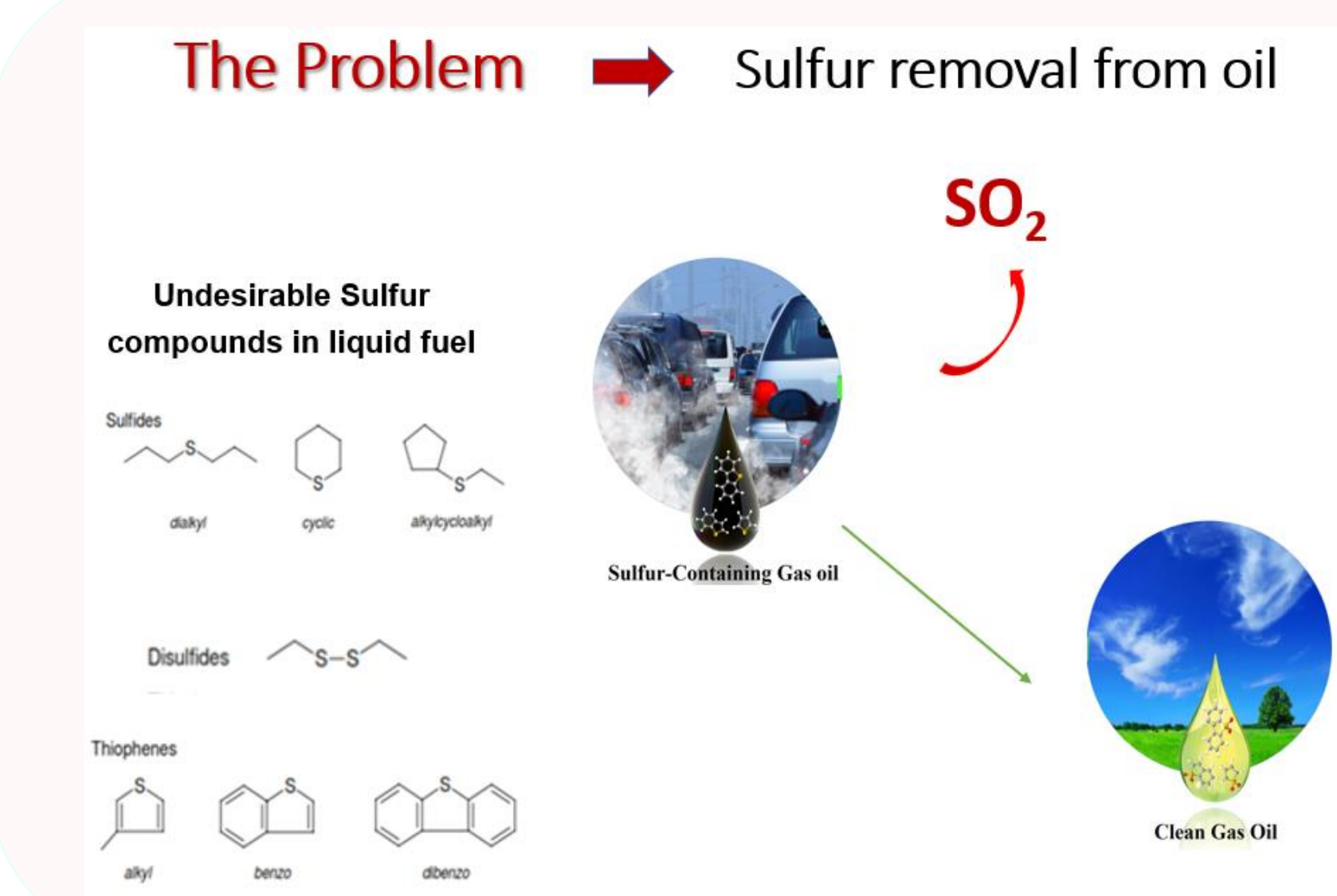


Introduction:



Biodesulfurization (BDS)

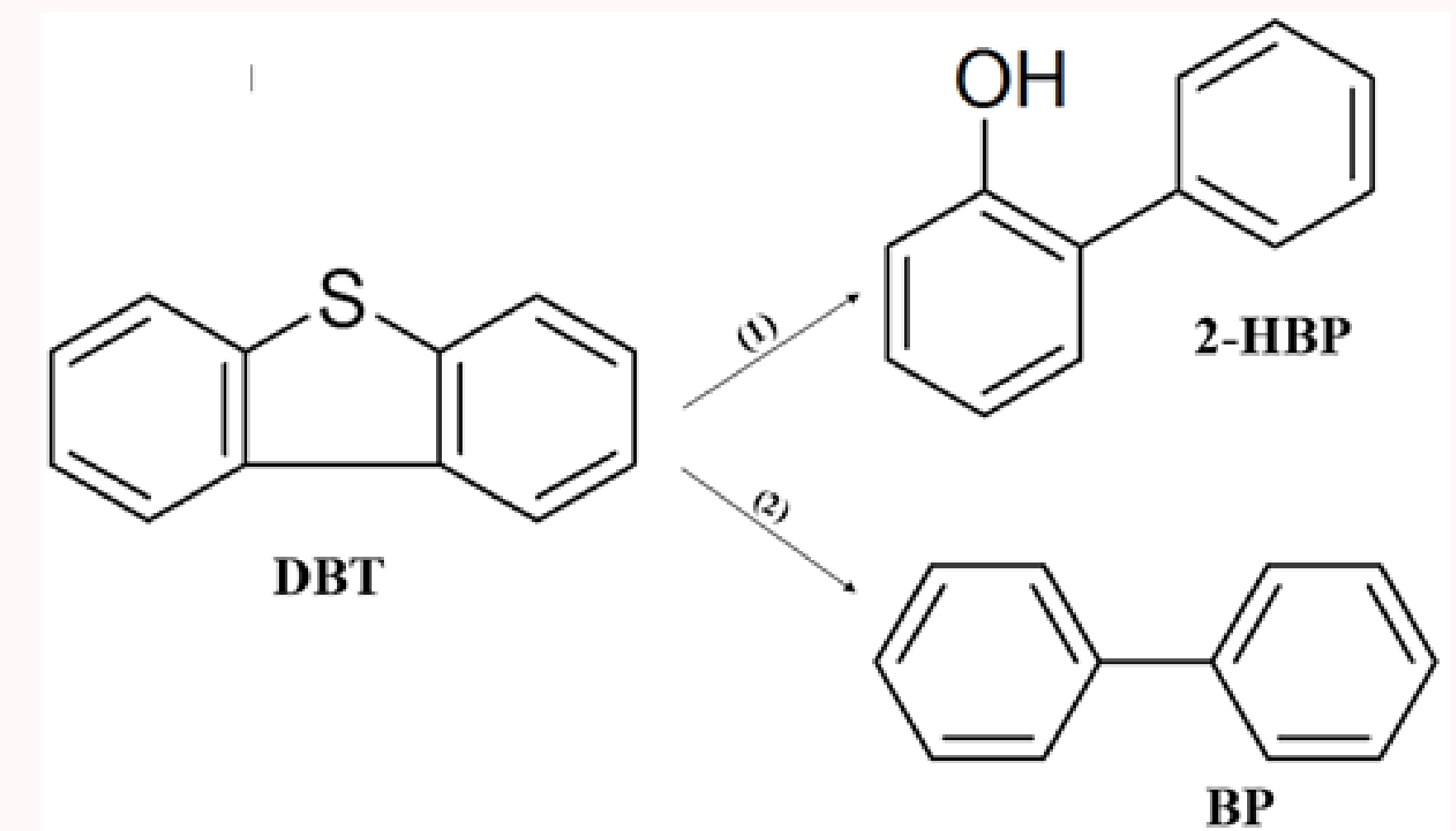
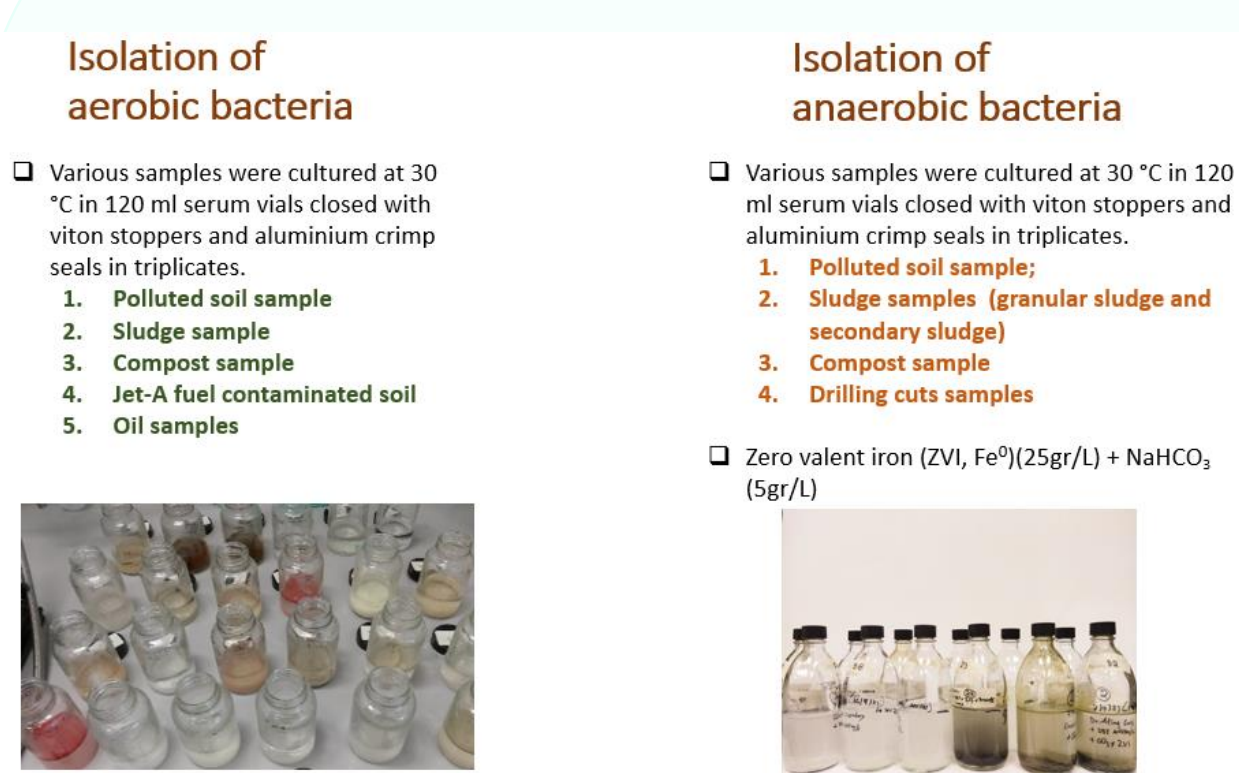


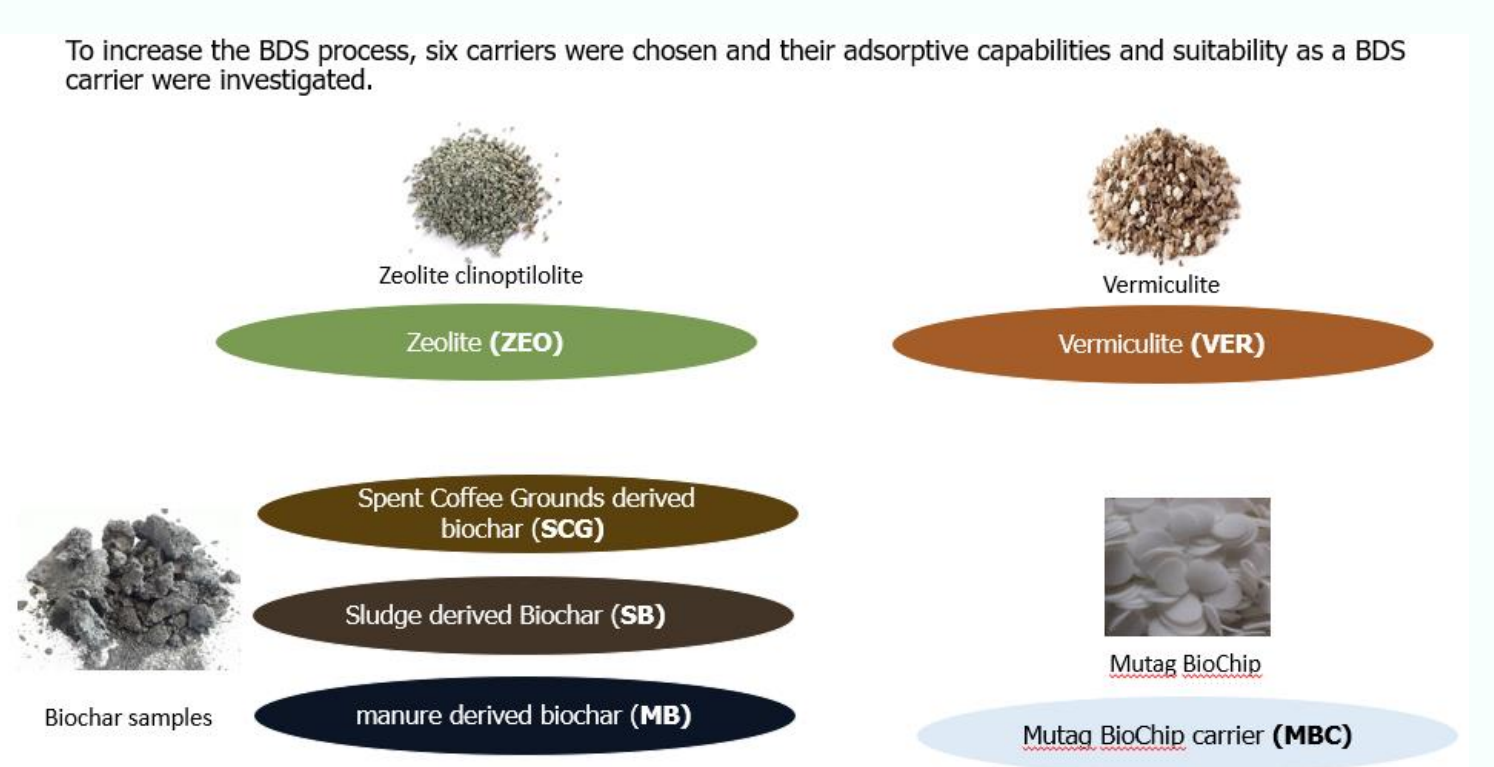
Figure 1. Desulfurization pathways: (1) aerobic microorganisms, and (2) anaerobic bacteria.

Materials and methods:

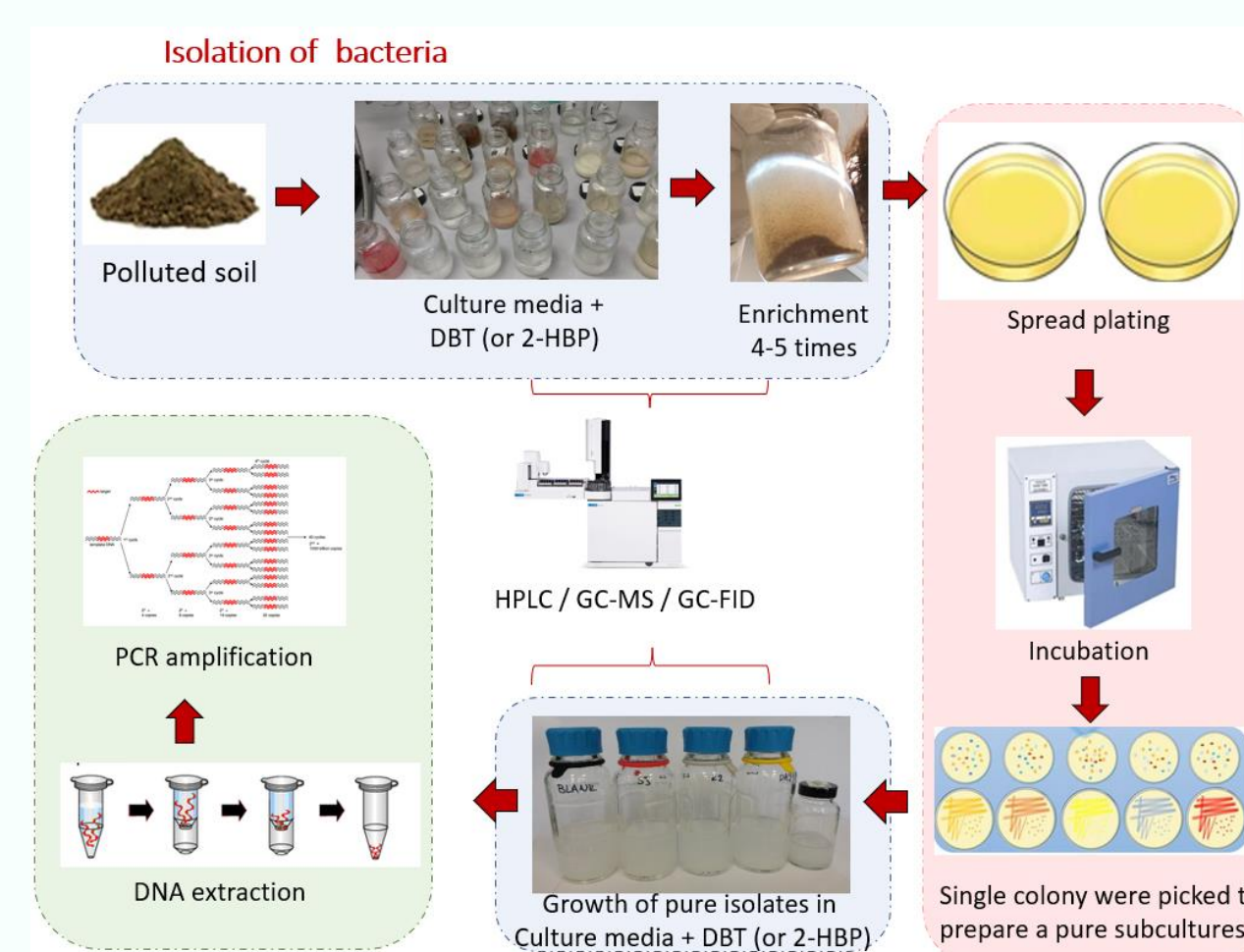
Sample incubation



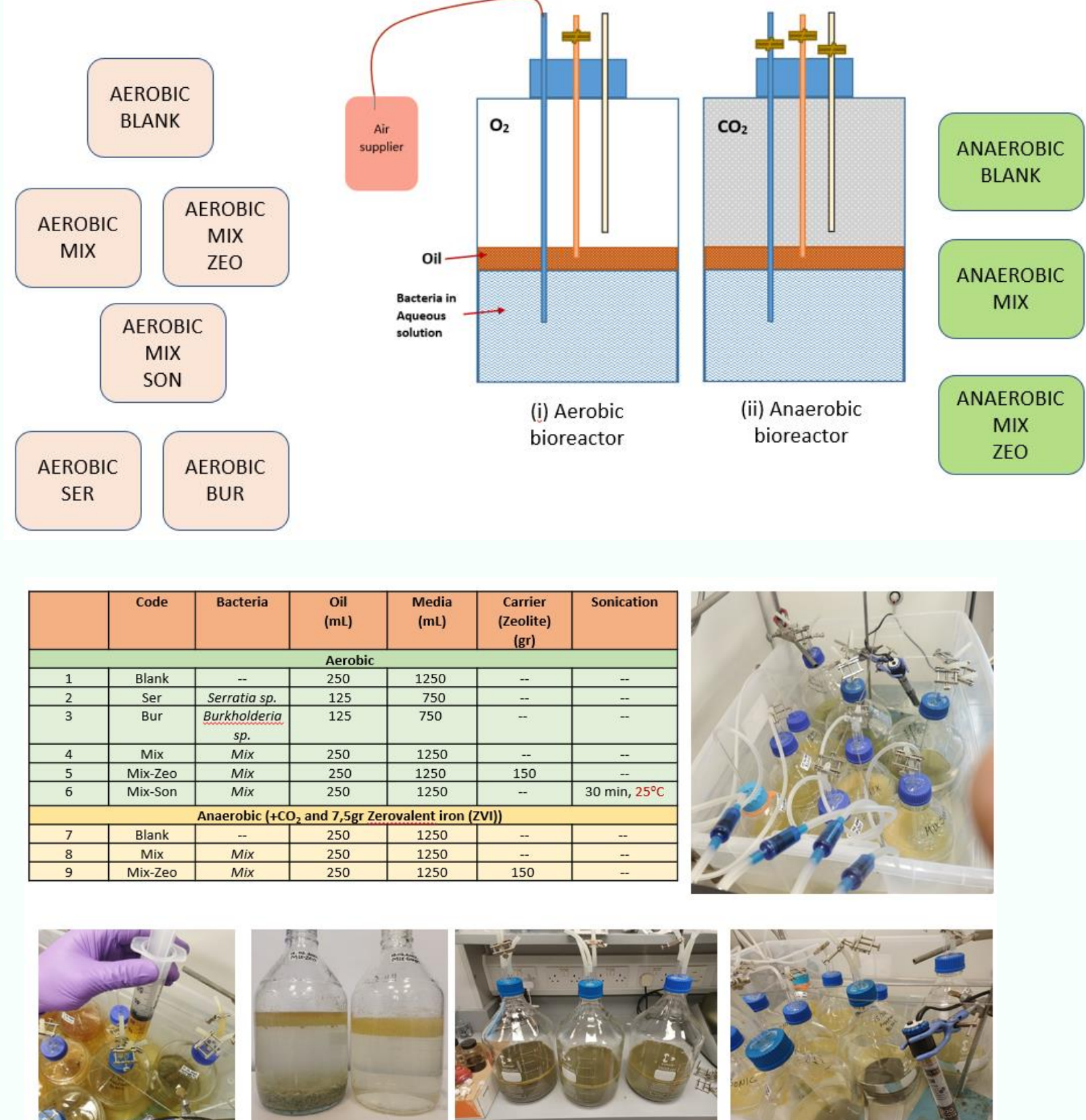
Immobilization of bacteria on various carriers



Isolation of bacteria

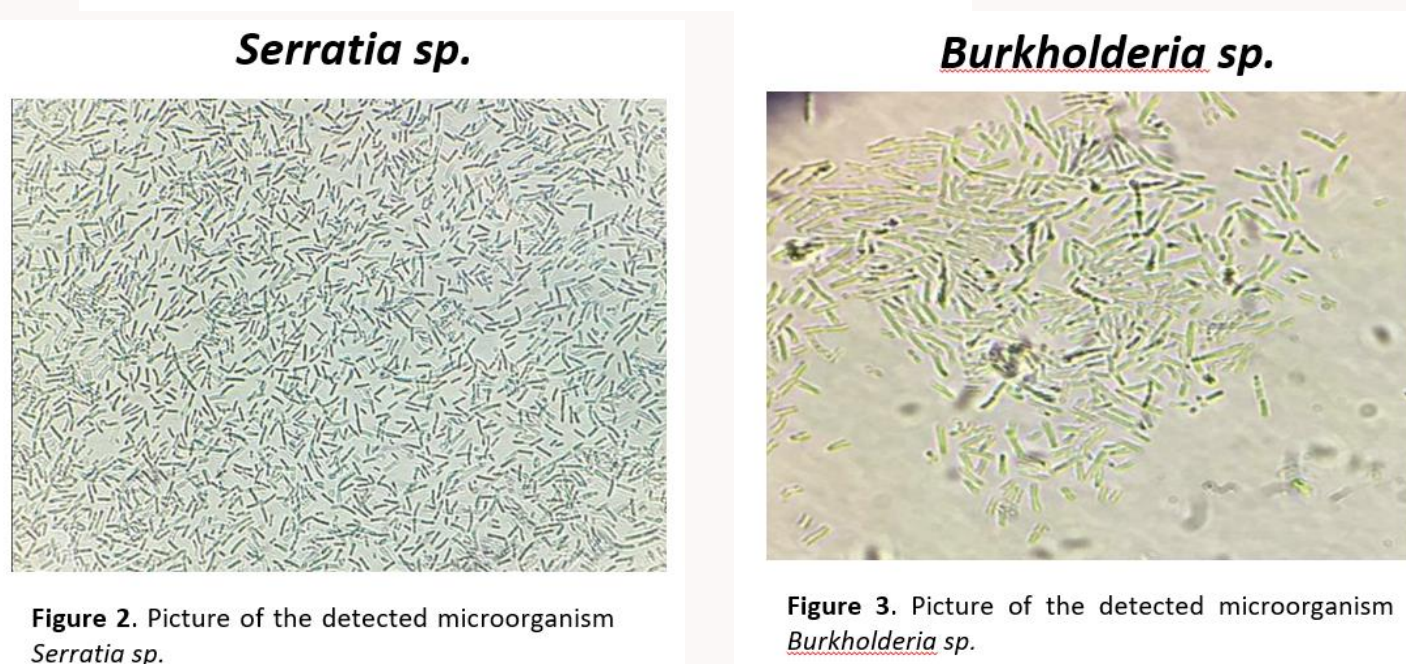


Semi-continuous operation of bioreactors for biodesulfurization of oil samples

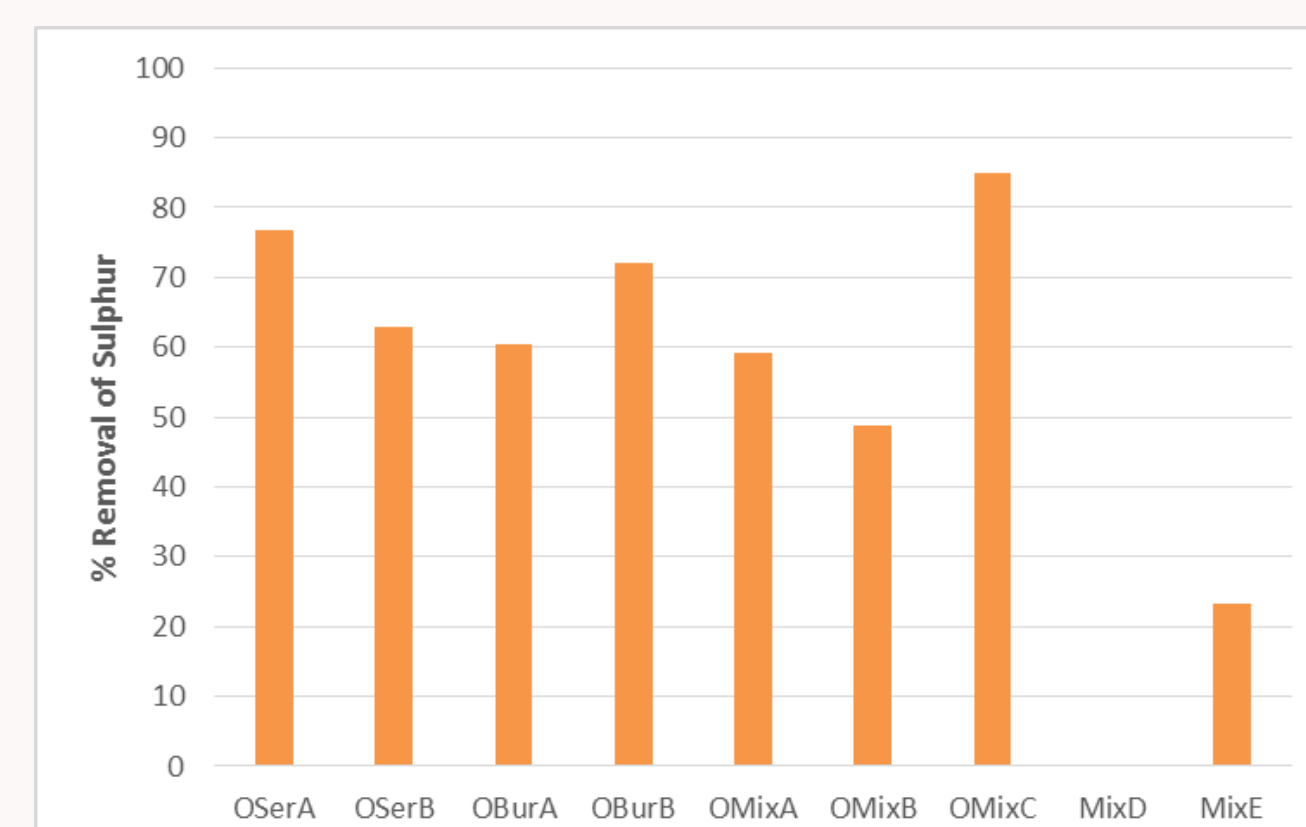
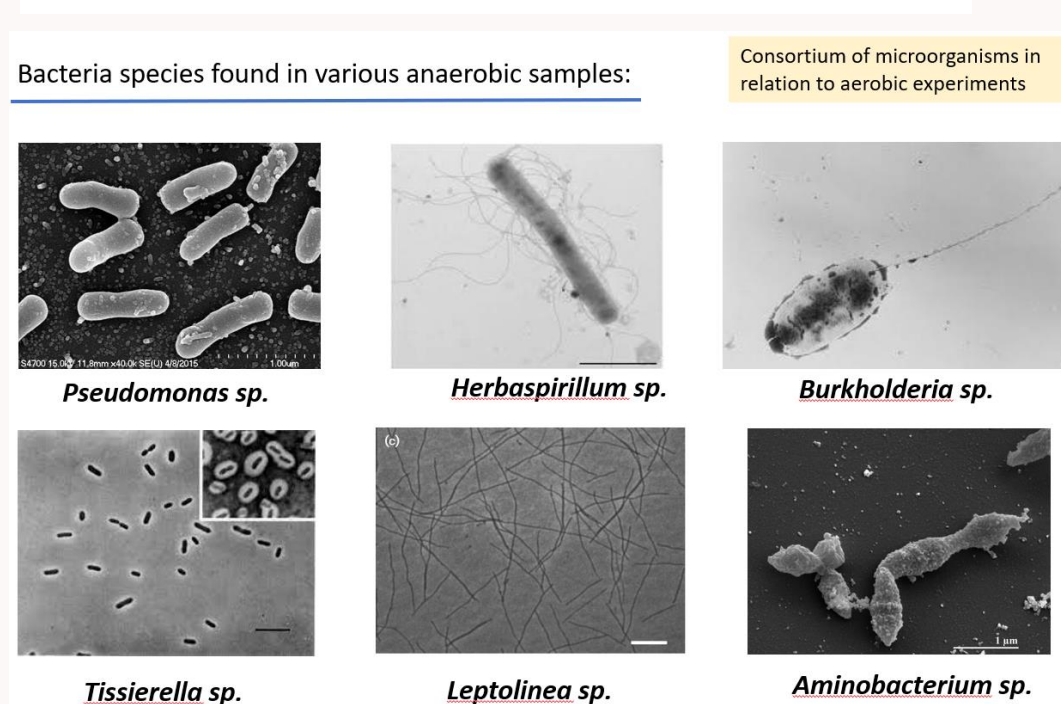


Results:

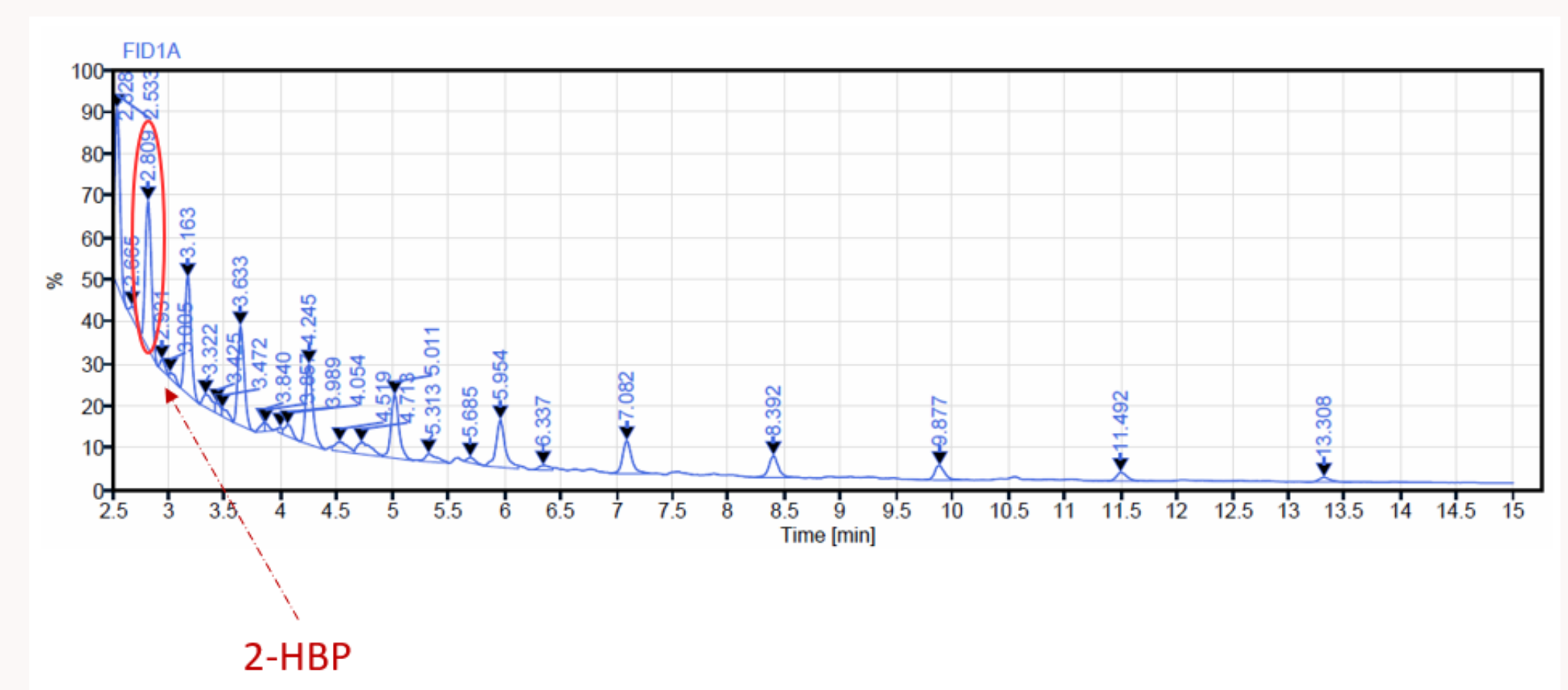
Isolation of aerobic bacteria



Isolation of anaerobic bacteria



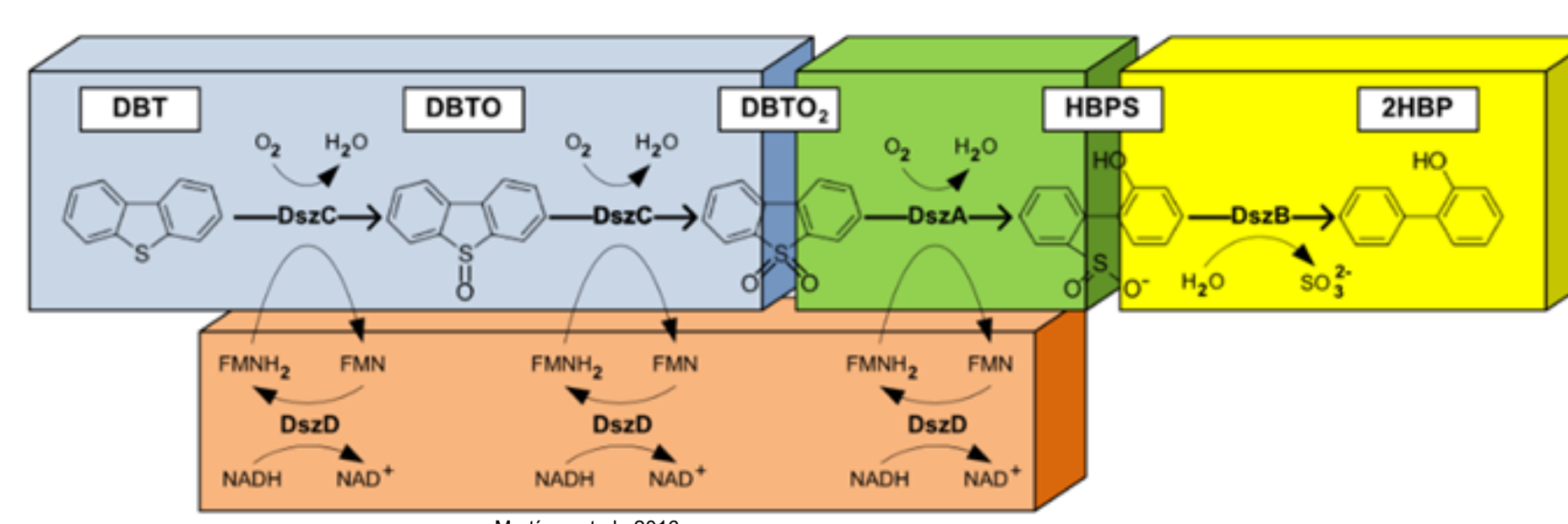
Results from aerobic experiments in bioreactors



Example from GC-FID analysis of aqueous sample from bioreactor with *Burkholderia* sp.

Conclusions:

➤ Aerobic bioreactors follow the 4S pathway



Acknowledgments

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