Prepartum supplementation of dairy cows with inorganic selenium, organic selenium or rumen-protected choline does not affect carotenoid composition or colour characteristics of bovine colostrum or transition milk.

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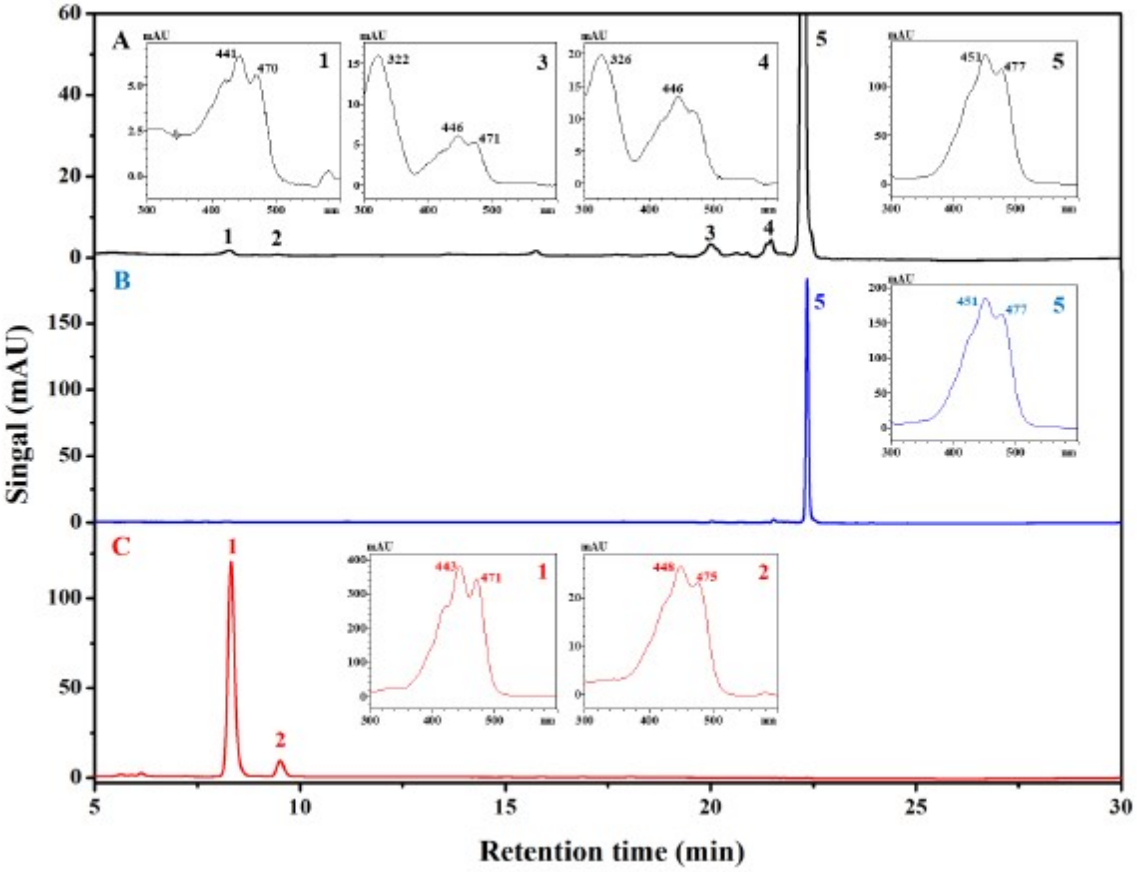
SUPPLEMENTARY FILE

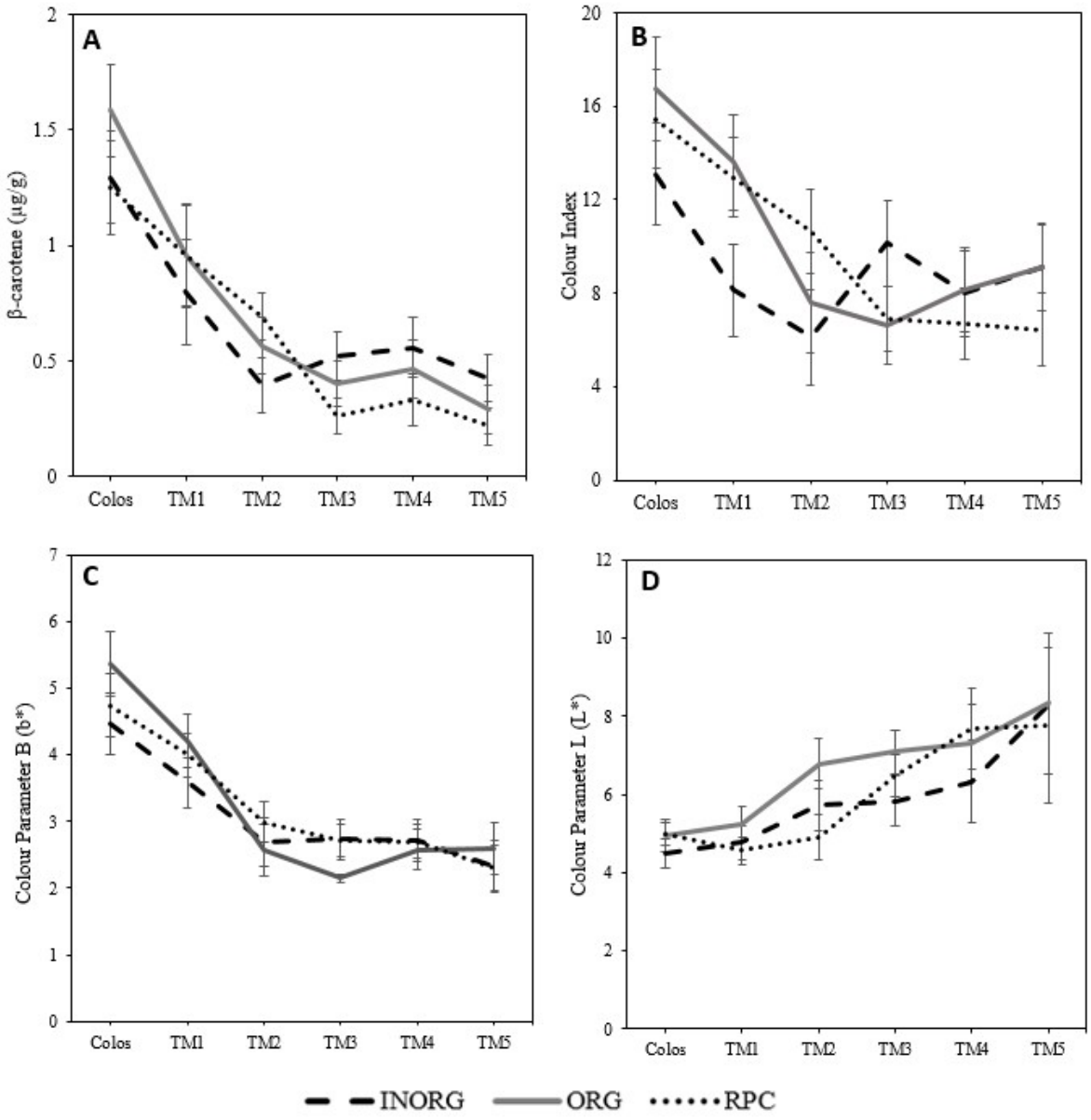


Supplementary Figure S1. Ultra-high-performance liquid chromatography (UHPLC) carotenoid profile of bovine colostrum.

Panel A: Sample carotenoid profile of bovine colostrum. Peak 1, all-trans-lutein; peak 2, all-trans-zeaxanthin; peak 3, 13-cis-β-carotene; peak 4, unidentified cis-β-carotene; peak 5, all-trans-β-carotene. Panels A1 to A5, spectrum of the corresponding peaks in the chromatogram.

Panel B: Carotenoid profile of all-trans-β-carotene standard. Peak 5, all-trans-β-carotene. Panel B5, spectrum of all-trans-β-carotene standard.

Panel C: Carotenoid profile of lutein and zeaxanthin standard. Peak 1, all-trans-lutein; peak 2, all-trans-zeaxanthin. Panels C1 and C2, spectrum of all-trans-lutein and all-trans-zeaxanthin standards.



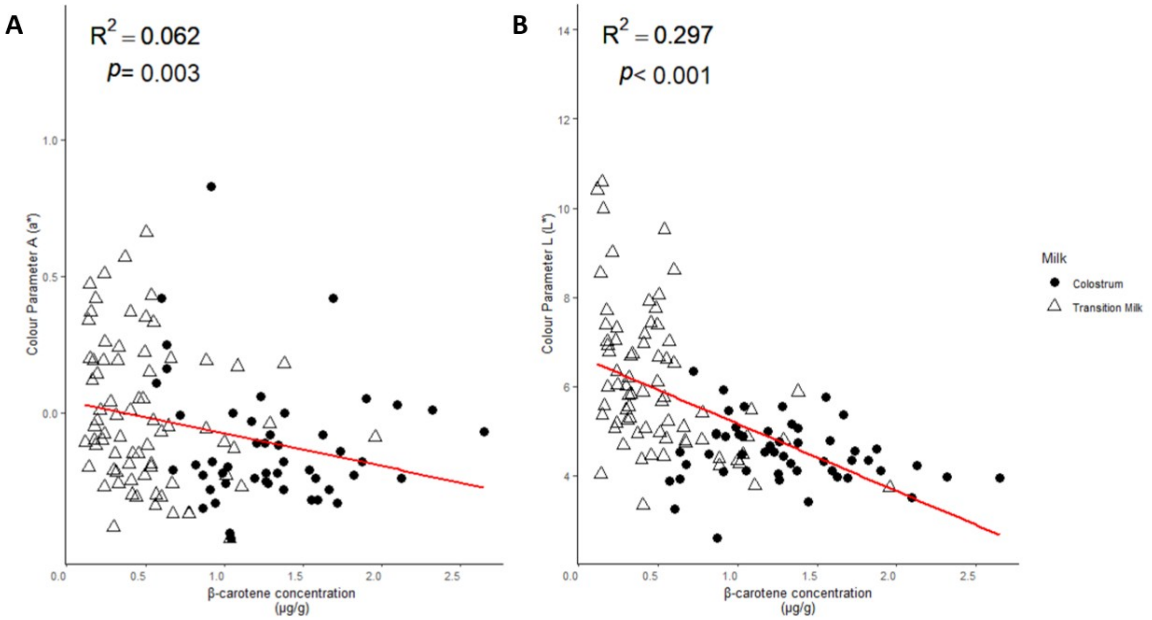
Supplementary Figure S2. Changes in β-carotene concentrations (µg/g), colour index and colour parameters b* and L* as milk transitioned from colostrum (colos) to transition milk one to five (TM1…TM5) (each milking postpartum).

Groups were separated based on supplement received during the prepartum period where INORG = inorganic selenium; ORG = organic selenium and RPC = rumen-protected choline.

Values are represented as mean ± standard error (SE).

The reader is referred to Table 4; for the individual *P*-values for the impact each milking postpartum had on β-carotene concentrations, colour index, b* and L* as milk transitioned from colostrum to TM5.

Colour parameter a* is not included was not significantly affected by each milking postpartum.



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36 **Supplementary Figure S3.** Panel A: Correlation observed between β-carotene
37 concentrations (µg/g) in milk and colour parameter A (a*) ($R^2 = 0.062$; $P = 0.003$). Panel B:
38 Correlation observed between β-carotene concentrations (µg/g) in milk and colour parameter
39 L (L*) ($R^2 = 0.297$; $P < 0.001$).

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