

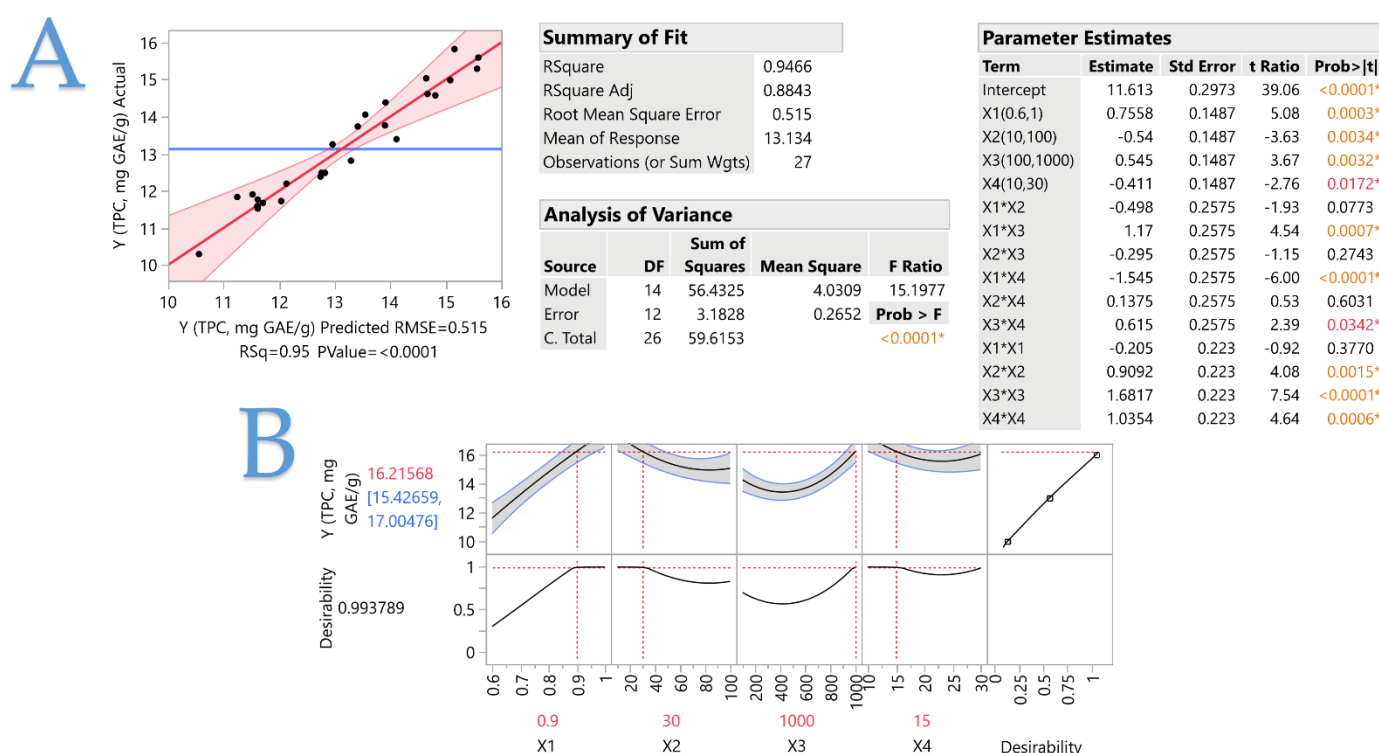
# Optimization of Pulsed Electric Field-based Extraction of Bioactive Compounds from *Cannabis sativa* Leaves

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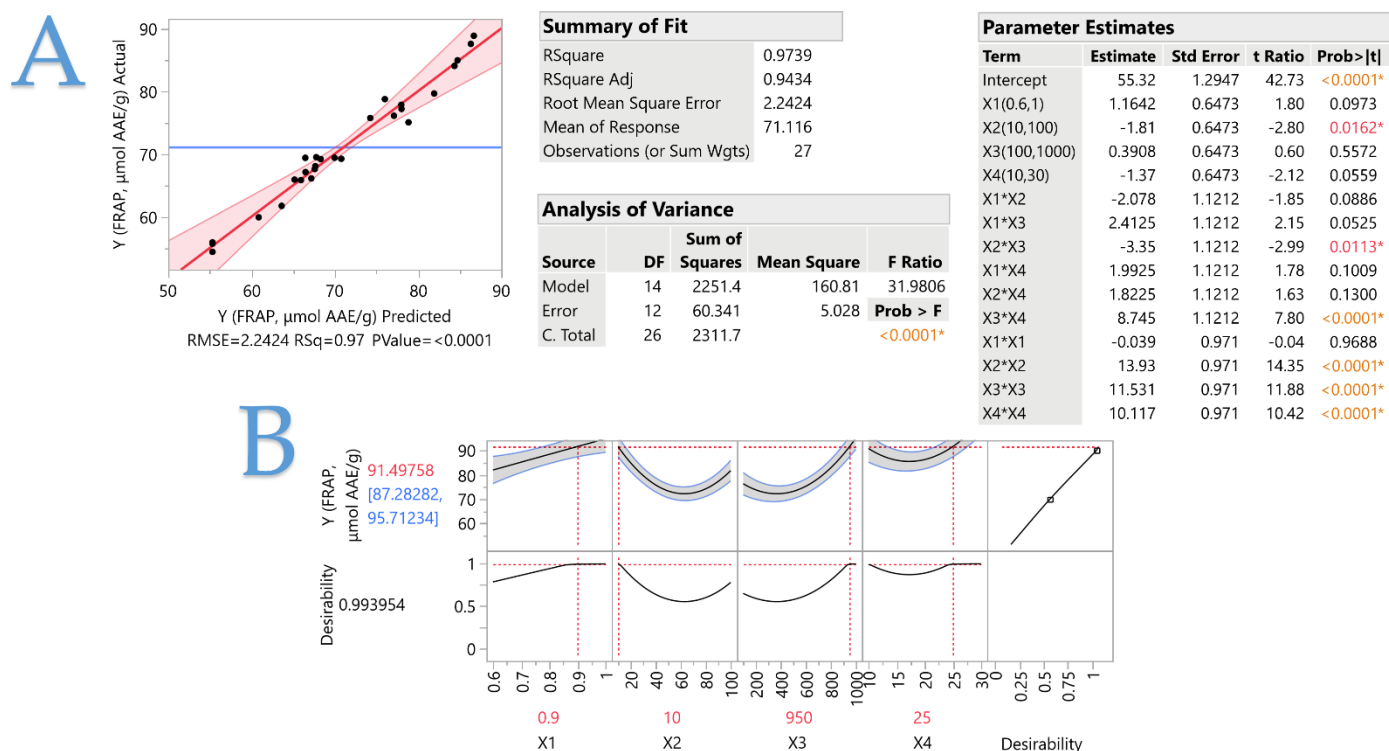
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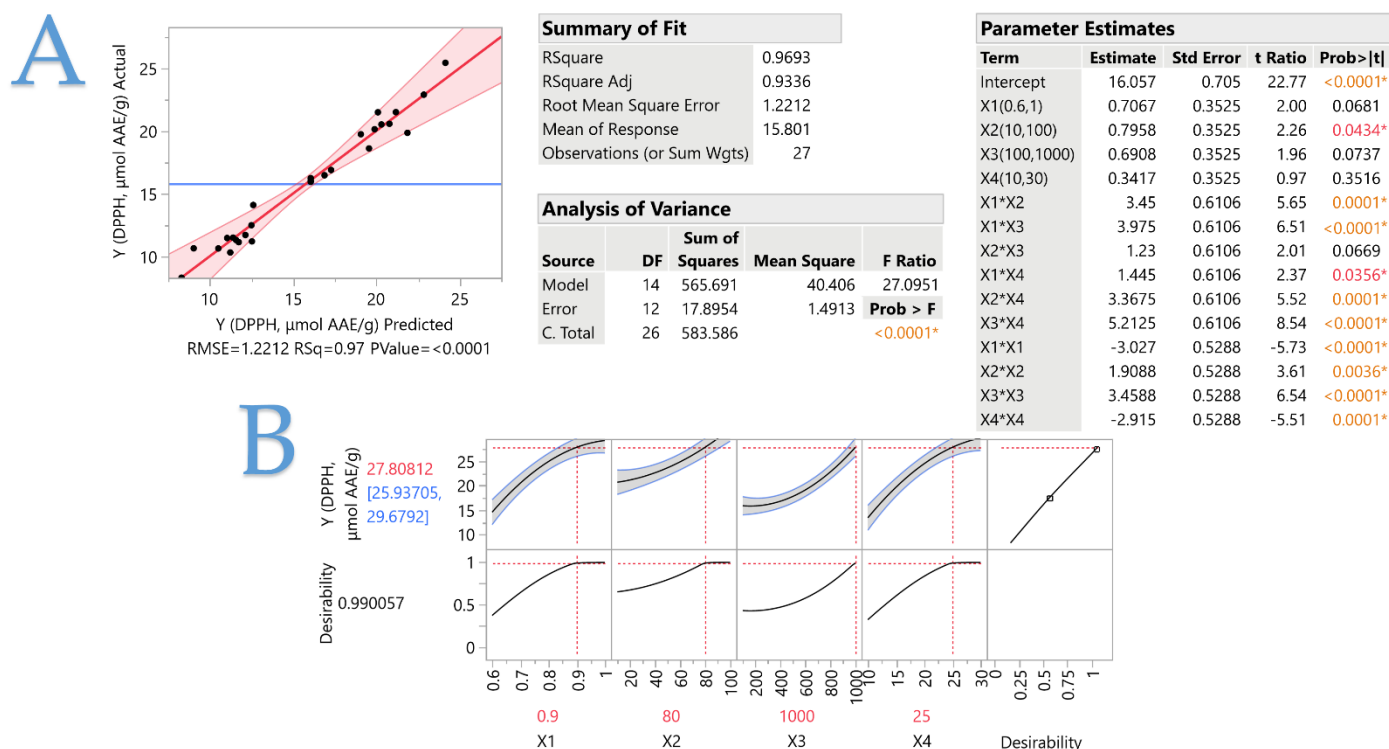
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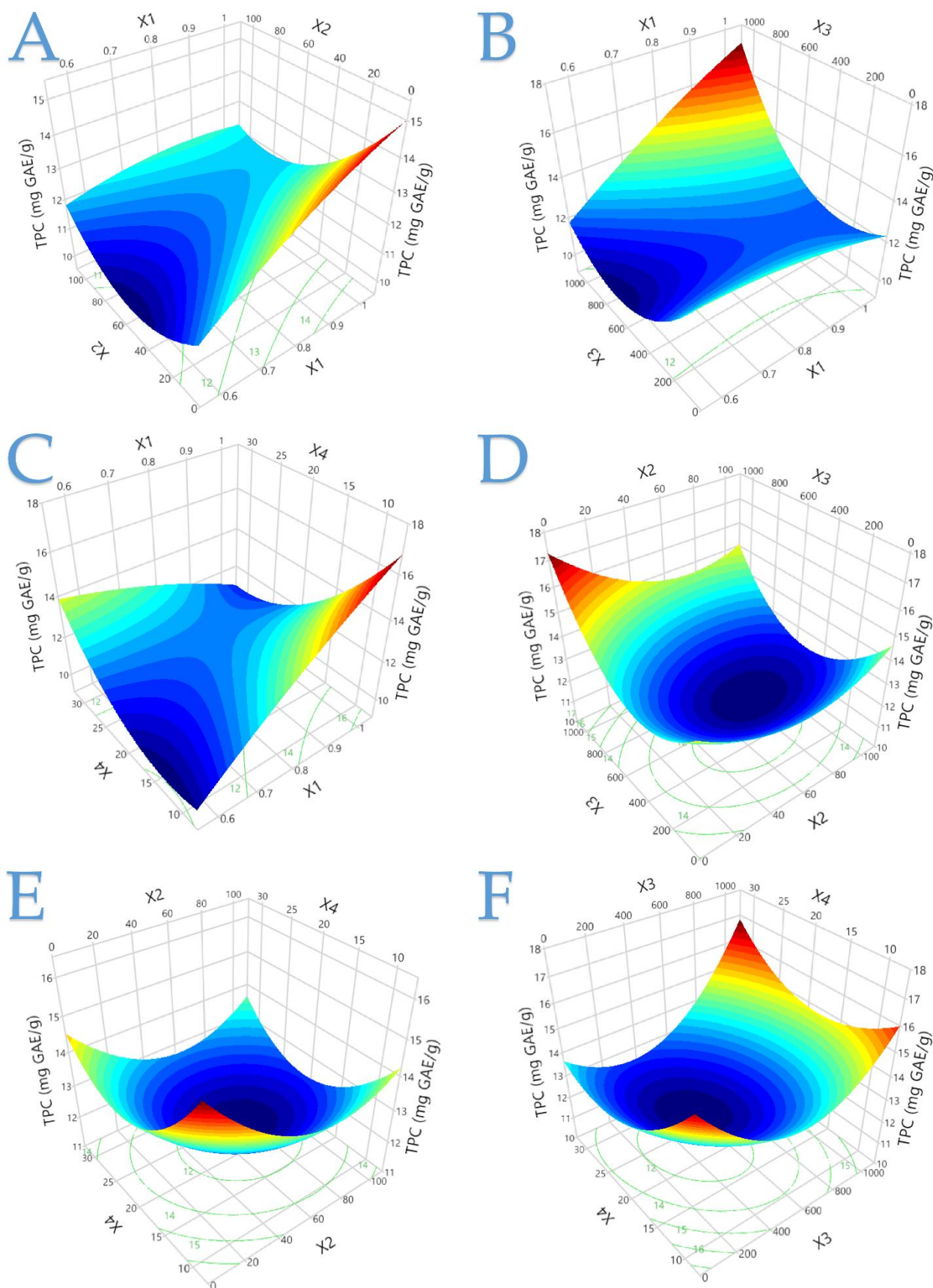
**Figure S1.** Plots **A** and **B** display the actual response versus the predicted response (Total polyphenol content – TPC, mg GAE/g) for the optimization of *C. sativa* leaf extracts carried out with hydroethanolic solution, different extraction PEF parameters, and the desirability function. Asterisks and colored values denote statistically significant values, while inset tables include statistics relevant to the evaluation of the resulting model.



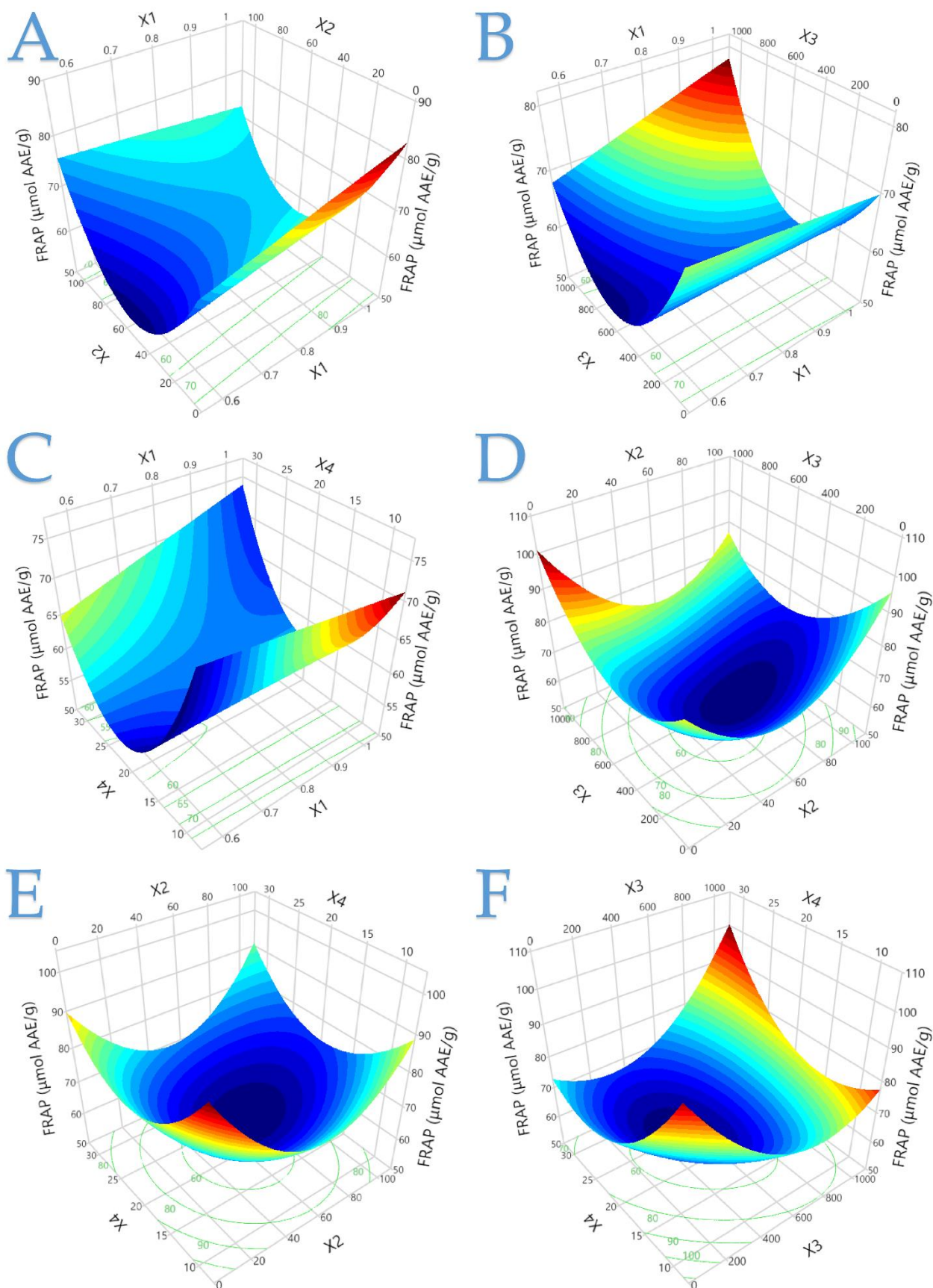
**Figure S2.** Plots A and B display the actual response versus the predicted response (FRAP,  $\mu\text{mol AAE/g}$ ) for the optimization of *C. sativa* leaf extracts carried out with hydroethanolic solution, different extraction PEF parameters, and the desirability function. Asterisks and colored values denote statistically significant values, while inset tables include statistics relevant to the evaluation of the resulting model.



**Figure S3.** Plots A and B display the actual response versus the predicted response (DPPH,  $\mu\text{mol AAE/g}$ ) for the optimization of *C. sativa* leaf extracts carried out with hydroethanolic solution, different extraction PEF parameters, and the desirability function. Asterisks and colored values denote statistically significant values, while inset tables include statistics relevant to the evaluation of the resulting model.

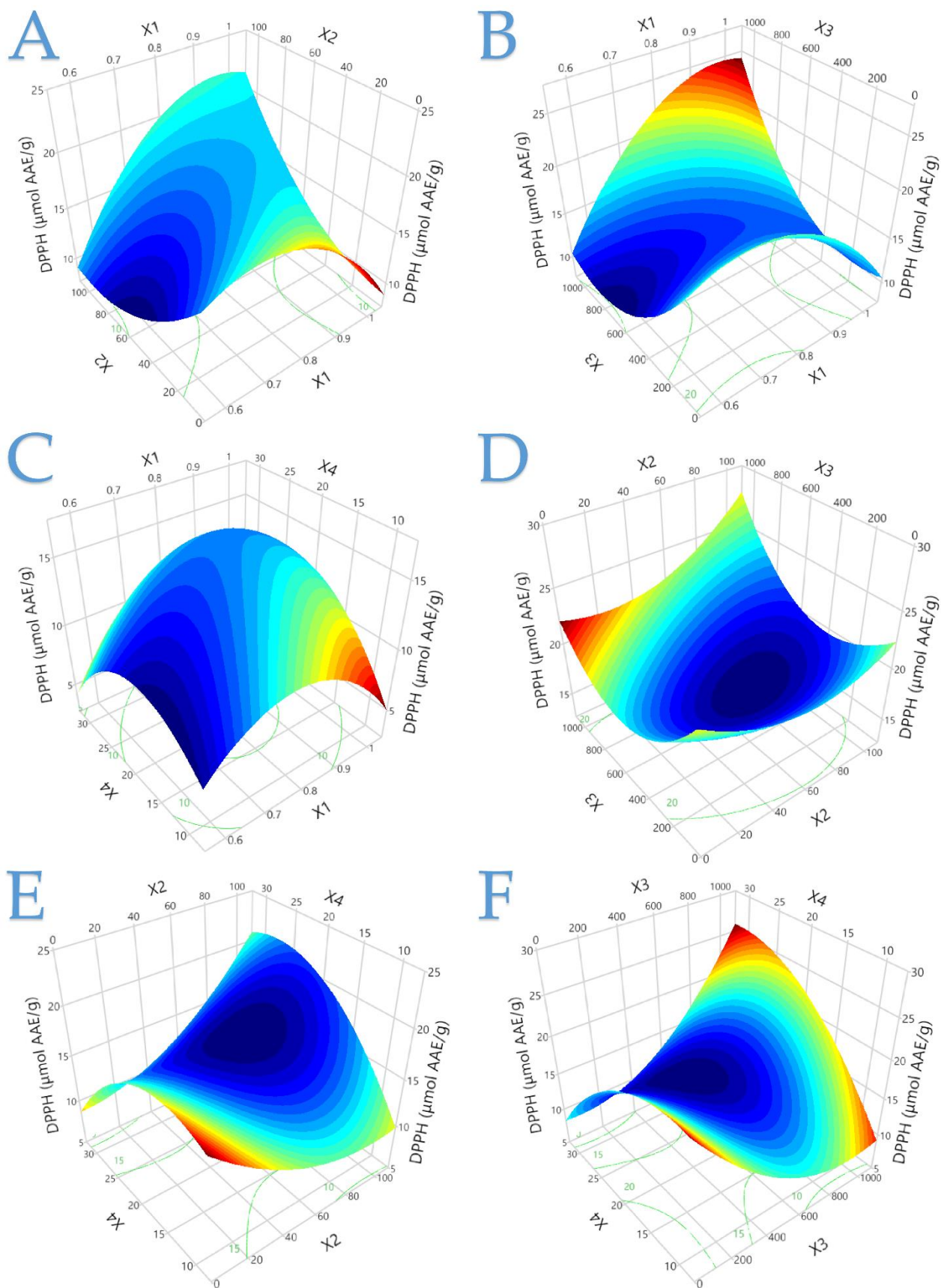


**Figure S4.** The optimal extraction of *C. sativa* leaf extracts is shown in 3D graphs that show the impact of the process variables considered in the response (Total polyphenol content – TPC, mg GAE/g). Plot (A), covariation of  $X_1$  and  $X_2$ ; plot (B), covariation of  $X_1$  and  $X_3$ ; plot (C), covariation of  $X_1$  and  $X_4$ ; plot (D), covariation of  $X_2$  and  $X_3$ ; plot (E), covariation of  $X_2$  and  $X_4$ ; plot (F), covariation of  $X_3$  and  $X_4$ .



**Figure S5.** The optimal extraction of *C. sativa* leaf extracts is shown in 3D graphs that show the impact of the process variables considered in the response (FRAP,  $\mu\text{mol AAE/g}$ ). Plot (A), covariation of  $X_1$  and  $X_2$ ; plot (B), covariation of  $X_1$  and  $X_3$ ; plot (C), covariation of  $X_1$  and  $X_4$ ; plot (D), covariation of  $X_2$  and  $X_3$ ; plot (E), covariation of  $X_2$  and  $X_4$ ; plot (F), covariation of  $X_3$  and  $X_4$ .





**Figure S6.** The optimal extraction of *C. sativa* leaf extracts is shown in 3D graphs that show the impact of the process variables considered in the response (DPPH,  $\mu\text{mol AAE/g}$ ). Plot (A), covariation of  $X_1$  and  $X_2$ ; plot (B), covariation of  $X_1$  and  $X_3$ ; plot (C), covariation of  $X_1$  and  $X_4$ ; plot (D), covariation of  $X_2$  and  $X_3$ ; plot (E), covariation of  $X_2$  and  $X_4$ ; plot (F), covariation of  $X_3$  and  $X_4$ .