Table S3. Effects of Virginiamycin and organic acids supplementation on the relative abundance (%) of the predominant microbiota at the phyla level in the cecal digesta of broilers at the age of 42 days in this experiment.

|  |  |  |  |
| --- | --- | --- | --- |
| Taxonomy | Groups 1 | SEM | *P* value |
| NC | PC | DOA | WOA | MOA |
| Bacteroidetes | 64.61 a | 66.35 a | 66.67 a | 67.44 a | 71.43 a | 1.65 | 0.776 |
| Firmicutes | 20.56 a | 30.65 a | 29.44 a | 29.69 a | 26.39 a | 1.44 | 0.191 |
| F/B ratio | 0.430 a  | 0.445 a  | 0.516 a  | 0.490 a  | 0.366 a  | 0.038  | 0.794  |
| Proteobacteria | 10.60 a | 1.78 b | 1.36 b | 0.64 b | 0.62 b | 1.12 | 0.009 |
| Tenericutes | 0.957 a | 0.913 a | 0.884 a | 1.230 a | 1.018 a | 0.070 | 0.549 |
| Verrucomicrobia | 0.0436 a | 0.0103 ab | 0.0137 ab | 0.0016 b | 0.0099 ab | 0.0064 | 0.306 |
| Actinobacteria | 0.0592 c | 0.1079 ab | 0.0615 bc | 0.1190 a | 0.0725 abc | 0.0083 | 0.053 |
| Cyanobacteria | 0.0306 a | 0.0051 b | 0.0192 ab | 0.0153 b | 0.0188 ab | 0.0025 | 0.031 |
| Acidobacteria | 0.0162 a | 0.0251 a | 0.0268 a | 0.0056 a | 0.0053 a | 0.0038 | 0.212 |
| Chloroflexi | 0.0064 a | 0.0084 a | 0.0070 a | 0.0010 a | 0.0042 a | 0.0014 | 0.501 |
| Saccharibacteria | 0.00032 b | 0.00307 a | 0.00032 b | 0 b | 0 b | 0.00039 | 0.033 |
| Gemmatimonadetes | 0.0011 ab | 0.0026 a | 0.0015 ab | 0 b | 0.0007 ab | 0.0021 | 0.287 |
| Planctomycetes | 0 a | 0.00027 a | 0.00027 a | 0 a | 0 a | 0.00041 | 0.567 |
| Others | 0.105 b | 0.135 b | 0.233 ab | 0.131 b | 0.277 a | 0.023 | 0.073 |

Notes: Superscript 1: NC = negative control, basal diet and basal drinking water with no antibiotic supplementation; PC = positive control, antibiotics supplementation; DOA = NC plus diet-administered OA supplementation; WOA = NC plus water-administered OA supplementation; MOA = NC plus diet-administered and water-administered OA supplementation. Values are expressed as means with pooled SEM values. *P* value is expressed combined significance. In the same line, values with different letters are significantly different for all possible combinations of these different groups (*P* < 0.05 or *P* < 0.01), n = 8.