ASV013 Filimonas ASV016 Flavobacterium ASV011 Filimonas

ASV025 Flavobacterium ASV012 Thiobacillus

ASV014 Thiobacillus Filimonas Flavobacterium

Thiobacillus

Hydrogenophilaceae

Flavobacteriaceae Chitinophagaceae ASV021 Pedobacter

ASV009 Hydrogenophaga

Flavobacte riales Pedobacter ASV029 Hydrogenophaga Chitinophagales ASV027 Pedobacter

ASV028 Hydrogenophaga Sphingobacteriaceae Hydrogenophaga Bacteroidia

Sphingobacteriales Comamonadaceae

Burkholderiales ASV010 Hydrogenophaga

Sinobacteraceae

ASV024 Hydrogenophaga Bacteroidota ASV022 Microbacterium

> Microbacterium Gammaproteobacteria Microbacte ria ceae

Bacteria Micro co coales Actinobacteria Salinisphaerales ASV030 Microbacterium

Actinobacteriota ASV006 Sinobacteraceae Solimonadaceae Proteobacteria

ASV002 Sinobacteraceae ASV001 Novosphingobium

