**Table** S**1.** Comparison of carotenoids among strictly longitudinal breast milk samples (µg/L)

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| --- | --- | --- | --- |
| **Carotenoid** | **Colostrum****(0–5 day)****n=30** | **Transitional milk****(10–15 day)****n=30** | **Early-term mature milk****(40–45 day)****n=30** |
| Lutein | 71.96 (65.36, 106.42) | 92.71(63.20, 126.24) | 55.50 (43.51, 91.45) |
| Zeaxanthin | 13.29(9.17, 20.67) | 21.00(15.30, 28.23) | 13.42(9.50, 20.06) |
| β-Cryptoxanthin | 51.9(36.33, 84.58) | 28.63(19.11, 44.97) | 15.22 (7.88, 22.06) |
| β-Carotene | 174.95(83.51, 289.02) | 42.11(26.80, 58.91) | 31.22 (14.34, 51.29) |
| Lycopene | 78.58(43.45, 139.47) | 12.70(6.08, 20.72) | 6.23(0, 14.08) |
| Total | 390.19(235.69, 564.08) | 219.10(151.79, 283.83) | 151.58 (80.36, 210.24) |

**Table S2.** Comparison of carotenoids across cross-sectional breast milk samples (µg/L)

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| --- | --- | --- | --- |
| **Carotenoid** | **Early-term mature milk****(40–45 day)****n=71** | **Mid-term mature milk****(200–240 day)****n=101** | **Late-term mature milk****(300–400 day)****n=99** |
| Lutein | 69.34(45.12, 108.99) | 56.11(32.33, 78.54) | 50.68(32.62, 73.84) |
| Zeaxanthin | 15.81(12.57, 24.05) | 32.53(17.22, 44.47) | 34.41(22.15, 53.19) |
| β-Cryptoxanthin | 17.35b (10.70, 30.77) | 12.37(1.54, 20.17) | 3.46(0, 11.70) |
| β-Carotene | 35.63(18.22, 51.58) | 14.53(10.33, 22.56) | 12.49(9.52, 17.42) |
| Lycopene | 7.55(0, 13.29) | 13.83(9.04, 22.64) | 10.29(7.29, 15.01) |
| Total | 152.63(105.24, 234.71) | 125.87(84.73, 200.20) | 118.75(80.28, 168.00) |