```
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Actinomycetaceae
    k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria (class); o\_Actinomycetales; f\_Brevibacteriaceae
    k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria (class); o\_Actinomycetales; f\_Cellulomonadaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Corynebacteriaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Dermabacteraceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Dietziaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Geodermatophilaceae
  k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Gordoniaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Intrasporangiaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Microbacteriaceae
    k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria (class); o\_Actinomycetales; f\_Micrococcaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Mycobacteriaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Nocardiaceae
    k\_Bacteria; p\_Actinobacteria; c\_Actinobacteria (class); o\_Actinomycetales; f\_Nocardioidaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Propionibacteriaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Pseudonocardiaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Actinomycetales;f_Streptomycetaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Bifidobacteriales;f_
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Bifidobacteriales;f_Bifidobacteriaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Coriobacteriales;f_
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Coriobacteriales;f_Coriobacteriaceae
k_Bacteria;p_Actinobacteria;c_Actinobacteria (class);o_Solirubrobacterales;f_
    k_Bacteria;p_Bacteroidetes;c_Bacteroidia;o_Bacteroidales;f_
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\_Flavobacteria; o\_Flavobacteriales; f\_Flavobacteriaceae
k_Bacteria;p_Bacteroidetes;c_Sphingobacteria;o_Sphingobacteriales;f_
k_Bacteria;p_Bacteroidetes;c_Sphingobacteria;o_Sphingobacteriales;f_Flexibacteraceae
    k\_Bacteria; p\_Bacteroidetes; c\_Sphingobacteria; o\_Sphingobacteriales; f\_Sphingobacteriaceae
    k_Bacteria;p_Cyanobacteria;c_;o_;f_
k_Bacteria;p_Cyanobacteria;c_mle1-12;o_;f_
k_Bacteria;p_Firmicutes;c_Bacilli;o_Bacillales;f_
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_Listeriaceae
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_Sporolactobacillaceae
k_Bacteria;p_Firmicutes;c_Bacilli;o_Bacillales;f_Staphylococcaceae
k_Bacteria;p_Firmicutes;c_Bacilli;o_Erysipelotrichales;f_Erysipelotrichaceae
    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;f_
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Catabacteriaceae
    k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Clostridiaceae
    k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Clostridiales \ Family \ XI. \ Incertae \ Sedis
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Clostridiales Family XIII. Incertae Sedis
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Dehalobacteriaceae
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Eubacteriaceae
k_Bacteria;p_Firmicutes;c_Clostridia;o_Clostridiales;f_Lachnospiraceae
    k\_Bacteria; p\_Firmicutes; c\_Clostridia; o\_Clostridiales; f\_Peptococcaceae
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_Fusobacteria;c_Fusobacteria (class);o_Fusobacteriales;f_Fusobacteriaceae
k_Bacteria;p_OP10;c_CH21;o_;f_
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Caulobacterales;f_Caulobacteraceae
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_Hyphomicrobiaceae
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Rhizobiales;f_Methylobacteriaceae
    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
    {\tt 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_Sphingomonadales;f_
k_Bacteria;p_Proteobacteria;c_Alphaproteobacteria;o_Sphingomonadales;f_Sphingomonadaceae
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_;f_
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
    k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Gallionellales;f_Gallionellaceae
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Hydrogenophilales;f_Hydrogenophilaceae
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Methylophilales;f_Methylophilaceae
    \label{lem:k_Bacteria} $$k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Neisseriales; f\_Neisseriaceae
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Nitrosomonadales;f_Nitrosomonadaceae
k_Bacteria;p_Proteobacteria;c_Betaproteobacteria;o_Rhodocyclales;f_
    k\_Bacteria; p\_Proteobacteria; c\_Betaproteobacteria; o\_Rhodocyclales; f\_Rhodocyclaceae
    k\_Bacteria; p\_Proteobacteria; c\_Delta proteobacteria; o\_Bdello vibrionales; f\_Bdello vibrionaceae
k_Bacteria;p_Proteobacteria;c_Deltaproteobacteria;o_Desulfovibrionales;f_Desulfovibrionaceae
k_Bacteria;p_Proteobacteria;c_Deltaproteobacteria;o_MIZ46;f_
k_Bacteria;p_Proteobacteria;c_Deltaproteobacteria;o_Myxococcales;f_
k_Bacteria;p_Proteobacteria;c_Epsilonproteobacteria;o_Campylobacterales;f_Campylobacteraceae
  k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o__;f__
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Aeromonadales;f_Aeromonadaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Alteromonadales;f_
    k\_Bacteria; p\_Proteobacteria; c\_Gamma proteobacteria; o\_Alteromonadales; f\_Alteromonadaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Alteromonadales;f_Psychromonadaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Alteromonadales;f_Shewanellaceae
    k\_Bacteria; p\_Proteobacteria; c\_Gamma proteobacteria; o\_Cardiobacteriales; f\_Cardiobacteria ceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Chromatiales;f_
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Chromatiales;f_Sinobacteraceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Enterobacteriales;f_Enterobacteriaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Oceanospirillales;f_
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Oceanospirillales;f_Halomonadaceae
    k\_Bacteria; p\_Proteobacteria; c\_Gamma proteobacteria; o\_Oceanos pirillales; f\_Pseudomonadaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Pasteurellales;f_Pasteurellaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Pseudomonadales;f_Moraxellaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Thiotrichales;f_Piscirickettsiaceae
k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Thiotrichales;f_Thiotrichaceae
  k_Bacteria;p_Proteobacteria;c_Gammaproteobacteria;o_Xanthomonadales;f_Xanthomonadaceae
  ■ k_Bacteria;p_Synergistetes;c_Synergistia;o_Synergistales;f_Dethiosulfovibrionaceae
k_Bacteria;p_TM7;c_TM7-3;o_EW055;f_
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 $k\_Bacteria; p\_Tenericutes; c\_Erysipelotrichi; o\_Erysipelotrichales; f\_Erysipelotrichaceae$ 

k\_Bacteria;p\_Verrucomicrobia;c\_Verrucomicrobiae;o\_Verrucomicrobiales;f\_Verrucomicrobiaceae

k\_Bacteria;p\_Tenericutes;c\_Mollicutes;o\_Mycoplasmatales;f\_Mycoplasmataceae

k\_Bacteria;p\_Thermi;c\_Deinococci;o\_Deinococcales;f\_Deinococcaceae

k\_Bacteria;p\_Tenericutes;c\_ML615J-28;o\_\_;f\_\_

k\_Bacteria;p\_Tenericutes;c\_Mollicutes;o\_RF39;f\_

k\_Archaea;p\_Euryarchaeota;c\_Methanobacteria;o\_Methanobacteriales;f\_Methanobacteriaceae

k\_Bacteria;p\_Acidobacteria;c\_Solibacteres;o\_Solibacterales;f\_Solibacteraceae

k\_Bacteria;p\_Actinobacteria;c\_\_;o\_\_;f\_\_