

Supplementary file

Optimization, In Vitro and Ex Vivo Assessment of Nanotransferosome Gels Infused with a Methanolic Extract of *Solanum xanthocarpum* for the Topical Treatment of Psoriasis

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Regression equation of the fitted quadratic model:

$$\text{Vesicle size} = + 135.51 + 4.72 \times X_1 + 4.19 \times X_2 - 3.44 \times X_3 + 0.5300 \times X_1 \times X_2 - 2.300 \times X_1 \times X_3 + 5.13 \times X_2 \times X_3 + 9.05 \times X_1^2 + 4.32 \times X_2^2 + 15.74 \times X_3^2$$

$$\text{PDI} = + 0.2156 + 0.0063 \times X_1 - 0.0002 \times X_2 + 0.0072 \times X_3 - 0.0315 \times X_1 \times X_2 + 0.0373 \times X_1 \times X_3 - 0.0113 \times X_2 \times X_3 + 0.0581 \times X_1^2 + 0.0237 \times X_2^2 + 0.0700 \times X_3^2$$

$$\text{EE} = - 913.41425 + 19.22618 \times X_1 + 8.44690 \times X_2 + 8.04700 \times X_3 - 0.120900 \times X_1 \times X_2 - 0.071600 \times X_1 \times X_3 - 0.084000 \times X_2 \times X_3 - 0.091923 \times X_1^2 + 0.274040 \times X_2^2 + 0.024840 \times X_3^2$$

X₁: p90G (mg), X₂: Cholesterol (mg), X₃: Sodium cholate (mg)

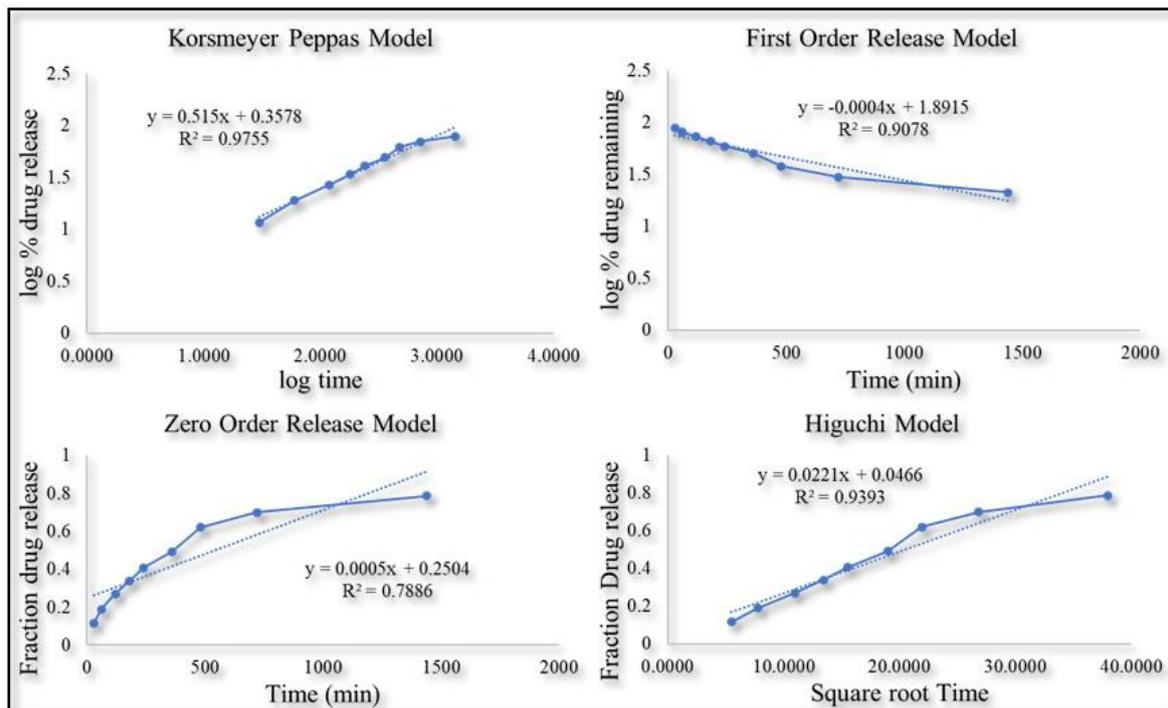


Figure S1. Drug release kinetic model diagrams of Korsmeyer Peppas Model, First Order Release Model, Zero Order Release Model, and Higuchi Model for SXE-NTF formulation.

Certificate

This is to certify that the project proposal no ICP/2023/04 entitled "Phyto-Pharmacognostical Investigation and Nanoparticle Formulation of Bioactives from *Plumbago zeylanica* and *Solanum xanthocarpum* for Diabetic Retinopathic Management" submitted by Ms. Rama Tyagi has been approved by the IAEC of Innovative institute of Pharmacy and Project number is CPCSEA/IAEC/ICP/2023/04 in its meeting held on 03/05/2023 and 48 animals of wistar rats of either sex have been sanctioned under this proposal for a duration of next 6 months.

Authorized by	Name	Signature	Date
Chairman:	Dr. Titiksha S. Sharma		03/05/2023
Member Secretary:	Dr. Anamjyoti Singh		05/05/2023
Main Nominee of CPCSEA:	Dr. Roshni Gaur		03/05/2023

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(Kindly make sure that minutes of the meeting duly signed by all the participants are maintained by Office)

Figure S2. Animal Approval Form.