**Online Supplementary Material 2**: Oligonucleotide concentrations, sequences as well as quantitative real-time PCR cycling conditions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Target | Oligonucleotide concentrations | Sequence 5' – 3' | Cycling conditions | Reference |
| Total bacteria | probe: 250 nM  forward primer: 900  nM  reverse primer: 900 nM | CTT GTA CAC ACC GCC CGT C  CGG TGA ATA CGT TCC CGG  TAC GGC TAC CTT GTT ACG ACT T | 95 °C for 10 min; 45 cycles of 95 °C for 30  sec and 60 °C for 1 min | (1) |
| Bifidobacterium  spp. | probe: 250 nM  forward primer: 900  nM  reverse primer: 900 nM | CTC CTG GAA ACG GGT G  CGG GTG AGT AAT GCG TGA CC  TGA TAG GAC GCG ACC CCA | 95 °C for 10 min; 45 cycles of 95 °C for 30  sec and 60 °C for 1 min | (1) |
| C. coccoides group | probe: 250 nM  forward primer: 900  nM  reverse primer: 900 nM | CGG TAC CTG ACT AAG AAG  GAC GCC GCG TGA AGG A  AGC CCC AGC CTT TCA CAT C | 95 °C for 10 min; 45 cycles of 95 °C for 30  sec and 60 °C for 1 min | (1) |
| C. leptum group | probe: 250 nM  forward primer: 900  nM  reverse primer: 900 nM | CAC AAT AAG TAA TCC ACC  CCT TCC GTG CCG CAG TTA  GAA TTA AAC CAC ATA CTC CAC TGC TT | 95 °C for 10 min; 45 cycles of 95 °C for 30  sec and 60 °C for 1 min | (1) |
| Bacteroides/Prevotella | probe: 250 nM  forward primer: 900  nM  reverse primer: 900 nM | AAG GTC CCC CAC ATT G  CCT TCG ATG GAT AGG GGT T  CAC GCT ACT TGG CTG GTT CAG | 95 °C for 10 min; 45 cycles of 95 °C for 30  sec and 60 °C for 1 min | (1) |
| E. coli | probe: 250 nM  forward primer: 900  nM  reverse primer: 900 nM | TAT TAA CTT TAC TCC CTT CCT CCC CGC TGA A  CAT GCC GCG TGT ATG AAG AA  CGG GTA ACG TCA ATG AGC AAA | 95 °C for 10 min; 45 cycles of 95 °C for 15 sec and 60 °C for 1 min | (2) |

TaqMan® chemistry were used for quantification; underlined = modified from reference

(1) J.-P. Furet et al., FEMS Microbiol. Ecol. 68, 351 (2009)

(2) H. G. H. J. Heilig et al., Appl. Environ. Microbiol. 68, 114 (2002)