Supplementary file for “A comprehensive review of the variability of bovine colostrum components and their effect on neonatal calf physiology”.

**Supplementary Table 1.** Qualitative comparison of lipid content between colostrum and either transitional or mature milk

|  |  |  |  |
| --- | --- | --- | --- |
| Fatty acids | Lower | Similar | Higher |
| C4:0 Butyric Acid | W, O |  |  |
| C6:0 Caproic Acid | W, O |  |  |
| C8:0 Octanoic Acid | O |  |  |
| C12:0 Lauric Acid |  |  | O |
| C14:0 Myristic acid |  |  | W, O |
| C14:1 ω-5 Myristoleic acid |  |  | O |
| C15:0 Pentadecanoic acid |  |  | O |
| C16:0 Palmitic acid |  |  | W, O |
| C16:1 ω-7 Palmitoleic |  |  | O |
| C17:0 Heptadecanoic acid  | O | W |  |
| C18:0 Stearic acid | O |  |  |
| C18:1 ω-9 Oleic acid | O |  |  |
| C18:2 ω-6 Linoleic acid (LA) |  |  | W, O |
| C18:3 ω-3 α-Linolenic acid (ALA) |  | W | O |
| C21:0 Behenic acid |  | O |  |
| C20:3 ω-6 Dihomo-γ-linolenic acid |  |  | O |
| C23:0 Tricosanoic acid |  |  | O |
| Saturated fatty acids |  | W, C | O |
| Unsaturated fatty acids | O |  |  |
| Branched-chain FA | W |  |  |
| MUFA |  O | W |  |
| Trans-MUFA | W C |  |  |
| PUFA |  |  | W, O,  |
| Conjugated linoleic acid (CLA) | C, O |  |  |
| ω-3 |  |  | C, O, W |
| ω-6 |  | C | W, O |
| Cholesterol |  |  | C, P |
| Phospholipids (total) |  |  | C |
| Phosphatidylethanolamine | C,  |  |  |
| Phosphatidylcholine |  | C,  |  |
| Phosphatidylserine |  | C |  |
| Phosphatidylinositol |  | C |  |
| Sphingomyelin |  |  | C |
| Triglycerides (48-52 carbons) |  |  | C |
| Triglycerides (24-36 carbons) | C |  |  |

"Lower" and "Higher" indicate a significant difference in the concentration of a fatty acid or fatty acid group between colostrum and transition milk or milk. "Similar" indicates that there were no significant differences.

Letters (P, C, O and W) refer to each reference where significant differences were observed between the fatty acid or fatty acid group concentration in colostrum compared to transition milk or milk.

O,[193]; W, [194]; C, [195]; P, [196].

**Supplementary Table 2.** Most abundant sialylated oligosaccharides in bovine colostrum and corresponding concentrations (mg/L). Mean values from each reference are shown, as well as a calculated mean, standard deviation (SD), and coefficient of variation (CV).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| OS | Ref. 1\* | Ref. 2 | Ref. 3 | Ref. 4† | Ref. 5 | Ref. 6 | Mean | SD | CV (%) |
| 3′SL | 834; 2388 | 594 | 853 | 681; 867 | 787 | 341 | 918 | 619 | 67 |
| 6′SL | 144; 222 | 103 | 141 | 243;136 | 113 | 112 | 152 | 52 | 34 |
| 6′SLN | 228; 534 | 145 | 117 | 239;220 | - | 204 | 241 | 137 | 57 |
| DSL | 84; 336 | 225 | - | 201;238 | 520 | 131 | 248 | 144 | 58 |

Some values may not actually refer to colostrum but to transition milk, as in some experiments "colostrum" was not collected until the 2nd day of lactation. Some values were obtained using graphical analysis software (https://plotdigitizer.com/app) when no numerical values were given.

OS, Oligosaccharide; 3’SL, 3′-sialyllactose; 6’SL, 6′-sialyllactose; 6’SLN, 6′-sialyllactosamine; DSL, disialyllactose; \* fresh (left) and heat-treated (right) colostrum are shown; † Friesian (left) and Jersey (right) cows.
Refs. 1 to 6: [223], [222], [220], [224], [225], [221], respectively.