**Supplementary Table 6. Taxa with significant difference in content between groups**

Genus level:

|  |  |
| --- | --- |
| Genus | Groups with significant differences |
| Acinetobacter | AB\_AC\_AD\_CD |
| Corynebacterium | AB\_AD\_BC\_CD |
| Peptostreptococcus | AB\_AD\_BC\_CD |
| Fusobacterium | AB\_AC\_AD |
| Stenotrophomonas | AB\_AC\_AD |
| Streptobacillus | AB\_AC\_AD |
| Veillonella | AB\_AC\_AD |
| Blautia | AB\_BC\_BD |
| Cobetia | AB\_BC\_BD |
| Nocardia | AB\_BC\_BD |
| Clostridium\_sensu\_stricto | AD\_BD\_CD |
| Faucicola | AD\_BD\_CD |
| Alloscardovia | AB\_AD |
| Gaiella | AB\_AD |
| Neisseria | AB\_AD |
| Ohtaekwangia | AB\_AD |
| Rothia | AB\_AD |
| Intrasporangium | AB\_AC |
| Moraxella | AB\_AC |
| Faecalibacterium | AB\_BD |
| Johnsonella | AB\_BD |
| Mycoplasma | AB\_BD |
| Prevotella | AC\_AD |
| Desulfobulbus | AD\_BD |
| Methanobrevibacter | AD\_BD |
| Vulcaniibacterium | AD\_BD |
| Parabacteroides | AC\_CD |
| Weissella | BC\_BD |
| Aeromonas | BD\_CD |
| Peptococcus | BD\_CD |
| Lactococcus | BC\_CD |
| Aerococcus | AB |
| Atopobium | AB |
| Butyrivibrio | AB |
| Fusicatenibacter | AB |
| Lactobacillus | AB |
| Pantoea | AB |
| Sediminibacterium | AB |
| Eubacterium | AD |
| Filifactor | AD |
| Gemmiger | AD |
| Granulicatella | AD |
| Haemophilus | AD |
| Leptotrichia | AD |
| Anoxybacillus | AC |
| Brevundimonas | AC |
| Delftia | AC |
| Gemmatimonas | AC |
| Nocardioides | AC |
| Streptomyces | AC |
| Actinomyces | BD |
| Burkholderia | BD |
| Phascolarctobacterium | BD |
| Schlegelella | BD |
| Cetobacterium | BC |
| Roseburia | BC |
| Ruminococcus | BC |
| Shuttleworthia | BC |
| Aggregatibacter | CD |
| Bosea | CD |
| Devosia | CD |
| Gp6 | CD |
| Odoribacter | CD |
| Paracoccus | CD |
| Stomatobaculum | CD |

Species level:

|  |  |
| --- | --- |
| Species | Groups with significant differences |
| *Acinetobacter\_nosocomialis* | AB|AC|AD|BD |
| *Streptobacillus\_moniliformis* | AB|AC|AD|CD |
| *Streptococcus\_sobrinus* | AB|AC|BD|CD |
| *Lactobacillus\_fermentum* | AB|BC|BD|CD |
| *Campylobacter\_rectus* | AB|AC|AD |
| *Lactobacillus\_salivarius* | AB|AC|AD |
| *Leptotrichia\_hongkongensis* | AB|AC|AD |
| *Pseudomonas\_beteli* | AB|AC|AD |
| *Veillonella\_dispar* | AB|AC|AD |
| *Corynebacterium\_matruchotii* | AB|AD|BC |
| *Peptostreptococcus\_stomatis* | AB|AD|BC |
| *Dialister\_micraerophilus* | AB|AD|BC |
| *Alloscardovia\_omnicolens* | AB|AD|CD |
| *Ohtaekwangia\_koreensis* | AB|AD|CD |
| *Blautia\_wexlerae* | AB|BC|BD |
| *Cobetia\_amphilecti* | AB|BC|BD |
| *Nocardia\_coeliaca* | AB|BC|BD |
| *Selenomonas\_artemidis* | AB|BC|BD |
| *Faecalibacterium\_prausnitzii* | AB|BC|CD |
| *Gaiella\_occulta* | AB|AD |
| *Porphyromonas\_gingivalis* | AB|AD |
| *Prevotella\_aurantiaca* | AB|AD |
| *Rothia\_mucilaginosa* | AB|AD |
| *Johnsonella\_ignava* | AB|BD |
| *Lactobacillus\_sanfranciscensis* | AB|BD |
| *Mycoplasma\_faucium* | AB|BD |
| *Olsenella\_uli* | AB|BC |
| *Actinomyces\_georgiae* | AB|CD |
| *Fusicatenibacter\_saccharivorans* | AB|CD |
| *Faucicola\_mancuniensis* | AD|BD |
| *Vulcaniibacterium\_thermophilum* | AC|BC |
| *Haemophilus\_parainfluenzae* | AD|CD |
| *Weissella\_cibaria* | BC|BD |
| *Actinomyces\_timonensis* | AB |
| *Aerococcus\_urinaeequi* | AB |
| *Haemophilus\_sputorum* | AB |
| *Megasphaera\_micronuciformis* | AB |
| *Neisseria\_oralis* | AB |
| *Prevotella\_oris* | AB |
| *Sediminibacterium\_goheungense* | AB |
| *Streptococcus\_mutans* | AB |
| *Gemmiger\_formicilis* | AD |
| *Granulicatella\_adiacens* | AD |
| *Leptotrichia\_shahii* | AD |
| *Mycoplasma\_lipophilum* | AD |
| *Mycoplasma\_spermatophilum* | AD |
| *Prevotella\_copri* | AD |
| *Bacteroides\_fragilis* | AC |
| *Brevundimonas\_nasdae* | AC |
| *Gemmatimonas\_aurantiaca* | AC |
| *Prevotella\_pallens* | AC |
| *Ralstonia\_insidiosa* | AC |
| *Treponema\_pectinovorum* | AC |
| *Aggregatibacter\_actinomycetemcomitans* | BD |
| *Dialister\_invisus* | BD |
| *Lactobacillus\_iners* | BD |
| *Mycoplasma\_salivarium* | BD |
| *Parabacteroides\_goldsteinii* | BD |
| *Peptococcus\_niger* | BD |
| *Actinomyces\_cardiffensis* | BC |
| *Cetobacterium\_somerae* | BC |
| *Eubacterium\_yurii\_subsp.\_schtitka* | BC |
| *Lactobacillus\_animalis* | BC |
| *Lactococcus\_lactis\_subsp.\_tructae* | BC |
| *Roseburia\_inulinivorans* | BC |
| *Ruminococcus\_bromii* | BC |
| *Shuttleworthia\_satelles* | BC |
| *Aggregatibacter\_aphrophilus* | CD |
| *Akkermansia\_muciniphila* | CD |
| *Anaerococcus\_octavius* | CD |
| *Bacteroides\_cellulosilyticus* | CD |
| *Parascardovia\_denticolens* | CD |
| *Phascolarctobacterium\_succinatutens* | CD |
| *Prevotella\_nigrescens* | CD |
| *Prevotella\_pleuritidis* | CD |
| *Sutterella\_stercoricanis* | CD |
| *Thermus\_scotoductus* | CD |