```
k_Bacteria;p_Acidobacteria;c_DA052;o_Ellin6513;f_
k_Bacteria;p_Acidobacteria;c_[Chloracidobacteria];o_RB41;f_Ellin6075
     k\_Bacteria; p\_Actinobacteria; c\_Acidimicrobiia; o\_Acidimicrobiales; f\_
     k\_Bacteria; p\_Actinobacteria; c\_Acidimicrobiia; o\_Acidimicrobiales; f\_Microthrixaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Actinomycetaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Actinospicaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Beutenbergiaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Bogoriellaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Brevibacteriaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Cellulomonadaceae
     k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Corynebacteriaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Dermabacteraceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Dermacoccaceae
     \verb|k_Bacteria|; \verb|p_Actinobacteria|; \verb|c_Actinobacteria|; \verb|o_Actinomycetales|; \verb|f_Geodermatophilaceae|
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Gordoniaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Intrasporangiaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Kineosporiaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Microbacteriaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Micrococcaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Mycobacteriaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Nakamurellaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Nocardiaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Nocardioidaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Promicromonosporaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Pseudonocardiaceae
   k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Streptomycetaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Actinomycetales;f_Streptosporangiaceae
     k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria; o\_Actinomycetales; f\_Williamsiaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria;o_Bifidobacteriales;f_Bifidobacteriaceae
k_Bacteria;p_Actinobacteria;c_Rubrobacteria;o_Rubrobacterales;f_Rubrobacteraceae
     k\_Bacteria; p\_Actinobacteria; c\_Thermoleophilia; o\_Gaiellales; f\_Gaiellaceae
     k\_Bacteria; p\_Actinobacteria; c\_Thermoleophilia; o\_Solirubrobacterales; f\_Conexibacteraceae
k_Bacteria;p_Actinobacteria;c_Thermoleophilia;o_Solirubrobacterales;f_Patulibacteraceae
k_Bacteria;p_Actinobacteria;c_Thermoleophilia;o_Solirubrobacterales;f_Solirubrobacteraceae
k_Bacteria;p_Armatimonadetes;c_Armatimonadia;o_Armatimonadales;f_Armatimonadaceae
k_Bacteria;p_Armatimonadetes;c_[Fimbriimonadia];o_[Fimbriimonadales];f_[Fimbriimonadaceae]
k_Bacteria;p_Bacteroidetes;c_Bacteroidia;o_Bacteroidales;f_Bacteroidaceae
k Bacteria;p Bacteroidetes;c Bacteroidia;o Bacteroidales;f Porphyromonadaceae
k_Bacteria;p_Bacteroidetes;c_Bacteroidia;o_Bacteroidales;f_Prevotellaceae
    k_Bacteria;p_Bacteroidetes;c_Bacteroidia;o_Bacteroidales;f_Rikenellaceae
k_Bacteria;p_Bacteroidetes;c_Cytophagia;o_Cytophagales;f_Cytophagaceae
k_Bacteria;p_Bacteroidetes;c_Flavobacteriia;o_Flavobacteriales;f_Flavobacteriaceae
      k_Bacteria;p_Bacteroidetes;c_Flavobacteriia;o_Flavobacteriales;f_[Weeksellaceae]
k_Bacteria;p_Bacteroidetes;c_Sphingobacteriia;o_Sphingobacteriales;f_Sphingobacteriaceae
   ■ k_Bacteria;p_Bacteroidetes;c_[Rhodothermi];o_[Rhodothermales];f_Rhodothermaceae
  k_Bacteria;p_Bacteroidetes;c_[Saprospirae];o_[Saprospirales];f_Chitinophagaceae
k_Bacteria;p_Bacteroidetes;c_[Saprospirae];o_[Saprospirales];f_Saprospiraceae
k_Bacteria;p_Chloroflexi;c_Ellin6529;o_;f_
k_Bacteria;p_Chloroflexi;c_TK10;o_B07_WMSP1;f_FFCH4570
k_Bacteria;p_Chloroflexi;c_Thermomicrobia;o_JG30-KF-CM45;f_
k_Bacteria;p_Cyanobacteria;c_ML635J-21;o__;f__
k_Bacteria;p_FBP;c_;o_;f_
   k_Bacteria;p_Firmicutes;c_Bacilli;o_Bacillales;Other
k_Bacteria;p_Firmicutes;c_Bacilli;o_Bacillales;f_Alicyclobacillaceae
   k_Bacteria;p_Firmicutes;c_Bacilli;o_Bacillales;f_Bacillaceae
k_Bacteria;p_Firmicutes;c_Bacilli;o_Bacillales;f_Paenibacillaceae
k_Bacteria;p_Firmicutes;c_Bacilli;o_Bacillales;f_Planococcaceae
k_Bacteria;p_Firmicutes;c_Bacilli;o_Bacillales;f_Staphylococcaceae
k Bacteria;p Firmicutes;c Bacilli;o Bacillales;f Thermoactinomycetaceae
     k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Bacillales; f\_[Exiguobacteraceae]
     k\_Bacteria; p\_Firmicutes; c\_Bacilli; o\_Lactobacillales; Other
k_Bacteria;p_Firmicutes;c_Bacilli;o_Lactobacillales;f_
k_Bacteria;p_Firmicutes;c_Bacilli;o_Lactobacillales;f_Aerococcaceae
k_Bacteria;p_Firmicutes;c_Bacilli;o_Lactobacillales;f_Carnobacteriaceae
k_Bacteria;p_Firmicutes;c_Bacilli;o_Lactobacillales;f_Enterococcaceae
   k_Bacteria;p_Firmicutes;c_Bacilli;o_Lactobacillales;f_Lactobacillaceae
k_Bacteria;p_Firmicutes;c_Bacilli;o_Lactobacillales;f_Leuconostocaceae
k_Bacteria;p_Firmicutes;c_Bacilli;o_Lactobacillales;f_Streptococcaceae
    k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; Other
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Clostridiaceae
     k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Lachnospiraceae
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Peptostreptococcaceae
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Ruminococcaceae
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Veillonellaceae
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_[Tissierellaceae]
k_Bacteria;p_Firmicutes;c_Erysipelotrichi;o_Erysipelotrichales;f_Erysipelotrichaceae
  k_Bacteria;p_Fusobacteria;c_Fusobacteriia;o_Fusobacteriales;f_Fusobacteriaceae
k_Bacteria;p_Gemmatimonadetes;c_Gemm-1;o__;f__
k_Bacteria;p_OD1;c_ZB2;o_;f_
k_Bacteria;p_Planctomycetes;c_BD7-11;o_;f_
k_Bacteria;p_Planctomycetes;c_Phycisphaerae;o_WD2101;f_
k_Bacteria;p_Planctomycetes;c_Planctomycetia;o_Gemmatales;f_Gemmataceae
   ■ k_Bacteria;p_Planctomycetes;c_Planctomycetia;o_Gemmatales;f_Isosphaeraceae
k_Bacteria;p_Planctomycetes;c_Planctomycetia;o_Planctomycetales;f_Planctomycetaceae
 k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_;f_
   k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_BD7-3;f_
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Caulobacterales;f_Caulobacteraceae
     k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhizobiales; Other and a superior of the content of th
     {\tt k\_Bacteria;p\_Proteobacteria;c\_Alphaproteobacteria;o\_Rhizobiales;f\_}
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Aurantimonadaceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Beijerinckiaceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Bradyrhizobiaceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Brucellaceae
   ■ k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Hyphomicrobiaceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Methylobacteriaceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Methylocystaceae
    k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Phyllobacteriaceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Rhizobiaceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Xanthobacteraceae
     k\_Bacteria; p\_Proteobacteria; c\_Alphaproteobacteria; o\_Rhodobacterales; f\_Hyphomonadaceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhodobacterales;f_Rhodobacteraceae
 k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhodospirillales;f_Acetobacteraceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhodospirillales;f_Rhodospirillaceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rickettsiales;f_
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rickettsiales;f_mitochondria
   k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Sphingomonadales;Other
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Sphingomonadales;f_Erythrobacteraceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Sphingomonadales;f_Sphingomonadaceae
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;Other;Other
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_;f_
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Burkholderiales;Other
   k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Burkholderiales;f_
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Burkholderiales;f_Alcaligenaceae
     k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Burkholderiales; f\_Burkholderiaceae
   k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Burkholderiales;f_Comamonadaceae
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Burkholderiales;f_Oxalobacteraceae
     {\tt k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Methylophilales; f\_Methylophilaceae}
     k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Neisseriales; f\_Neisseriaceae
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Rhodocyclales;f_Rhodocyclaceae
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Thiobacterales;f_
k_Bacteria;p_Proteobacteria;c_Deltaproteobacteria;o_Bdellovibrionales;f_Bacteriovoracaceae
k_Bacteria;p_Proteobacteria;c_Deltaproteobacteria;o_Bdellovibrionales;f_Bdellovibrionaceae
   k_Bacteria;p_Proteobacteria;c_Deltaproteobacteria;o_Myxococcales;f_0319-6G20
k_Bacteria;p_Proteobacteria;c_Deltaproteobacteria;o_Myxococcales;f_Cystobacterineae
k_Bacteria;p_Proteobacteria;c_Deltaproteobacteria;o_Myxococcales;f_Myxococcaceae
    k_Bacteria;p_Proteobacteria;c_Deltaproteobacteria;o_Spirobacillales;f_
k_Bacteria;p_Proteobacteria;c_Epsilonproteobacteria;o_Campylobacterales;f_Campylobacteraceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;Other;Other
     {\tt k\_Bacteria;p\_Proteobacteria;c\_Gammaproteobacteria;o\_Aeromonadales;f\_Aeromonadaceae}
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Alteromonadales;f_Alteromonadaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Alteromonadales;f_Shewanellaceae
   k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Alteromonadales;f_[Chromatiaceae]
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Enterobacteriales;f_Enterobacteriaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Legionellales;f_Coxiellaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Legionellales;f_Legionellaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Methylococcales;f_
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Oceanospirillales;f_Halomonadaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Pasteurellales;f_Pasteurellaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Pseudomonadales;Other
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Pseudomonadales;f_Moraxellaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Pseudomonadales;f_Pseudomonadaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Xanthomonadales;f_Sinobacteraceae
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k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Xanthomonadales;f_Xanthomonadaceae

 $\label{lem:condition} $$k_Bacteria;p_Verrucomicrobia;c_Verrucomicrobiae;o_Verrucomicrobiales;f_Verrucomicrobiaceae $$k_Bacteria;p_Verrucomicrobia;c_[Spartobacteria];o_[Chthoniobacterales];f_[Chthoniobacteraceae] $$$

k_Bacteria;p_Tenericutes;c_Mollicutes;o_;f_k_Bacteria;p_Tenericutes;c_Mollicutes;o_RF39;f_

k_Bacteria;p_[Thermi];c_Deinococci;o_Deinococcales;f_Deinococcaceae
 k_Bacteria;p_[Thermi];c_Deinococci;o_Deinococcales;f_Trueperaceae
 k_Bacteria;p_[Thermi];c_Deinococci;o_Thermales;f_Thermaceae

k_Bacteria;p_WPS-2;c__;o__;f__

Unassigned;Other;Other;Other;Otherk Bacteria;Other;Other;Other;Other

k_Bacteria;p_Acidobacteria;c_Acidobacteriia;o_Acidobacteriales;f_Koribacteraceae