 Hours | 14.34 ± 0.29 ^A | 13.69 ± 0.25 ^{AB} | 13.11 ± 0.58 ^B | 0.0117 | |
| 1 Day | 14.56 ± 0.29 | 13.85 ± 0.28 | 13.13 ± 0.59 | 0.0576 | |
| 2 Days | 14.48 ± 0.26 ^A | 13.56 ± 0.24 ^{AB} | 12.78 ± 0.44 ^B | 0.0022 | |
| 3 Days | 14.38 ± 0.34 | 13.55 ± 0.24 | 13.05 ± 0.52 | 0.0608 | |
| 5 Days | 14.20 ± 0.29 | 13.63 ± 0.19 | 14.00 ± 0.44 | 0.5120 | |
| 7 Days | 13.66 ± 0.26 | 13.57 ± 0.25 | 14.79 ± 0.51 | 0.0626 | |
| 10 Days | 13.01 ± 0.23 ^B | 13.26 ± 0.40 ^B | 15.24 ± 0.65 ^A | 0.0027 | |
| 15 Days | 12.70 ± 0.25 ^B | 12.86 ± 0.34 ^{AB} | 14.63 ± 0.52 ^A | 0.0036 | |
| 30 Days | 12.14 ± 0.50 | 12.44 ± 0.57 | 13.50 ± 0.39 | 0.2557 | |

A, B - different letters on the line mean statistically significant difference compared with Tukey's test.

Table S6 – Mean values and standard error of the mean obtained for the Mean Corpuscular Hemoglobin Concentration (MCHC), expressed in %, of Nellore calves during the first month of life and grouped according to type of birth (elective cesarean section without induction of labor, cesarean section elective with labor induction and spontaneous vaginal calving).

| Time of life (hours or days) | MCHC % | | | P-Values |
|---|---|---|--|-----------------|
| | Elective cesarean section without inducing labor | Elective cesarean section with labor induction | Spontaneous vaginal calving | |
| | | | | |
| 0 Hours | 29.94 ± 0.32 | 29.16 ± 0.26 | 30.03 ± 0.61 | 0.1665 |
| 3 Hours | 29.63 ± 0.36 | 29.49 ± 0.21 | 29.73 ± 0.40 | 0.7276 |
| 6 Hours | 29.78 ± 0.32 | 29.24 ± 0.30 | 29.93 ± 0.86 | 0.3862 |
| 12 Hours | 30.24 ± 0.34 | 30.20 ± 0.33 | 30.03 ± 0.42 | 0.5557 |
| 1 Day | 30.71 ± 0.48 | 30.69 ± 0.31 | 30.50 ± 0.35 | 0.9348 |
| 2 Days | 31.22 ± 0.21 | 30.44 ± 0.29 | 30.68 ± 0.24 | 0.0703 |
| 3 Days | 31.49 ± 0.37 | 30.90 ± 0.21 | 31.40 ± 0.48 | 0.4103 |
| 5 Days | 32.18 ± 0.37 ^A | 31.16 ± 0.33 ^B | 31.38 ± 0.23 ^{AB} | 0.0201 |
| 7 Days | 31.83 ± 0.36 | 31.36 ± 0.31 | 30.63 ± 0.36 | 0.0757 |
| 10 Days | 31.55 ± 0.25 | 31.69 ± 0.36 | 30.95 ± 0.25 | 0.3134 |
| 15 Days | 32.07 ± 0.38 ^A | 31.75 ± 0.26 ^A | 30.53 ± 0.23 ^B | 0.0071 |
| 30 Days | 33.17 ± 0.83 | 32.89 ± 1.07 | 31.77 ± 0.18 | 0.6246 |

A, B - different letters on the line mean statistically significant difference compared with Tukey's test.

Table S7 – Mean values and standard error of the mean obtained for mean Serum Iron (SFe), expressed in $\mu\text{L/dL}$, of Nellore calves during the first month of life and grouped according to type of birth (elective cesarean section without labor induction, elective cesarean section with labor induction and spontaneous vaginal calving).

| Time of life (hours or days) | SFe $\mu\text{L/dL}$ | | | P-Values |
|---|--|--|---------------------------------|-----------------|
| | Elective cesarean section without inducing labor | Elective cesarean section with labor induction | Spontaneous vaginal calving | |
| | | | | |
| 0 Hours | 154.46 \pm 16.17 ^A | 140.80 \pm 11.93 ^A | 65.32 \pm 9.19 ^B | 0.0004 |
| 3 Hours | 122.72 \pm 15.83 ^A | 103.39 \pm 10.62 ^{AB} | 66.36 \pm 7.13 ^B | 0.0101 |
| 6 Hours | 78.93 \pm 13.27 | 66.18 \pm 8.32 | 55.77 \pm 7.01 | 0.3452 |
| 12 Hours | 50.55 \pm 8.12 | 46.06 \pm 10.65 | 41.22 \pm 5.82 | 0.8046 |
| 1 Day | 38.40 \pm 7.18 | 49.11 \pm 12.94 | 83.52 \pm 19.99 | 0.0647 |
| 2 Days | 58.70 \pm 7.94 ^B | 71.70 \pm 12.78 ^B | 228.06 \pm 49.68 ^A | 0.0001 |
| 3 Days | 58.55 \pm 10.06 ^B | 54.11 \pm 11.16 ^B | 262.10 \pm 44.08 ^A | 0.0001 |
| 5 Days | 47.71 \pm 6.64 ^B | 59.95 \pm 16.01 ^B | 273.94 \pm 48.00 ^A | 0.0001 |
| 7 Days | 70.33 \pm 17.19 ^B | 54.24 \pm 12.08 ^B | 264.15 \pm 50.64 ^A | 0.0001 |
| 10 Days | 55.94 \pm 11.63 ^B | 59.64 \pm 18.72 ^B | 345.51 \pm 41.54 ^A | 0.0001 |
| 15 Days | 75.89 \pm 20.04 ^B | 41.76 \pm 8.03 ^B | 369.29 \pm 64.22 ^A | 0.0001 |
| 30 Days | 79.14 \pm 20.42 ^B | 123.29 \pm 32.93 ^B | 292.03 \pm 33.13 ^A | 0.0001 |

A, B - different letters on the line mean statistically significant difference compared with Tukey's test.

Table S8 – Mean values and standard error of the mean obtained for the Total Capacity to Bind Iron to Transferrin (TIBIC), expressed in $\mu\text{L/dL}$, of Nellore calves during the first month of life and grouped according to type of birth (elective cesarean section without induction of delivery, elective cesarean section with labor induction and spontaneous vaginal calving).

| Time of life (hours or days) | TIBIC $\mu\text{L/dL}$ | | | P-Values |
|---|--|--|--------------------------------|-----------------|
| | Elective cesarean section without inducing labor | Elective cesarean section with labor induction | Spontaneous vaginal calving | |
| | | | | |
| 0 Hours | $307.96 \pm 10.84^{\text{B}}$ | $321.93 \pm 22.86^{\text{AB}}$ | $478.32 \pm 32.01^{\text{A}}$ | 0.0001 |
| 3 Hours | $269.12 \pm 12.84^{\text{B}}$ | $284.72 \pm 6.76^{\text{AB}}$ | $466.46 \pm 27.92^{\text{A}}$ | 0.0001 |
| 6 Hours | $240.80 \pm 13.15^{\text{B}}$ | $255.14 \pm 11.38^{\text{AB}}$ | $423.17 \pm 22.78^{\text{A}}$ | 0.0001 |
| 12 Hours | $232.17 \pm 14.17^{\text{B}}$ | $206.50 \pm 29.07^{\text{B}}$ | $412.00 \pm 21.80^{\text{A}}$ | 0.0001 |
| 1 Day | $223.14 \pm 12.53^{\text{B}}$ | $220.02 \pm 28.17^{\text{B}}$ | $399.42 \pm 28.84^{\text{A}}$ | 0.0001 |
| 2 Days | $246.90 \pm 12.94^{\text{B}}$ | $235.12 \pm 34.52^{\text{B}}$ | $434.66 \pm 24.96^{\text{A}}$ | 0.0001 |
| 3 Days | $278.35 \pm 21.37^{\text{B}}$ | $226.25 \pm 42.01^{\text{B}}$ | $470.10 \pm 28.73^{\text{A}}$ | 0.0001 |
| 5 Days | $295.98 \pm 16.97^{\text{B}}$ | $187.20 \pm 38.03^{\text{B}}$ | $526.14 \pm 23.76^{\text{A}}$ | 0.0001 |
| 7 Days | $329.33 \pm 20.21^{\text{B}}$ | $238.40 \pm 41.16^{\text{B}}$ | $578.25 \pm 18.79^{\text{A}}$ | 0.0001 |
| 10 Days | $344.94 \pm 23.27^{\text{B}}$ | $271.10 \pm 42.63^{\text{B}}$ | $616.91 \pm 25.38^{\text{A}}$ | 0.0001 |
| 15 Days | $353.92 \pm 21.01^{\text{B}}$ | $250.83 \pm 49.87^{\text{B}}$ | $612.59 \pm 24.43^{\text{A}}$ | 0.0001 |
| 30 Days | $394.07 \pm 28.71^{\text{B}}$ | $378.47 \pm 70.53^{\text{B}}$ | $590.43 \pm 36.53^{\text{A}}$ | 0.0080 |

A, B - different letters on the line mean statistically significant difference compared with Tukey's test.

Table S9 – Mean values and standard error of the mean obtained for the Transferrin Saturation Index (TSI), expressed in %, of Nellore calves during the first month of life and grouped according to type of birth (elective cesarean section without labor induction, elective cesarean section with labor induction and spontaneous vaginal calving).

| Time of life (hours or days) | TSI % | | | P-Values |
|------------------------------------|--|--|--------------------------------|----------|
| | Elective cesarean section without inducing labor | Elective cesarean section with labor induction | Spontaneous vaginal calving | |
| | | | | |
| 0 Hours | 51.64 ± 5.28 ^B | 49.88 ± 2.15 ^B | 14.24 ± 1.96 ^A | 0.0001 |
| 3 Hours | 48.17 ± 5.74 ^B | 43.48 ± 4.20 ^{AB} | 14.60 ± 1.51 ^A | 0.0002 |
| 6 Hours | 31.71 ± 4.55 | 32.71 ± 4.73 | 13.42 ± 1.60 | 0.0114 |
| 12 Hours | 21.14 ± 2.55 ^{AB} | 32.41 ± 3.72 ^B | 10.24 ± 1.51 ^A | 0.0008 |
| 1 Day | 17.06 ± 2.82 | 35.86 ± 3.35 | 21.28 ± 5.64 | 0.0293 |
| 2 Days | 24.22 ± 3.39 ^B | 41.61 ± 3.39 ^{AB} | 51.75 ± 9.83 ^A | 0.0092 |
| 3 Days | 21.56 ± 3.80 ^B | 36.70 ± 5.79 ^{AB} | 56.76 ± 9.65 ^A | 0.0023 |
| 5 Days | 16.99 ± 2.63 ^B | 28.99 ± 5.19 ^{AB} | 52.00 ± 9.33 ^A | 0.0009 |
| 7 Days | 21.86 ± 4.70 | 25.04 ± 3.72 | 44.26 ± 7.77 | 0.0291 |
| 10 Days | 17.12 ± 3.64 ^B | 24.09 ± 4.84 ^{AB} | 56.19 ± 6.51 ^A | 0.0001 |
| 15 Days | 22.26 ± 5.15 ^B | 28.46 ± 5.12 ^{AB} | 59.76 ± 9.88 ^A | 0.0028 |
| 30 Days | 19.26 ± 4.36 ^B | 57.97 ± 6.95 ^A | 49.48 ± 4.94 ^A | 0.0001 |

A, B - different letters on the line mean statistically significant difference compared with Tukey's test.