

*Supplementary Material*

# Machine Learning Analyses on Data including Essential Oil Chemical Composition and In Vitro Experimental Antibiofilm Activities against *Staphylococcus* Species

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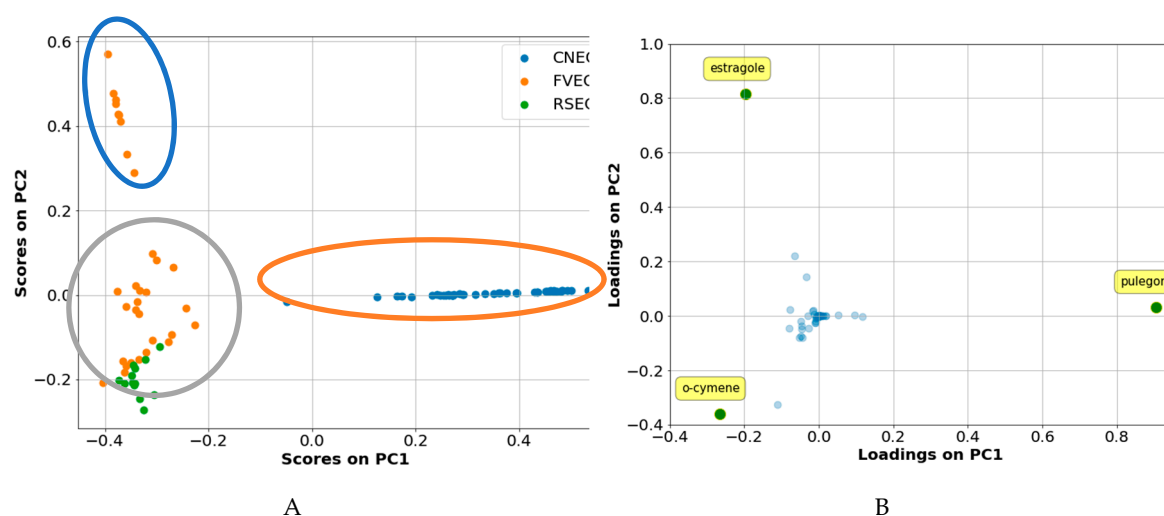
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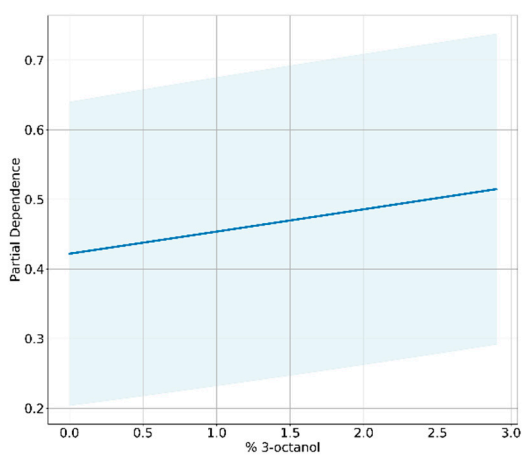
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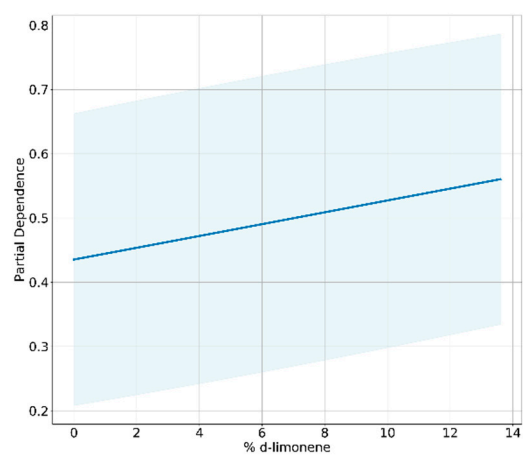
† These authors contributed equally to this work.



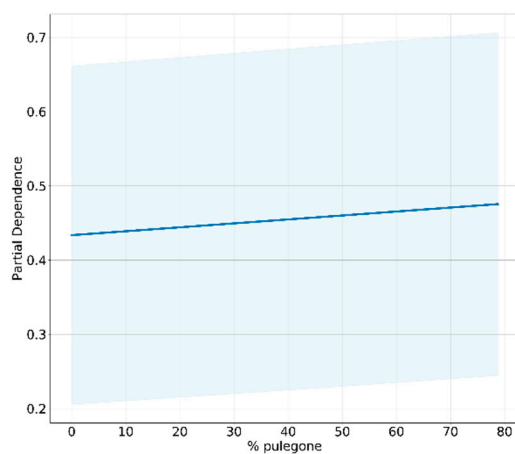
**Figure SM-1.** PCA first two PCs' graphical plots. Scores plot (panel A) indicate the presence of at least three clusters (circled in panel A). Loading plots (panel B) highlights that estragole, *o*-cymene and pulegone could be the most important chemical constituents among all the tested EOs.



**A**

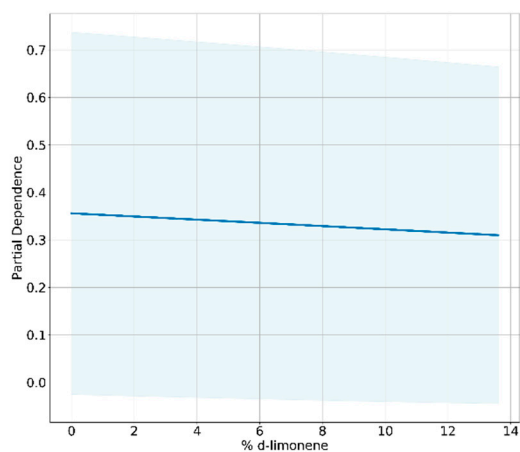
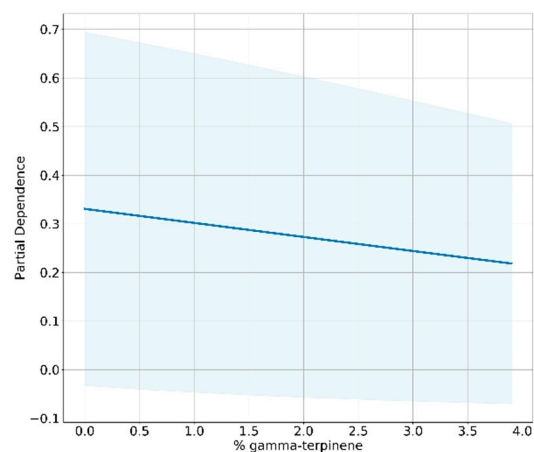
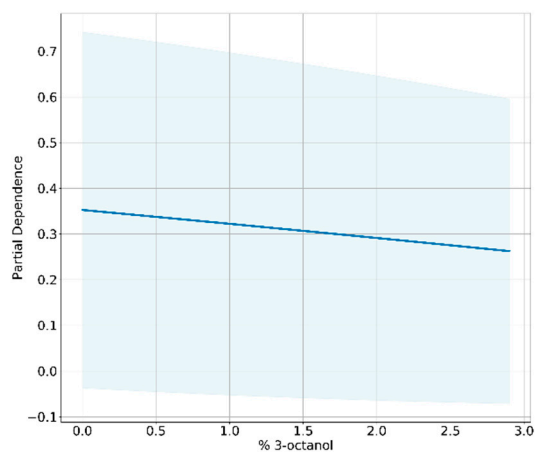
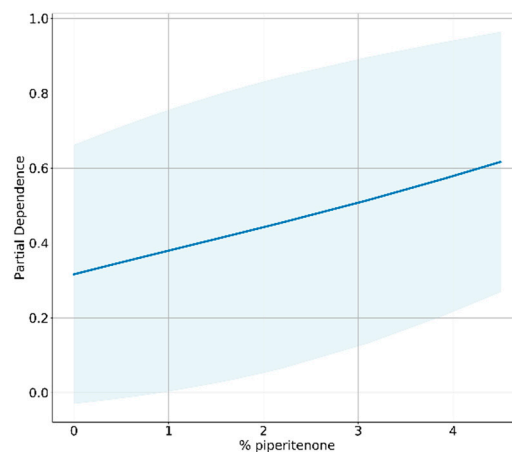


**B**

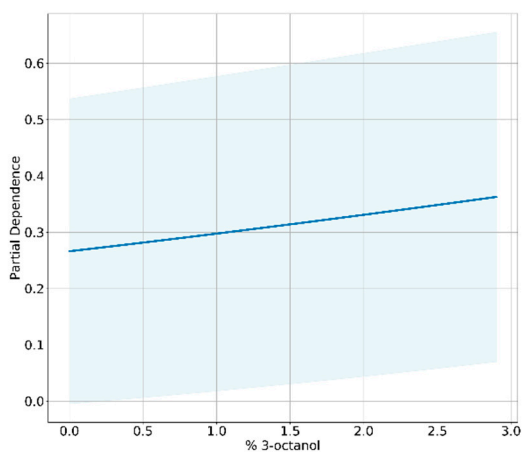


**C**

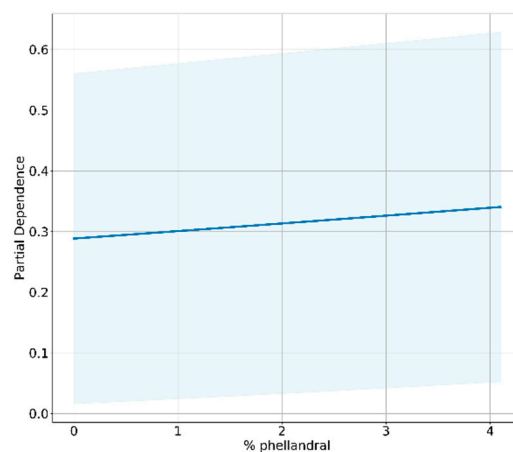
**Figure SM-2.** 3-octanol, D-limonene and pulegone partial dependence plots for the activation model on 6538P biofilm production.

**A****B****C****D**

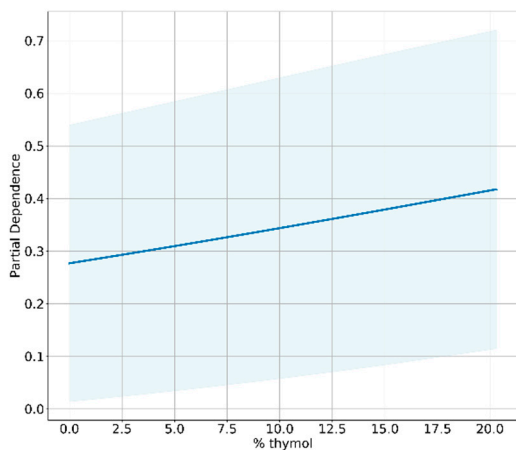
**Figure SM-3.** D-Limonene,  $\gamma$ -terpinene, 3-octanol and piperitenone partial dependence plots for the inhibition model on 25923 biofilm production.



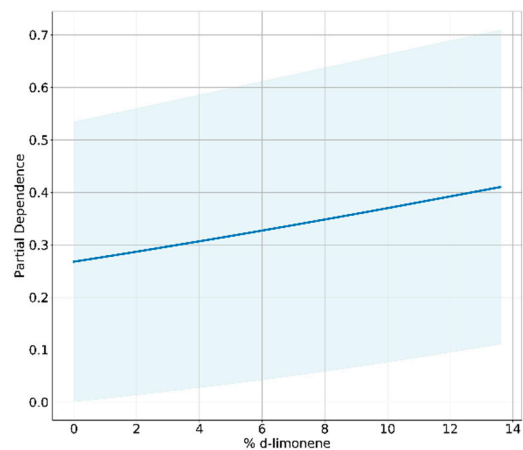
**A**



**B**

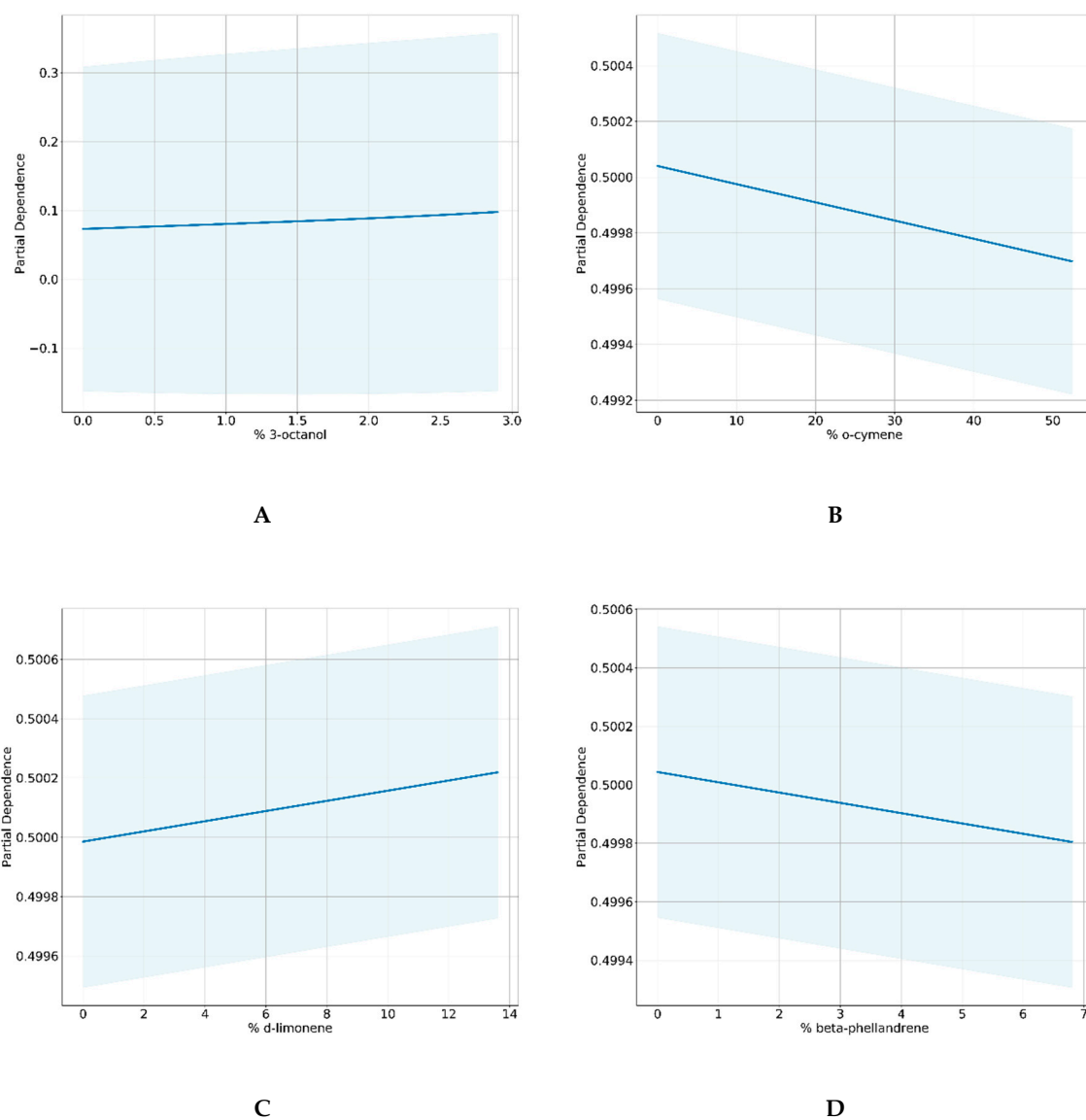


**C**



**D**

**Figure SM-4.** 3-Octanol, phellandral, thymol and D-limonene partial dependence plots for the inhibition model on RP62A biofilm.



**Figure SM-5.** 3-Octanol, *o*-cymene, *D*-limonene and  $\beta$ -phellandrene partial dependence plots for the inhibition model on O-47 biofilm.