Supplementary File

Anti-Proliferative Potential of Quercetin Loaded Polymeric Mixed Micelles on Rat C6 and Human U87MG Glioma Cells

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Supplementary Equations

$$\boldsymbol{Particle\ Size} = +716.09520 + 499.87603 * \boldsymbol{Soluplus} - 1038.48627\boldsymbol{E-TPGS} - 4469.14112 * \boldsymbol{Poloxamer}407 + 247.80037 * \boldsymbol{Soluplus} * \boldsymbol{E-TPGS} - 590.50167 * \boldsymbol{Soluplus} * \boldsymbol{Poloxamer}\ 407 + 2403.70370\boldsymbol{E-TPGS} * \boldsymbol{Poloxamer}\ 407 - 222.37313\boldsymbol{Soluplus}^2 + 142.78996\boldsymbol{E-TPGS}^2 + 9815.16333\boldsymbol{Poloxamer}407^2 \ldots\ldots\ldots \text{(S1)}$$

$$PDI = +1.11487 + 0.725355\boldsymbol{Soluplus} - 1.55176\boldsymbol{E-TPGS} - 9.03024\boldsymbol{Poloxamer}\ 407 + 0.369629\boldsymbol{Soluplus} * \boldsymbol{E-TPGS} + 0.241667\boldsymbol{Soluplus} * \boldsymbol{Poloxamer}\ 407 + 1.62407\boldsymbol{E-TPGS} * \boldsymbol{Poloxamer}\ 407 - 0.323134\boldsymbol{Soluplus}^2 + 0.640576\boldsymbol{E-TPGS}^2 + 17.96333 \ldots\ldots\ldots \text{(S2)}$$

$$\%\boldsymbol{EE} = -42.55104 + 117.09552\boldsymbol{Soluplus} + 42.08558\boldsymbol{E-TPGS} - 202.60861\ \boldsymbol{Poloxamer}407 - 45.41852\boldsymbol{Soluplus} * \boldsymbol{E-TPGS} + 172.21667\ \boldsymbol{Soluplus} * \boldsymbol{Poloxamer}\ 407 - 3.55556 * \boldsymbol{E-TPGS} * \boldsymbol{Poloxamer}407 * 35.74400 * \boldsymbol{Soluplus}^2 + 34.08971 * \boldsymbol{E-TPGS}^2 + 36.15000 * \boldsymbol{Poloxamer}\ 407^2 \ldots\ldots\ldots \text{(S3)}$$

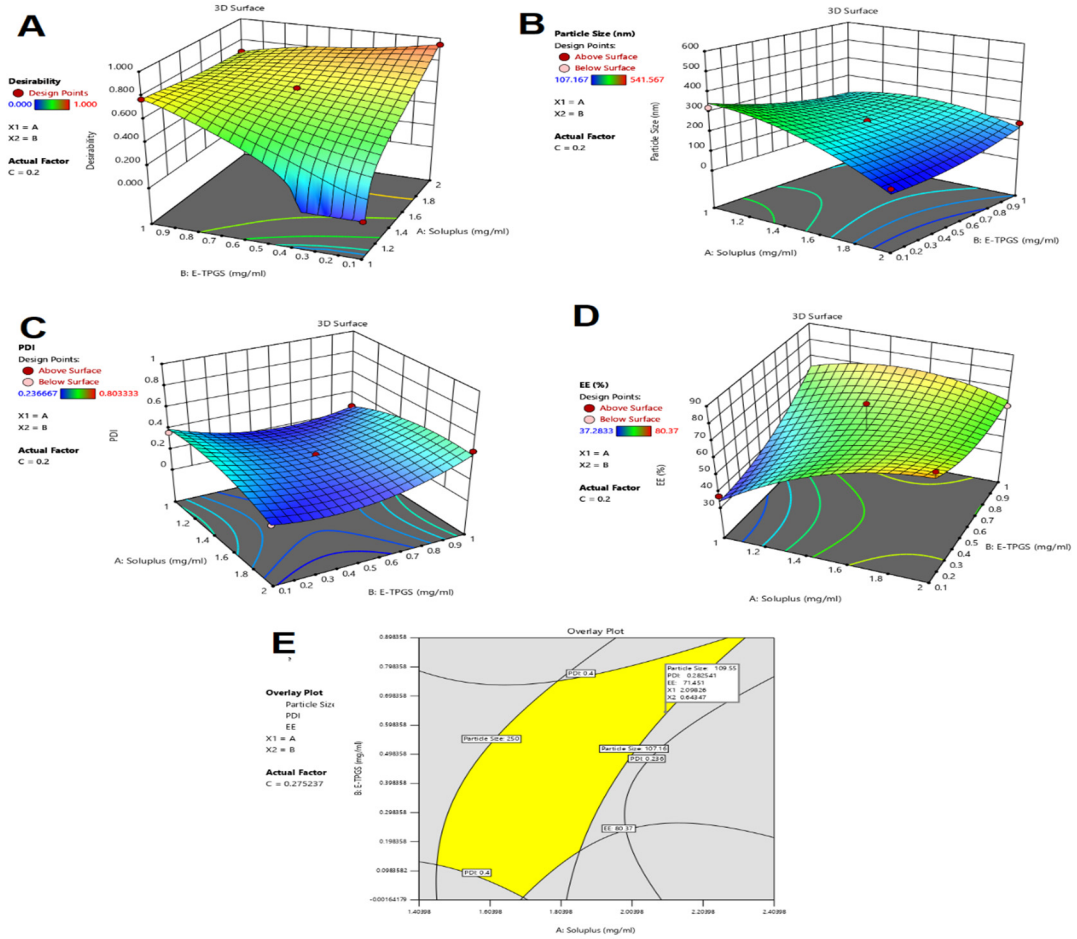

Figure S1: 3D plot analysis of impact of independent variables on dependent variables of prepared Qu-PMMs; A. Desirability, B. Particle size, C. PDI, D. %EE and E. overlay plot of optimized Qu-PMMs.

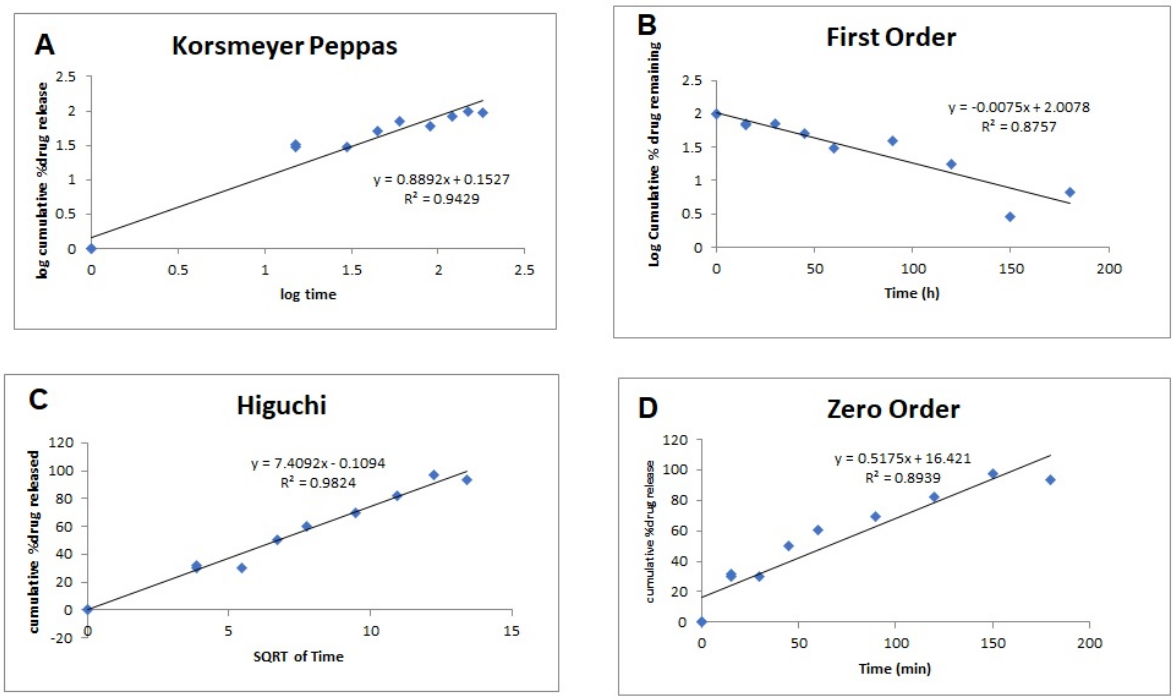

Figure S2. Drug release kinetic model; A. Korsmeyer peppas drug release model; B. First order drug release model; C. Higuchi drug release model; D. Zero order drug release model.