**Table S1. Summary of milk fat globule RNA quality by stage of lactation and processing method for all samples processed (N=55)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Stage of lactation** | **Timing of sample collection****Median (min-max)** | **Na:K ratio****Median (min-max)** | **Processing Methoda** | **Suitable for sequencingb** **No. (%)\*** |
| Day 2, Colostralc | 45.8 (37.0-64.8) hours | 3.44 (2.10-9.62) | Soft | 0 of 1 (0) |
| Hard | 1 of 4 (25) |
| Washed | 2 of 6 (33) |
| **Overall** | **3 of 11 (27)** |
| Day 2, Transitionald | 46.5 (38.9-74.2) hours | 1.09 (0.42-1.86) | Soft | 1 of 2 (50) |
| Hard | 4 of 5 (80) |
| Washed | 4 of 8 (50) |
| **Overall** | **9 of 15 (60)** |
| Maturee | 45 (24-368) days | 0.35 (0.19-0.89) | Soft | 3 of 5 (60) |
| Harde | 7 of 9 (77) |
| Washed | 11 of 15 (73) |
| **Overall** | **21 of 29 (72)** |

\*Proportion suitable for sequencing by stage of lactation, Chi-square=6.7, *p*=0.03

a See Methods for an explanation of milk sample processing categories

b Suitable for sequencing defined as RIN > 7.0 and RNA > 10 ng/uL (the latter excluded 4 Colostrum, 1 Transitional, and 1 Mature)

c,d Lactation stage biochemically defined as colostral, Na:K > 2.0; and transitional,Na:K < 2.0