***Animal* journal**

**Transient reductions in milk fat synthesis and their association with the ruminal and metabolic profile in dairy cows fed high-starch, low-fat diets**

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**Supplementary Table S1** Treatment assignment of a repeated design to study the induction and recovery of subacute ruminal acidosis (SARA) of fed a high-starch, low-fat diet (SARA), a low-starch, low-fat diet (Control), or a low-starch, low-fat diet after SARA induction (Recovery).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Assignment | Pre-experiment | Period 1 | Period 2 | Period 3 |
| 1 | Control | Control | SARA | Recovery |
| 2 | SARA | Recovery | Control | SARA |
| 3 | Control | SARA | Recovery | Control |

**Supplementary Table S2** Evolution of milk fatty acids of cows fed a high-starch, low-fat diet (SARA), a low-starch, low-fat diet (Control), or a low-starch, low-fat diet after SARA induction (Recovery).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | |  | |  | |  | *P* - value | | | | | | | | | |
|  |  |  | |  | |  | |  | -----Contrasts----- | | | |  | |  | |  | |
| Fatty acid¹ | Day | Control | | SARA | | Recovery | | SEM | S vs. C | | R vs. C | | Treatment | | Day | | Treatment x day | |
| 4:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 2.80 | | 2.46 | | 2.02 | | 0.216 | 0.122 | | <.001 | | 0.009 | | 0.155 | | 0.047 | |
|  | 3 | 2.53 | | 2.19 | | 2.40 | | 0.216 | 0.122 | | 0.550 | |  | |  | |  | |
|  | 7 | 2.71 | | 2.28 | | 2.57 | | 0.216 | 0.050 | | 0.527 | |  | |  | |  | |
|  | 14 | 2.66 | | 2.52 | | 2.67 | | 0.216 | 0.532 | | 0.962 | |  | |  | |  | |
|  | 21 | 2.64 | | 2.37 | | 2.89 | | 0.216 | 0.204 | | 0.255 | |  | |  | |  | |
| 5:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0407 | | 0.0301 | | 0.0478 | | 0.050 | 0.023 | | 0.124 | | <.001 | | 0.487 | | <.001 | |
|  | 3 | 0.0338 | | 0.0483 | | 0.0342 | | 0.050 | 0.019 | | 0.929 | |  | |  | |  | |
|  | 7 | 0.0372 | | 0.0519 | | 0.0335 | | 0.050 | 0.017 | | 0.430 | |  | |  | |  | |
|  | 14 | 0.0365 | | 0.0591 | | 0.0341 | | 0.050 | <.001 | | 0.595 | |  | |  | |  | |
|  | 21 | 0.0338 | | 0.0485 | | 0.0425 | | 0.050 | 0.017 | | 0.060 | |  | |  | |  | |
| 6:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 2.27 | | 2.05 | | 1.83 | | 0.152 | 0.139 | | <.001 | | 0.037 | | 0.029 | | 0.229 | |
|  | 3 | 2.08 | | 1.91 | | 1.98 | | 0.152 | 0.277 | | 0.529 | |  | |  | |  | |
|  | 7 | 2.22 | | 1.94 | | 2.10 | | 0.152 | 0.068 | | 0.435 | |  | |  | |  | |
|  | 14 | 2.24 | | 2.15 | | 2.24 | | 0.152 | 0.547 | | 0.977 | |  | |  | |  | |
|  | 21 | 2.21 | | 2.09 | | 2.39 | | 0.152 | 0.439 | | 0.245 | |  | |  | |  | |
| 7:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0456 | | 0.0352 | | 0.0615 | | 0.005 | 0.059 | | 0.041 | | <.001 | | 0.757 | | <.001 | |
|  | 3 | 0.0398 | | 0.0592 | | 0.0405 | | 0.005 | 0.010 | | 0.898 | |  | |  | |  | |
|  | 7 | 0.0419 | | 0.0658 | | 0.0348 | | 0.005 | <.001 | | 0.195 | |  | |  | |  | |
|  | 14 | 0.0422 | | 0.0710 | | 0.0380 | | 0.005 | <.001 | | 0.442 | |  | |  | |  | |
|  | 21 | 0.0390 | | 0.0604 | | 0.0475 | | 0.005 | <.001 | | 0.120 | |  | |  | |  | |
| 8:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 1.54 | | 1.43 | | 1.36 | | 0.0855 | 0.183 | | 0.037 | | 0.316 | | 0.011 | | 0.683 | |
|  | 3 | 1.43 | | 1.40 | | 1.41 | | 0.0855 | 0.748 | | 0.830 | |  | |  | |  | |
|  | 7 | 1.52 | | 1.41 | | 1.46 | | 0.0855 | 0.210 | | 0.475 | |  | |  | |  | |
|  | 14 | 1.57 | | 1.54 | | 1.56 | | 0.0855 | 0.724 | | 0.871 | |  | |  | |  | |
|  | 21 | 1.52 | | 1.51 | | 1.61 | | 0.0855 | 0.927 | | 0.289 | |  | |  | |  | |
| 9:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0589 | | 0.0524 | | 0.0880 | | 0.007 | 0.344 | | <.001 | | <.001 | | 0.700 | | <.001 | |
|  | 3 | 0.0496 | | 0.0895 | | 0.0587 | | 0.007 | <.001 | | 0.187 | |  | |  | |  | |
|  | 7 | 0.0528 | | 0.0946 | | 0.0509 | | 0.007 | <.001 | | 0.778 | |  | |  | |  | |
|  | 14 | 0.0619 | | 0.0967 | | 0.0537 | | 0.007 | <.001 | | 0.231 | |  | |  | |  | |
|  | 21 | 0.0530 | | 0.0844 | | 0.0609 | | 0.007 | <.001 | | 0.253 | |  | |  | |  | |
| 10:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 3.97 | | 3.80 | | 3.89 | | 0.214 | 0.412 | | 0.709 | | 0.388 | | 0.036 | | 0.850 | |
|  | 3 | 3.73 | | 3.99 | | 3.81 | | 0.214 | 0.221 | | 0.702 | |  | |  | |  | |
|  | 7 | 3.89 | | 4.01 | | 3.81 | | 0.214 | 0.561 | | 0.709 | |  | |  | |  | |
|  | 14 | 4.20 | | 4.36 | | 4.12 | | 0.214 | 0.452 | | 0.710 | |  | |  | |  | |
|  | 21 | 4.01 | | 4.23 | | 4.22 | | 0.214 | 0.291 | | 0.309 | |  | |  | |  | |
| 10:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.374 | | 0.346 | | 0.351 | | 0.0201 | 0.174 | | 0.269 | | 0.657 | | 0.010 | | 0.757 | |
|  | 3 | 0.361 | | 0.370 | | 0.356 | | 0.0201 | 0.634 | | 0.809 | |  | |  | |  | |
|  | 7 | 0.372 | | 0.379 | | 0.364 | | 0.0201 | 0.750 | | 0.691 | |  | |  | |  | |
|  | 14 | 0.400 | | 0.410 | | 0.389 | | 0.0201 | 0.618 | | 0.585 | |  | |  | |  | |
|  | 21 | 0.376 | | 0.396 | | 0.399 | | 0.0201 | 0.326 | | 0.247 | |  | |  | |  | |
| 11:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.105 | | 0.088 | | 0.178 | | 0.0139 | 0.200 | | <.001 | | <.001 | | 0.449 | | <.001 | |
|  | 3 | 0.099 | | 0.180 | | 0.112 | | 0.0139 | <.001 | | 0.363 | |  | |  | |  | |
|  | 7 | 0.096 | | 0.198 | | 0.098 | | 0.0139 | <.001 | | 0.886 | |  | |  | |  | |
|  | 14 | 0.115 | | 0.193 | | 0.104 | | 0.0139 | <.001 | | 0.443 | |  | |  | |  | |
|  | 21 | 0.099 | | 0.168 | | 0.108 | | 0.0139 | <.001 | | 0.515 | |  | |  | |  | |
| 12:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 4.91 | | 4.74 | | 5.13 | | 0.260 | 0.525 | | 0.385 | | 0.005 | | 0.022 | | 0.205 | |
|  | 3 | 4.62 | | 5.22 | | 4.82 | | 0.260 | 0.022 | | 0.455 | |  | |  | |  | |
|  | 7 | 4.77 | | 5.26 | | 4.73 | | 0.260 | 0.057 | | 0.882 | |  | |  | |  | |
|  | 14 | 5.29 | | 5.71 | | 5.14 | | 0.260 | 0.107 | | 0.584 | |  | |  | |  | |
|  | 21 | 4.97 | | 5.49 | | 5.24 | | 0.260 | 0.049 | | 0.305 | |  | |  | |  | |
| 13:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.152 | | 0.138 | | 0.236 | | 0.0149 | 0.335 | | <.001 | | <.001 | | 0.744 | | <.001 | |
|  | 3 | 0.144 | | 0.232 | | 0.163 | | 0.0149 | <.001 | | 0.215 | |  | |  | |  | |
|  | 7 | 0.144 | | 0.251 | | 0.146 | | 0.0149 | <.001 | | 0.898 | |  | |  | |  | |
|  | 14 | 0.155 | | 0.248 | | 0.143 | | 0.0149 | <.001 | | 0.429 | |  | |  | |  | |
|  | 21 | 0.142 | | 0.219 | | 0.154 | | 0.0149 | <.001 | | 0.428 | |  | |  | |  | |
| *Iso* 13:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0244 | | 0.0345 | | 0.0307 | | 0.0371 | 0.007 | | 0.090 | | 0.990 | | 0.626 | | 0.012 | |
|  | 3 | 0.0281 | | 0.0238 | | 0.0311 | | 0.0371 | 0.245 | | 0.417 | |  | |  | |  | |
|  | 7 | 0.0341 | | 0.0261 | | 0.0298 | | 0.0371 | 0.033 | | 0.247 | |  | |  | |  | |
|  | 14 | 0.0294 | | 0.0313 | | 0.0297 | | 0.0371 | 0.610 | | 0.937 | |  | |  | |  | |
|  | 21 | 0.0298 | | 0.0302 | | 0.0236 | | 0.0371 | 0.908 | | 0.094 | |  | |  | |  | |
| *anteiso* 13:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0183 | | 0.0116 | | 0.0076 | | 0.0403 | 0.101 | | 0.009 | | 0.477 | | 0.999 | | 0.183 | |
|  | 3 | 0.0143 | | 0.0109 | | 0.0127 | | 0.0403 | 0.398 | | 0.692 | |  | |  | |  | |
|  | 7 | 0.0122 | | 0.0130 | | 0.0126 | | 0.0403 | 0.830 | | 0.907 | |  | |  | |  | |
|  | 14 | 0.0123 | | 0.0134 | | 0.0135 | | 0.0403 | 0.772 | | 0.756 | |  | |  | |  | |
|  | 21 | 0.0116 | | 0.0086 | | 0.0175 | | 0.0403 | 0.472 | | 0.139 | |  | |  | |  | |
| 14:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 13.51 | | 13.49 | | 13.56 | | 0.479 | 0.960 | | 0.912 | | 0.344 | | 0.062 | | 0.924 | |
|  | 3 | 12.95 | | 13.46 | | 13.76 | | 0.479 | 0.292 | | 0.094 | |  | |  | |  | |
|  | 7 | 13.38 | | 13.52 | | 13.32 | | 0.479 | 0.762 | | 0.914 | |  | |  | |  | |
|  | 14 | 13.98 | | 14.35 | | 13.92 | | 0.479 | 0.439 | | 0.910 | |  | |  | |  | |
|  | 21 | 13.48 | | 13.97 | | 13.91 | | 0.479 | 0.307 | | 0.379 | |  | |  | |  | |
| *cis*-9 14:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 1.13 | | 1.10 | | 1.19 | | 0.0560 | 0.5452 | | 0.3255 | | 0.0400 | | 0.0420 | | 0.0559 | |
|  | 3 | 1.13 | | 1.23 | | 1.16 | | 0.0560 | 0.0647 | | 0.6375 | |  | |  | |  | |
|  | 7 | 1.13 | | 1.28 | | 1.12 | | 0.0560 | 0.0112 | | 0.7957 | |  | |  | |  | |
|  | 14 | 1.23 | | 1.37 | | 1.18 | | 0.0560 | 0.0193 | | 0.3738 | |  | |  | |  | |
|  | 21 | 1.14 | | 1.26 | | 1.18 | | 0.0560 | 0.0399 | | 0.4820 | |  | |  | |  | |
| *cis*-11 14:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0716 | | 0.0686 | | 0.0833 | | 0.0053 | 0.568 | | 0.030 | | <.001 | | 0.085 | | 0.030 | |
|  | 3 | 0.0682 | | 0.0904 | | 0.0712 | | 0.0053 | <.001 | | 0.563 | |  | |  | |  | |
|  | 7 | 0.0680 | | 0.0889 | | 0.0689 | | 0.0053 | 0.001 | | 0.859 | |  | |  | |  | |
|  | 14 | 0.0773 | | 0.0914 | | 0.0776 | | 0.0053 | 0.009 | | 0.952 | |  | |  | |  | |
|  | 21 | 0.0743 | | 0.0845 | | 0.0795 | | 0.0053 | 0.059 | | 0.335 | |  | |  | |  | |
| 15:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 1.22 | | 1.19 | | 1.69 | | 0.0812 | 0.712 | | <.001 | | <.001 | | 0.273 | | <.001 | |
|  | 3 | 1.21 | | 1.61 | | 1.37 | | 0.0812 | <.001 | | 0.042 | |  | |  | |  | |
|  | 7 | 1.21 | | 1.70 | | 1.24 | | 0.0812 | <.001 | | 0.701 | |  | |  | |  | |
|  | 14 | 1.22 | | 1.66 | | 1.20 | | 0.0812 | <.001 | | 0.826 | |  | |  | |  | |
|  | 21 | 1.17 | | 1.52 | | 1.20 | | 0.0812 | <.001 | | 0.759 | |  | |  | |  | |
| *iso* 15:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.191 | | 0.192 | | 0.174 | | 0.0808 | 0.913 | | 0.046 | | <.001 | | 0.232 | | <.001 | |
|  | 3 | 0.192 | | 0.155 | | 0.209 | | 0.0808 | <.001 | | 0.034 | |  | |  | |  | |
|  | 7 | 0.190 | | 0.164 | | 0.191 | | 0.0808 | 0.0130 | | 0.928 | |  | |  | |  | |
|  | 14 | 0.183 | | 0.163 | | 0.191 | | 0.0808 | 0.0155 | | 0.310 | |  | |  | |  | |
|  | 21 | 0.182 | | 0.166 | | 0.182 | | 0.0808 | 0.0457 | | 0.991 | |  | |  | |  | |
| 15:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0356 | | 0.0347 | | 0.0259 | | 0.0351 | 0.794 | | 0.006 | | 0.147 | | 0.670 | | 0.035 | |
|  | 3 | 0.0311 | | 0.0316 | | 0.0324 | | 0.0351 | 0.878 | | 0.713 | |  | |  | |  | |
|  | 7 | 0.0343 | | 0.0288 | | 0.0302 | | 0.0351 | 0.123 | | 0.248 | |  | |  | |  | |
|  | 14 | 0.0301 | | 0.0277 | | 0.0298 | | 0.0351 | 0.511 | | 0.945 | |  | |  | |  | |
|  | 21 | 0.0327 | | 0.0256 | | 0.0355 | | 0.0351 | 0.045 | | 0.429 | |  | |  | |  | |
| 16:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 29.30 | | 30.34 | | 30.97 | | 0.822 | 0.208 | | 0.043 | | 0.032 | | 0.097 | | 0.924 | |
|  | 3 | 29.67 | | 30.61 | | 30.69 | | 0.822 | 0.253 | | 0.217 | |  | |  | |  | |
|  | 7 | 28.95 | | 29.55 | | 30.07 | | 0.822 | 0.462 | | 0.174 | |  | |  | |  | |
|  | 14 | 29.15 | | 29.45 | | 29.97 | | 0.822 | 0.715 | | 0.318 | |  | |  | |  | |
|  | 21 | 28.98 | | 29.74 | | 28.97 | | 0.822 | 0.356 | | 0.994 | |  | |  | |  | |
| *cis*-9 16:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 1.25 | | 1.22 | | 1.28 | | 0.0635 | 0.700 | | 0.626 | | 0.017 | | 0.112 | | 0.553 | |
|  | 3 | 1.29 | | 1.35 | | 1.25 | | 0.0635 | 0.373 | | 0.459 | |  | |  | |  | |
|  | 7 | 1.25 | | 1.35 | | 1.21 | | 0.0635 | 0.106 | | 0.512 | |  | |  | |  | |
|  | 14 | 1.31 | | 1.34 | | 1.22 | | 0.0635 | 0.567 | | 0.162 | |  | |  | |  | |
|  | 21 | 1.20 | | 1.26 | | 1.17 | | 0.0635 | 0.337 | | 0.656 | |  | |  | |  | |
| *cis*-11 16:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0477 | | 0.0327 | | 0.0309 | | 0.0502 | 0.003 | | 0.010 | | 0.232 | | 0.504 | | 0.021 | |
|  | 3 | 0.0314 | | 0.0386 | | 0.0299 | | 0.0502 | 0.154 | | 0.766 | |  | |  | |  | |
|  | 7 | 0.0337 | | 0.0359 | | 0.0269 | | 0.0502 | 0.660 | | 0.179 | |  | |  | |  | |
|  | 14 | 0.0327 | | 0.0337 | | 0.0345 | | 0.0502 | 0.849 | | 0.717 | |  | |  | |  | |
|  | 21 | 0.0308 | | 0.0331 | | 0.0363 | | 0.0502 | 0.653 | | 0.274 | |  | |  | |  | |
| *cis*-13 16:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.160 | | 0.164 | | 0.203 | | 0.0113 | 0.741 | | 0.020 | | <.001 | | 0.145 | | <.001 | |
|  | 3 | 0.173 | | 0.216 | | 0.177 | | 0.0113 | 0.020 | | 0.716 | |  | |  | |  | |
|  | 7 | 0.166 | | 0.203 | | 0.167 | | 0.0113 | 0.013 | | 0.926 | |  | |  | |  | |
|  | 14 | 0.180 | | 0.206 | | 0.180 | | 0.0113 | 0.021 | | 0.987 | |  | |  | |  | |
|  | 21 | 0.178 | | 0.207 | | 0.177 | | 0.0113 | 0.012 | | 0.903 | |  | |  | |  | |
| *cis*-14 16:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0121 | | 0.0183 | | 0.0136 | | 0.0293 | 0.038 | | 0.619 | | 0.093 | | 0.732 | | 0.116 | |
|  | 3 | 0.0154 | | 0.0178 | | 0.0136 | | 0.0293 | 0.398 | | 0.556 | |  | |  | |  | |
|  | 7 | 0.0180 | | 0.0181 | | 0.0150 | | 0.0293 | 0.983 | | 0.310 | |  | |  | |  | |
|  | 14 | 0.0210 | | 0.0129 | | 0.0140 | | 0.0293 | 0.007 | | 0.019 | |  | |  | |  | |
|  | 21 | 0.0172 | | 0.0159 | | 0.0145 | | 0.0293 | 0.659 | | 0.373 | |  | |  | |  | |
| *trans*-5 16:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0138 | | 0.0138 | | 0.0116 | | 0.0283 | 0.998 | | 0.454 | | 0.221 | | 0.037 | | 0.095 | |
|  | 3 | 0.0126 | | 0.0107 | | 0.0082 | | 0.0283 | 0.492 | | 0.122 | |  | |  | |  | |
|  | 7 | 0.0123 | | 0.0109 | | 0.0130 | | 0.0283 | 0.610 | | 0.798 | |  | |  | |  | |
|  | 14 | 0.0053 | | 0.0151 | | 0.0081 | | 0.0283 | 0.006 | | 0.320 | |  | |  | |  | |
|  | 21 | 0.0141 | | 0.0148 | | 0.0134 | | 0.0283 | 0.804 | | 0.803 | |  | |  | |  | |
| *trans*-6-8 16:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0292 | | 0.0323 | | 0.0327 | | 0.0380 | 0.420 | | 0.361 | | 0.049 | | 0.207 | | 0.859 | |
|  | 3 | 0.0353 | | 0.0371 | | 0.0317 | | 0.0380 | 0.633 | | 0.337 | |  | |  | |  | |
|  | 7 | 0.0318 | | 0.0368 | | 0.0318 | | 0.0380 | 0.191 | | 1.000 | |  | |  | |  | |
|  | 14 | 0.0285 | | 0.0359 | | 0.0297 | | 0.0380 | 0.053 | | 0.767 | |  | |  | |  | |
|  | 21 | 0.0297 | | 0.0309 | | 0.0293 | | 0.0380 | 0.760 | | 0.902 | |  | |  | |  | |
| *trans*-9 16:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0458 | | 0.0481 | | 0.0419 | | 0.0416 | 0.582 | | 0.352 | | 0.040 | | 0.009 | | 0.390 | |
|  | 3 | 0.0552 | | 0.0433 | | 0.0461 | | 0.0416 | 0.005 | | 0.031 | |  | |  | |  | |
|  | 7 | 0.0496 | | 0.0449 | | 0.0466 | | 0.0416 | 0.260 | | 0.478 | |  | |  | |  | |
|  | 14 | 0.0505 | | 0.0395 | | 0.0404 | | 0.0416 | 0.009 | | 0.017 | |  | |  | |  | |
|  | 21 | 0.0447 | | 0.0387 | | 0.0370 | | 0.0416 | 0.152 | | 0.065 | |  | |  | |  | |
| 17:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.371 | | 0.376 | | 0.427 | | 0.0214 | 0.818 | | 0.009 | | 0.471 | | 0.251 | | 0.031 | |
|  | 3 | 0.387 | | 0.388 | | 0.396 | | 0.0214 | 0.960 | | 0.657 | |  | |  | |  | |
|  | 7 | 0.379 | | 0.416 | | 0.373 | | 0.0214 | 0.092 | | 0.766 | |  | |  | |  | |
|  | 14 | 0.371 | | 0.376 | | 0.360 | | 0.0214 | 0.800 | | 0.605 | |  | |  | |  | |
|  | 21 | 0.385 | | 0.393 | | 0.348 | | 0.0214 | 0.709 | | 0.086 | |  | |  | |  | |
| *iso* 17:0 + 16:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.176 | | 0.178 | | 0.179 | | 0.0095 | 0.910 | | 0.758 | | 0.017 | | 0.257 | | 0.030 | |
|  | 3 | 0.190 | | 0.156 | | 0.197 | | 0.0095 | 0.001 | | 0.435 | |  | |  | |  | |
|  | 7 | 0.190 | | 0.177 | | 0.189 | | 0.0095 | 0.186 | | 0.961 | |  | |  | |  | |
|  | 14 | 0.179 | | 0.174 | | 0.174 | | 0.0095 | 0.616 | | 0.610 | |  | |  | |  | |
|  | 21 | 0.182 | | 0.174 | | 0.167 | | 0.0095 | 0.432 | | 0.133 | |  | |  | |  | |
| *anteiso* 17:0 + 16:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.422 | | 0.399 | | 0.356 | | 0.0183 | 0.207 | | 0.0004 | | 0.030 | | 0.743 | | 0.026 | |
|  | 3 | 0.402 | | 0.391 | | 0.395 | | 0.0183 | 0.540 | | 0.713 | |  | |  | |  | |
|  | 7 | 0.405 | | 0.379 | | 0.400 | | 0.0183 | 0.154 | | 0.794 | |  | |  | |  | |
|  | 14 | 0.417 | | 0.365 | | 0.414 | | 0.0183 | 0.005 | | 0.885 | |  | |  | |  | |
|  | 21 | 0.394 | | 0.365 | | 0.396 | | 0.0183 | 0.109 | | 0.906 | |  | |  | |  | |
| *cis*-9 17:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.157 | | 0.163 | | 0.163 | | 0.0141 | 0.708 | | 0.669 | | 0.034 | | 0.282 | | 0.917 | |
|  | 3 | 0.162 | | 0.163 | | 0.150 | | 0.0141 | 0.962 | | 0.371 | |  | |  | |  | |
|  | 7 | 0.156 | | 0.176 | | 0.150 | | 0.0141 | 0.165 | | 0.674 | |  | |  | |  | |
|  | 14 | 0.155 | | 0.164 | | 0.140 | | 0.0141 | 0.532 | | 0.297 | |  | |  | |  | |
|  | 21 | 0.148 | | 0.155 | | 0.134 | | 0.0141 | 0.625 | | 0.317 | |  | |  | |  | |
| 18:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 5.36 | | 5.81 | | 5.04 | | 0.372 | 0.233 | | 0.393 | | 0.040 | | 0.026 | | 0.029 | |
|  | 3 | 5.68 | | 4.71 | | 5.25 | | 0.372 | 0.010 | | 0.249 | |  | |  | |  | |
|  | 7 | 5.59 | | 4.68 | | 5.56 | | 0.372 | 0.016 | | 0.950 | |  | |  | |  | |
|  | 14 | 5.00 | | 4.23 | | 5.05 | | 0.372 | 0.040 | | 0.906 | |  | |  | |  | |
|  | 21 | 5.92 | | 4.79 | | 5.34 | | 0.372 | 0.003 | | 0.121 | |  | |  | |  | |
| *trans*-4 18:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0110 | | 0.0130 | | 0.0126 | | 0.0264 | 0.444 | | 0.560 | | 0.607 | | 0.333 | | 0.884 | |
|  | 3 | 0.0114 | | 0.0141 | | 0.0111 | | 0.0264 | 0.295 | | 0.927 | |  | |  | |  | |
|  | 7 | 0.0089 | | 0.0119 | | 0.0114 | | 0.0264 | 0.261 | | 0.358 | |  | |  | |  | |
|  | 14 | 0.0101 | | 0.0100 | | 0.0086 | | 0.0264 | 0.973 | | 0.579 | |  | |  | |  | |
|  | 21 | 0.0129 | | 0.0109 | | 0.0121 | | 0.0264 | 0.453 | | 0.773 | |  | |  | |  | |
| *trans*-5 18:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0155 | | 0.0148 | | 0.0159 | | 0.0231 | 0.756 | | 0.879 | | 0.513 | | 0.611 | | 0.641 | |
|  | 3 | 0.0140 | | 0.0150 | | 0.0135 | | 0.0231 | 0.672 | | 0.825 | |  | |  | |  | |
|  | 7 | 0.0189 | | 0.0153 | | 0.0140 | | 0.0231 | 0.120 | | 0.036 | |  | |  | |  | |
|  | 14 | 0.0133 | | 0.0161 | | 0.0140 | | 0.0231 | 0.241 | | 0.786 | |  | |  | |  | |
|  | 21 | 0.0146 | | 0.0154 | | 0.0139 | | 0.0231 | 0.740 | | 0.766 | |  | |  | |  | |
| *trans*-6-8 18:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.171 | | 0.176 | | 0.180 | | 0.0134 | 0.685 | | 0.484 | | 0.022 | | 0.250 | | 0.396 | |
|  | 3 | 0.202 | | 0.171 | | 0.170 | | 0.0134 | 0.024 | | 0.020 | |  | |  | |  | |
|  | 7 | 0.190 | | 0.188 | | 0.164 | | 0.0134 | 0.848 | | 0.054 | |  | |  | |  | |
|  | 14 | 0.179 | | 0.164 | | 0.163 | | 0.0134 | 0.277 | | 0.248 | |  | |  | |  | |
|  | 21 | 0.176 | | 0.171 | | 0.156 | | 0.0134 | 0.678 | | 0.136 | |  | |  | |  | |
| *trans*-9 18:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.349 | | 0.357 | | 0.337 | | 0.0389 | 0.843 | | 0.752 | | 0.014 | | 0.024 | | 0.696 | |
|  | 3 | 0.409 | | 0.318 | | 0.338 | | 0.0389 | 0.021 | | 0.068 | |  | |  | |  | |
|  | 7 | 0.374 | | 0.348 | | 0.301 | | 0.0389 | 0.502 | | 0.063 | |  | |  | |  | |
|  | 14 | 0.346 | | 0.292 | | 0.314 | | 0.0389 | 0.167 | | 0.408 | |  | |  | |  | |
|  | 21 | 0.315 | | 0.296 | | 0.255 | | 0.0389 | 0.627 | | 0.131 | |  | |  | |  | |
| *trans*-12 18:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.219 | | 0.213 | | 0.242 | | 0.0242 | 0.800 | | 0.345 | | 0.597 | | 0.041 | | 0.115 | |
|  | 3 | 0.277 | | 0.220 | | 0.222 | | 0.0242 | 0.019 | | 0.025 | |  | |  | |  | |
|  | 7 | 0.247 | | 0.270 | | 0.220 | | 0.0242 | 0.331 | | 0.280 | |  | |  | |  | |
|  | 14 | 0.196 | | 0.209 | | 0.211 | | 0.0242 | 0.593 | | 0.544 | |  | |  | |  | |
|  | 21 | 0.223 | | 0.234 | | 0.213 | | 0.0242 | 0.638 | | 0.676 | |  | |  | |  | |
| *trans-*16 18:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.166 | | 0.128 | | 0.154 | | 0.0271 | 0.162 | | 0.666 | | 0.150 | | 0.152 | | 0.560 | |
|  | 3 | 0.173 | | 0.128 | | 0.116 | | 0.0271 | 0.101 | | 0.038 | |  | |  | |  | |
|  | 7 | 0.182 | | 0.173 | | 0.137 | | 0.0271 | 0.741 | | 0.098 | |  | |  | |  | |
|  | 14 | 0.116 | | 0.133 | | 0.126 | | 0.0271 | 0.526 | | 0.719 | |  | |  | |  | |
|  | 21 | 0.146 | | 0.137 | | 0.135 | | 0.0271 | 0.740 | | 0.687 | |  | |  | |  | |
| *cis*-9 18:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 10.82 | | 10.96 | | 10.29 | | 0.755 | 0.860 | | 0.483 | | 0.104 | | 0.334 | | 0.948 | |
|  | 3 | 11.56 | | 10.55 | | 10.51 | | 0.755 | 0.182 | | 0.164 | |  | |  | |  | |
|  | 7 | 11.43 | | 10.83 | | 11.21 | | 0.755 | 0.426 | | 0.769 | |  | |  | |  | |
|  | 14 | 10.64 | | 9.78 | | 10.35 | | 0.755 | 0.256 | | 0.708 | |  | |  | |  | |
|  | 21 | 11.24 | | 10.23 | | 10.49 | | 0.755 | 0.180 | | 0.317 | |  | |  | |  | |
| *cis*-11 18:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 1.029 | | 0.984 | | 0.997 | | 0.109 | 0.677 | | 0.769 | | 0.171 | | 0.030 | | 0.956 | |
|  | 3 | 1.055 | | 1.050 | | 0.993 | | 0.109 | 0.960 | | 0.568 | |  | |  | |  | |
|  | 7 | 0.998 | | 1.007 | | 0.876 | | 0.109 | 0.931 | | 0.263 | |  | |  | |  | |
|  | 14 | 0.895 | | 0.861 | | 0.853 | | 0.109 | 0.751 | | 0.695 | |  | |  | |  | |
|  | 21 | 0.819 | | 0.854 | | 0.661 | | 0.109 | 0.745 | | 0.148 | |  | |  | |  | |
| *cis*-12 18:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.511 | | 0.418 | | 0.461 | | 0.0639 | 0.146 | | 0.432 | | 0.329 | | 0.017 | | 0.692 | |
|  | 3 | 0.525 | | 0.463 | | 0.438 | | 0.0639 | 0.332 | | 0.176 | |  | |  | |  | |
|  | 7 | 0.461 | | 0.462 | | 0.406 | | 0.0639 | 0.987 | | 0.391 | |  | |  | |  | |
|  | 14 | 0.385 | | 0.317 | | 0.392 | | 0.0639 | 0.284 | | 0.915 | |  | |  | |  | |
|  | 21 | 0.344 | | 0.394 | | 0.334 | | 0.0639 | 0.435 | | 0.876 | |  | |  | |  | |
| *cis*-13 18:1 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.159 | | 0.093 | | 0.113 | | 0.0381 | 0.085 | | 0.231 | | 0.037 | | 0.045 | | 0.597 | |
|  | 3 | 0.150 | | 0.087 | | 0.079 | | 0.0381 | 0.100 | | 0.063 | |  | |  | |  | |
|  | 7 | 0.157 | | 0.113 | | 0.072 | | 0.0381 | 0.259 | | 0.028 | |  | |  | |  | |
|  | 14 | 0.070 | | 0.055 | | 0.083 | | 0.0381 | 0.699 | | 0.743 | |  | |  | |  | |
|  | 21 | 0.072 | | 0.082 | | 0.057 | | 0.0381 | 0.792 | | 0.698 | |  | |  | |  | |
| *cis*-9, *trans*-12 18:2 |  |  |  | |  | |  | | |  | |  | |  | |  | |
|  | 0 | 0.0275 | | 0.0314 | | 0.0373 | | 0.0314 | 0.217 | | 0.023 | | 0.044 | | 0.566 | | 0.043 | |
|  | 3 | 0.0333 | | 0.0385 | | 0.0320 | | 0.0314 | 0.106 | | 0.678 | |  | |  | |  | |
|  | 7 | 0.0326 | | 0.0376 | | 0.0311 | | 0.0314 | 0.110 | | 0.635 | |  | |  | |  | |
|  | 14 | 0.0317 | | 0.0367 | | 0.0319 | | 0.0314 | 0.118 | | 0.959 | |  | |  | |  | |
|  | 21 | 0.0328 | | 0.0353 | | 0.0282 | | 0.0314 | 0.424 | | 0.144 | |  | |  | |  | |
| *trans*-8, *cis*-13 18:2 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0574 | | 0.0666 | | 0.0761 | | 0.0577 | 0.114 | | 0.015 | | 0.022 | | 0.080 | | 0.051 | |
|  | 3 | 0.0710 | | 0.0779 | | 0.0688 | | 0.0577 | 0.231 | | 0.710 | |  | |  | |  | |
|  | 7 | 0.0730 | | 0.0836 | | 0.0689 | | 0.0577 | 0.067 | | 0.486 | |  | |  | |  | |
|  | 14 | 0.0701 | | 0.0748 | | 0.0667 | | 0.0577 | 0.425 | | 0.557 | |  | |  | |  | |
|  | 21 | 0.0694 | | 0.0708 | | 0.0636 | | 0.0577 | 0.805 | | 0.314 | |  | |  | |  | |
| *trans*-9, *cis*-12 18:2 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0232 | | 0.0267 | | 0.0285 | | 0.0224 | 0.120 | | 0.019 | | 0.011 | | 0.010 | | 0.063 | |
|  | 3 | 0.0301 | | 0.0312 | | 0.0269 | | 0.0224 | 0.629 | | 0.148 | |  | |  | |  | |
|  | 7 | 0.0297 | | 0.0296 | | 0.0247 | | 0.0224 | 0.989 | | 0.026 | |  | |  | |  | |
|  | 14 | 0.0265 | | 0.0301 | | 0.0254 | | 0.0224 | 0.102 | | 0.624 | |  | |  | |  | |
|  | 21 | 0.0265 | | 0.0258 | | 0.0228 | | 0.0224 | 0.763 | | 0.101 | |  | |  | |  | |
| *trans*-9, *cis*-13 18:2 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.167 | | 0.167 | | 0.197 | | 0.0182 | 0.996 | | 0.106 | | 0.253 | | 0.876 | | 0.153 | |
|  | 3 | 0.178 | | 0.206 | | 0.165 | | 0.0182 | 0.125 | | 0.480 | |  | |  | |  | |
|  | 7 | 0.178 | | 0.210 | | 0.173 | | 0.0182 | 0.089 | | 0.748 | |  | |  | |  | |
|  | 14 | 0.182 | | 0.187 | | 0.168 | | 0.0182 | 0.781 | | 0.454 | |  | |  | |  | |
|  | 21 | 0.187 | | 0.181 | | 0.188 | | 0.0182 | 0.730 | | 0.928 | |  | |  | |  | |
| *trans*-11, *cis*-15 18:2 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0369 | | 0.0438 | | 0.0318 | | 0.0478 | 0.154 | | 0.283 | | <.001 | | 0.022 | | 0.020 | |
|  | 3 | 0.0483 | | 0.0358 | | 0.0440 | | 0.0478 | 0.010 | | 0.375 | |  | |  | |  | |
|  | 7 | 0.0498 | | 0.0335 | | 0.0500 | | 0.0478 | 0.001 | | 0.968 | |  | |  | |  | |
|  | 14 | 0.0398 | | 0.0293 | | 0.0430 | | 0.0478 | 0.029 | | 0.498 | |  | |  | |  | |
|  | 21 | 0.0423 | | 0.0300 | | 0.0409 | | 0.0478 | 0.011 | | 0.768 | |  | |  | |  | |
| 18:2 n6 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 1.11 | | 1.19 | | 1.39 | | 0.102 | 0.444 | | 0.070 | | 0.030 | | 0.310 | | 0.390 | |
|  | 3 | 1.26 | | 1.35 | | 1.30 | | 0.102 | 0.378 | | 0.679 | |  | |  | |  | |
|  | 7 | 1.20 | | 1.40 | | 1.37 | | 0.102 | 0.059 | | 0.110 | |  | |  | |  | |
|  | 14 | 1.21 | | 1.32 | | 1.22 | | 0.102 | 0.310 | | 0.958 | |  | |  | |  | |
|  | 21 | 1.30 | | 1.40 | | 1.29 | | 0.102 | 0.332 | | 0.916 | |  | |  | |  | |
| 18:3 n6 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0273 | | 0.0225 | | 0.0274 | | 0.0310 | 0.125 | | 0.986 | | 0.368 | | 0.889 | | 0.284 | |
|  | 3 | 0.0241 | | 0.0293 | | 0.0260 | | 0.0310 | 0.090 | | 0.536 | |  | |  | |  | |
|  | 7 | 0.0233 | | 0.0281 | | 0.0251 | | 0.0310 | 0.126 | | 0.570 | |  | |  | |  | |
|  | 14 | 0.0247 | | 0.0267 | | 0.0242 | | 0.0310 | 0.508 | | 0.867 | |  | |  | |  | |
|  | 21 | 0.0247 | | 0.0263 | | 0.0294 | | 0.0310 | 0.605 | | 0.124 | |  | |  | |  | |
| 18:3 n3 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0318 | | 0.0309 | | 0.0298 | | 0.0062 | 0.876 | | 0.744 | | 0.665 | | 0.044 | | 0.813 | |
|  | 3 | 0.0306 | | 0.0257 | | 0.0216 | | 0.0062 | 0.425 | | 0.145 | |  | |  | |  | |
|  | 7 | 0.0303 | | 0.0310 | | 0.0309 | | 0.0062 | 0.910 | | 0.915 | |  | |  | |  | |
|  | 14 | 0.0290 | | 0.0325 | | 0.0298 | | 0.0062 | 0.569 | | 0.903 | |  | |  | |  | |
|  | 21 | 0.0406 | | 0.0314 | | 0.0394 | | 0.0062 | 0.140 | | 0.855 | |  | |  | |  | |
| 18:4 n3 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0196 | | 0.0109 | | 0.0119 | | 0.0494 | 0.078 | | 0.118 | | 0.189 | | 0.013 | | 0.638 | |
|  | 3 | 0.0116 | | 0.0086 | | 0.0095 | | 0.0494 | 0.540 | | 0.664 | |  | |  | |  | |
|  | 7 | 0.0173 | | 0.0116 | | 0.0164 | | 0.0494 | 0.246 | | 0.856 | |  | |  | |  | |
|  | 14 | 0.0118 | | 0.0120 | | 0.0125 | | 0.0494 | 0.974 | | 0.883 | |  | |  | |  | |
|  | 21 | 0.0176 | | 0.0163 | | 0.0251 | | 0.0494 | 0.789 | | 0.133 | |  | |  | |  | |
| *cis*-9, *trans*-11 CLA |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.242 | | 0.249 | | 0.238 | | 0.0218 | 0.767 | | 0.836 | | 0.136 | | 0.159 | | 0.774 | |
|  | 3 | 0.264 | | 0.254 | | 0.263 | | 0.0218 | 0.650 | | 0.965 | |  | |  | |  | |
|  | 7 | 0.259 | | 0.252 | | 0.293 | | 0.0218 | 0.752 | | 0.117 | |  | |  | |  | |
|  | 14 | 0.247 | | 0.226 | | 0.250 | | 0.0218 | 0.341 | | 0.907 | |  | |  | |  | |
|  | 21 | 0.256 | | 0.228 | | 0.262 | | 0.0218 | 0.198 | | 0.768 | |  | |  | |  | |
| 20:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0806 | | 0.0679 | | 0.0607 | | 0.0103 | 0.217 | | 0.055 | | 0.216 | | 0.018 | | 0.443 | |
|  | 3 | 0.0689 | | 0.0605 | | 0.0607 | | 0.0103 | 0.410 | | 0.423 | |  | |  | |  | |
|  | 7 | 0.0718 | | 0.0649 | | 0.0750 | | 0.0103 | 0.504 | | 0.757 | |  | |  | |  | |
|  | 14 | 0.0720 | | 0.0760 | | 0.0706 | | 0.0103 | 0.697 | | 0.888 | |  | |  | |  | |
|  | 21 | 0.0870 | | 0.0707 | | 0.0929 | | 0.0103 | 0.115 | | 0.567 | |  | |  | |  | |
| 20:2 n6 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0243 | | 0.0168 | | 0.0177 | | 0.0359 | 0.039 | | 0.067 | | 0.524 | | 0.452 | | 0.111 | |
|  | 3 | 0.0185 | | 0.0194 | | 0.0181 | | 0.0359 | 0.807 | | 0.912 | |  | |  | |  | |
|  | 7 | 0.0233 | | 0.0193 | | 0.0188 | | 0.0359 | 0.268 | | 0.207 | |  | |  | |  | |
|  | 14 | 0.0179 | | 0.0193 | | 0.0165 | | 0.0359 | 0.707 | | 0.690 | |  | |  | |  | |
|  | 21 | 0.0187 | | 0.0189 | | 0.0269 | | 0.0359 | 0.976 | | 0.025 | |  | |  | |  | |
| 20:3 n6 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0546 | | 0.0252 | | 0.0257 | | 0.0105 | 0.006 | | 0.007 | | 0.570 | | 0.362 | | 0.154 | |
|  | 3 | 0.0268 | | 0.0233 | | 0.0229 | | 0.0105 | 0.743 | | 0.712 | |  | |  | |  | |
|  | 7 | 0.0260 | | 0.0303 | | 0.0306 | | 0.0105 | 0.683 | | 0.662 | |  | |  | |  | |
|  | 14 | 0.0326 | | 0.0405 | | 0.0292 | | 0.0105 | 0.452 | | 0.744 | |  | |  | |  | |
|  | 21 | 0.0303 | | 0.0290 | | 0.0405 | | 0.0105 | 0.903 | | 0.332 | |  | |  | |  | |
| 20:4 n3 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0132 | | 0.0088 | | 0.0090 | | 0.0325 | 0.172 | | 0.194 | | 0.013 | | 0.020 | | 0.540 | |
|  | 3 | 0.0127 | | 0.0081 | | 0.0084 | | 0.0325 | 0.165 | | 0.189 | |  | |  | |  | |
|  | 7 | 0.0145 | | 0.0104 | | 0.0171 | | 0.0325 | 0.219 | | 0.417 | |  | |  | |  | |
|  | 14 | 0.0134 | | 0.0109 | | 0.0161 | | 0.0325 | 0.441 | | 0.411 | |  | |  | |  | |
|  | 21 | 0.0175 | | 0.0144 | | 0.0212 | | 0.0325 | 0.342 | | 0.266 | |  | |  | |  | |
| 20:5 n3 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0307 | | 0.0235 | | 0.0249 | | 0.0369 | 0.052 | | 0.115 | | 0.166 | | 0.134 | | 0.258 | |
|  | 3 | 0.0264 | | 0.0253 | | 0.0234 | | 0.0369 | 0.757 | | 0.410 | |  | |  | |  | |
|  | 7 | 0.0293 | | 0.0242 | | 0.0237 | | 0.0369 | 0.174 | | 0.131 | |  | |  | |  | |
|  | 14 | 0.0222 | | 0.0235 | | 0.0216 | | 0.0369 | 0.714 | | 0.890 | |  | |  | |  | |
|  | 21 | 0.0273 | | 0.0238 | | 0.0326 | | 0.0369 | 0.342 | | 0.153 | |  | |  | |  | |
| 22:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0196 | | 0.0242 | | 0.0175 | | 0.0302 | 0.127 | | 0.493 | | 0.186 | | 0.310 | | 0.179 | |
|  | 3 | 0.0197 | | 0.0193 | | 0.0155 | | 0.0302 | 0.872 | | 0.167 | |  | |  | |  | |
|  | 7 | 0.0227 | | 0.0183 | | 0.0184 | | 0.0302 | 0.149 | | 0.159 | |  | |  | |  | |
|  | 14 | 0.0184 | | 0.0138 | | 0.0189 | | 0.0302 | 0.126 | | 0.876 | |  | |  | |  | |
|  | 21 | 0.0213 | | 0.0179 | | 0.0192 | | 0.0302 | 0.262 | | 0.482 | |  | |  | |  | |
| 22:2 n6 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0184 | | 0.0083 | | 0.0094 | | 0.0395 | 0.011 | | 0.024 | | 0.104 | | 0.129 | | 0.015 | |
|  | 3 | 0.0124 | | 0.0098 | | 0.0085 | | 0.0395 | 0.507 | | 0.325 | |  | |  | |  | |
|  | 7 | 0.0102 | | 0.0133 | | 0.0164 | | 0.0395 | 0.426 | | 0.117 | |  | |  | |  | |
|  | 14 | 0.0134 | | 0.0055 | | 0.0092 | | 0.0395 | 0.047 | | 0.290 | |  | |  | |  | |
|  | 21 | 0.0108 | | 0.0118 | | 0.0215 | | 0.0395 | 0.795 | | 0.007 | |  | |  | |  | |
| 22:6 n3 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0254 | | 0.0143 | | 0.0176 | | 0.0059 | 0.061 | | 0.189 | | 0.465 | | 0.060 | | 0.423 | |
|  | 3 | 0.0160 | | 0.0166 | | 0.0207 | | 0.0059 | 0.915 | | 0.425 | |  | |  | |  | |
|  | 7 | 0.0150 | | 0.0216 | | 0.0227 | | 0.0059 | 0.265 | | 0.192 | |  | |  | |  | |
|  | 14 | 0.0179 | | 0.0244 | | 0.0219 | | 0.0059 | 0.274 | | 0.507 | |  | |  | |  | |
|  | 21 | 0.0260 | | 0.0237 | | 0.0317 | | 0.0059 | 0.686 | | 0.337 | |  | |  | |  | |
| 24:0 |  |  | |  | |  | |  |  | |  | |  | |  | |  | |
|  | 0 | 0.0402 | | 0.0267 | | 0.0188 | | 0.0061 | 0.027 | | 0.006 | | 0.245 | | 0.122 | | 0.018 | |
|  | 3 | 0.0209 | | 0.0224 | | 0.0167 | | 0.0061 | 0.806 | | 0.486 | |  | |  | |  | |
|  | 7 | 0.0230 | | 0.0202 | | 0.0223 | | 0.0061 | 0.642 | | 0.911 | |  | |  | |  | |
|  | 14 | 0.0233 | | 0.0266 | | 0.0205 | | 0.0061 | 0.589 | | 0.644 | |  | |  | |  | |
|  | 21 | 0.0255 | | 0.0181 | | 0.0342 | | 0.0061 | 0.221 | | 0.155 | |  | |  | |  | |

S = SARA (Subacute ruminal acidosis); C = Control; R = Recovery; CLA = Conjugated linoleic acid

¹ % of milk fat

**Supplementary Table S3** Evolution of plasma cytokines content of cows fed a high-starch, low-fat diet (SARA), a low-starch, low-fat diet (Control), or a low-starch, low-fat diet after SARA induction (Recovery).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | | | | *P* - value | | |
| Cytokine¹ | Control | SARA | Recovery | SEM | S vs. C | | R vs. C |
| IFNα | 317 | 416 | 388 | 1.75 | 0.43 | | 0.82 |
| IFNγ | 1313 | 1353 | 1394 | 1.68 | 0.89 | | 0.92 |
| IL-13 | 2253 | 2039 | 2276 | 1.73 | 0.59 | | 0.58 |
| IL-1 F1 | 2186 | 2208 | 2186 | 1.73 | 0.97 | | 0.97 |
| IL-1 F5 | 3752 | 3569 | 3715 | 1.48 | 0.89 | | 0.34 |
| IL-21 | 2416 | 2231 | 2416 | 1.75 | 0.69 | | 0.47 |
| IP-10 | 26370 | 26370 | 25336 | 1.51 | 0.99 | | 0.85 |
| MIG | 8691 | 8103 | 8866 | 1.54 | 0.73 | | 0.63 |
| MIP-1β | 699 | 863 | 804 | 1.42 | 0.46 | | 0.81 |
| TNFα | 1261 | 1236 | 1236 | 1.79 | 0.92 | | 0.99 |

S = SARA (Subacute ruminal acidosis); C = Control; R = Recovery; IFNα = Interferon–alpha; IFNγ = Interferon-gamma; IL-13 = Interleukin-13; IL-1 F1 = Interleukin-1 alpha; IL-1 F5 = Interleukin-1 F5; IL-21 = interleukin-21; IP-10 = Interferon gamma-induced protein 10; MIG = Monokine induced by gamma; MIP-1β = Macrophage inflammatory protein-1 beta; TNFα = Tumor Necrosis Factor alpha

¹ pg/ml

**![A close up of a map

Description automatically generated]()**

**Supplementary Figure S1** Neutral detergent fiber (NDF) (a) and starch (b) intakes of cows fed a high-starch, low-fat diet (SARA), a low-starch, low-fat diet (Control), or a low-starch, low-fat diet after SARA induction (Recovery). S: SARA vs. Control = *P <* 0.05; R: Recovery vs. Control = *P <* 0.05.

![A picture containing sky

Description automatically generated]()

**Supplementary Figure S2** Evolution of the milk β-hydroxybutyrate (BHBA) content of cows fed a high-starch, low-fat diet (SARA), a low-starch, low-fat diet (Control), or a low-starch, low-fat diet after SARA induction (Recovery). S: SARA vs. Control = *P <* 0.05; R: Recovery vs. Control = *P <* 0.05; r: Recovery vs. Control = *P <* 0.10.

**![A close up of a map

Description automatically generated]()**

**Supplementary Figure S3** Evolution of plasma lipopolysaccharide-binding protein (LBP) content of cows fed a high-starch, low-fat diet (SARA), a low-starch, low-fat diet (Control), or a low-starch, low-fat diet after SARA induction (Recovery). S: SARA vs. Control = *P <* 0.05; s: SARA vs. Control = *P <* 0.10,