

Supplementary Table S4

Estimated average weekly milk yield in magnesium butyrate (MgB) and Control groups and standard error of mean (Linear mixed-effects model).

| | Weeks | | | | | | | | | | SEM | Group | <i>P</i> -values | |
|-----------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------------------|--------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | Week | Group × Week |
| Control | 27.39 | 34.79 | 35.67 | 38.61 | 38.33 | 37.78 | 38.26 | 34.98 | 36.29 | 36.24 | 0.94 | 0.181 | <0.0001 | 0.0005 |
| MgB | 32.07 | 36.55 | 37.51 | 39.13 | 37.88 | 37.74 | 38.15 | 35.76 | 36.32 | 36.43 | | | | |
| <i>P</i> -value | <0.0001 | 0.057 | 0.048 | 0.581 | 0.636 | 0.962 | 0.911 | 0.418 | 0.975 | 0.841 | | | | |

Supplementary Table S5

Estimated marginal means of BCS in magnesium butyrate (MgB) and Control groups and standard error of the mean (Linear mixed effects model).

| | Weeks | | | | | | | | | | | | | | <i>P</i> -values | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|------------------|-------|---------|-----------------|
| | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | SEM | Group | Week | Group × Week |
| Control | 3.61 | 3.60 | 3.62 | 3.61 | 3.57 | 3.53 | 3.49 | 3.45 | 3.39 | 3.33 | 3.29 | 3.22 | 3.18 | 3.13 | 0.030 | 0.034 | <0.0001 | <0.00001 |
| MgB | 3.62 | 3.60 | 3.63 | 3.62 | 3.62 | 3.59 | 3.55 | 3.52 | 3.47 | 3.43 | 3.38 | 3.30 | 3.25 | 3.18 | | | | |
| <i>P</i> -value | 0.828 | 0.975 | 0.729 | 0.542 | 0.111 | 0.078 | 0.047 | 0.020 | 0.005 | <0.001 | 0.003 | 0.011 | 0.041 | 0.101 | | | | |