|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | SpO2 | | | HR | | | rScO2 | | | cFTOE | | |
| Time | FHbF (%) | Hb (g/dL) | HbFc (g/dL) | FHbF (%) | Hb (g/dL) | HbFc  (g/dL) | FHbF (%) | Hb (g/dL) | HbFc (g/dL) | FHbF (%) | Hb (g/dL) | HbFc (g/dL) |
| 2 | -0,163 | 0,235 | 0,270 | -0,042 | 0,312 | 0,210 | -0,201 | 0,626 | 0,657 | -0,237 | -0,605 | -0,786 |
| 3 | -0,317 | 0,361 | 0,271 | -0,019 | -0,054 | -0,011 | -0,205 | 0,561 | 0,558 | 0,354 | -0,728 | -0,605 |
| 4 | -0,210 | 0,323 | 0,251 | 0,124 | -0,263 | -0,143 | -0,173 | 0,549 | 0,536 | 0,174 | -0,539 | -0,314 |
| 5 | -0,342 | 0,434 | 0,263 | 0,109 | -0,315 | -0,214 | -0,109 | 0,515 | 0,558 | 0,235 | -0,535 | -0,397 |
| 6 | -0,354 | 0,473 | 0,284 | 0,295 | -0,252 | 0,096 | -0,283 | 0,417 | 0,305 | 0,452 | -0,397 | -0,230 |
| 7 | -0,332 | 0,535 | 0,280 | 0,245 | -0,034 | 0,236 | -0,218 | 0,509 | 0,424 | 0,219 | -0,391 | -0,171 |
| 8 | -0,357 | 0,383 | 0,125 | 0,071 | 0,055 | 0,179 | -0,253 | 0,465 | 0,313 | 0,340 | -0,368 | -0,100 |
| 9 | -0,312 | 0,267 | 0,036 | -0,018 | 0,118 | 0,046 | -0,292 | 0,433 | 0,222 | 0,274 | -0,351 | -0,150 |
| 10 | -0,168 | 0,142 | -0,005 | 0,061 | -0,084 | 0,039 | -0,184 | 0,359 | 0,241 | 0,219 | -0,277 | -0,105 |
| 11 | -0,309 | 0,170 | -0,011 | 0,047 | -0,184 | -0,123 | -0,301 | 0,454 | 0,222 | 0,292 | -0,444 | -0,263 |
| 12 | -0,315 | 0,102 | -0,094 | 0,030 | -0,148 | -0,043 | -0,282 | 0,406 | 0,181 | 0,269 | -0,410 | -0,214 |
| 13 | -0,460 | 0,225 | -0,102 | -0,052 | -0,270 | -0,275 | -0,351 | 0,403 | 0,134 | 0,399 | -0,418 | -0,162 |
| 14 | -0,250 | 0,164 | -0,018 | -0,068 | -0,356 | -0,389 | -0,369 | 0,367 | 0,100 | 0,301 | -0,275 | 0,000 |
| 15 | -0,122 | 0,204 | 0,156 | -0,208 | -0,206 | -0,296 | -0,301 | 0,363 | 0,127 | 0,263 | -0,389 | -0,206 |

Table S1: Spearman’s correlation coefficient (ρ) for monitoring parameters (SpO2, HR, rScO2, cFTOE) and blood sample parameters (FHbF, Hb, HbFc) for each minute in preterm neonates.Table S2: Spearman’s correlation coefficient (ρ) for monitoring parameters (SpO2, HR, rScO2, cFTOE) and blood sample parameters (FHbF, Hb, HbFc) for each minute in term neonates.

Absolute correlation coefficients below ρ = 0.30 are considered negligible (very light green), 0.3 to <0.5 low (light green), 0.5 to <0.7 moderate (dark green), 0.7 to <0.9 high (dark green) and ≥0.9 very high.

– in front of the number stands for negative correlation.

SpO2-pulsatile arterial oxygenation, HR-heart rate, rScO2-regional cerebral tissue oxygen saturation, cFTOE- cerebral fractional tissue oxygen extraction, FHbF-fraction of fetal hemoglobin, Hb-total hemoglobin concentration, HbFc-fetal hemoglobin concentration.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | SpO2 | | | HR | | | rScO2 | | | cFTOE | | |
| Time | FHbF (%) | Hb (g/dL) | HbFc (g/dL) | FHbF (%) | Hb (g/dL) | HbFc (g/dL) | FHbF (%) | Hb (g/dL) | HbFc (g/dL) | FHbF (%) | Hb (g/dL) | HbFc (g/dL) |
| 2 | 0,062 | 0,036 | -0,023 | 0,000 | 0,225 | 0,125 | 0,022 | 0,062 | 0,047 | 0,028 | 0,029 | 0,025 |
| 3 | 0,221 | 0,059 | 0,160 | -0,047 | -0,017 | -0,072 | 0,059 | 0,086 | 0,100 | -0,001 | -0,072 | -0,058 |
| 4 | 0,221 | 0,050 | 0,179 | 0,095 | -0,043 | 0,017 | 0,112 | 0,038 | 0,116 | 0,028 | -0,036 | -0,015 |
| 5 | 0,237 | 0,068 | 0,230 | 0,183 | -0,081 | 0,097 | 0,147 | 0,065 | 0,155 | -0,007 | -0,017 | 0,004 |
| 6 | 0,263 | 0,050 | 0,258 | 0,216 | 0,009 | 0,164 | 0,152 | 0,068 | 0,165 | -0,025 | -0,060 | -0,053 |
| 7 | 0,249 | 0,089 | 0,282 | 0,152 | -0,126 | 0,016 | 0,063 | 0,136 | 0,159 | 0,013 | -0,099 | -0,065 |
| 8 | 0,224 | 0,106 | 0,289 | 0,193 | -0,170 | 0,021 | -0,026 | 0,197 | 0,127 | 0,185 | -0,137 | 0,029 |
| 9 | 0,219 | 0,134 | 0,312 | 0,177 | -0,144 | 0,039 | -0,073 | 0,213 | 0,101 | 0,122 | -0,103 | 0,012 |
| 10 | 0,249 | 0,085 | 0,302 | 0,112 | -0,061 | 0,017 | -0,073 | 0,203 | 0,088 | 0,266 | -0,167 | 0,106 |
| 11 | 0,177 | 0,153 | 0,293 | 0,124 | -0,104 | 0,013 | -0,088 | 0,226 | 0,082 | 0,200 | -0,171 | 0,046 |
| 12 | 0,108 | 0,148 | 0,205 | 0,124 | -0,090 | 0,015 | -0,100 | 0,244 | 0,073 | 0,190 | -0,208 | 0,023 |
| 13 | 0,233 | 0,098 | 0,291 | 0,108 | -0,088 | 0,006 | -0,047 | 0,214 | 0,099 | 0,131 | -0,224 | -0,030 |
| 14 | 0,186 | 0,096 | 0,217 | 0,090 | -0,031 | 0,035 | -0,082 | 0,245 | 0,083 | 0,193 | -0,278 | -0,021 |
| 15 | 0,150 | 0,173 | 0,232 | 0,160 | -0,056 | 0,068 | -0,075 | 0,299 | 0,129 | 0,154 | -0,279 | -0,057 |

Absolute correlation coefficients below ρ = 0.30 are considered negligible (very light green), 0.3 to <0.5 low (light green), 0.5 to <0.7 moderate (dark green), 0.7 to <0.9 high (dark green) and ≥0.9 very high.

– in front of the number stands for negative correlation.

SpO2-pulsatile arterial oxygenation, HR-heart rate, rScO2-regional cerebral tissue oxygen saturation, cFTOE- cerebral fractional tissue oxygen extraction, FHbF-fraction of fetal hemoglobin, Hb-total hemoglobin concentration, HbFc-fetal hemoglobin concentration.

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