SUMMARY & CONCLUSIONS
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1. Pharmacological and Phytochemical analysis of *E. littorale* confirms authenticity of the plant as per previous reports.

2. The results of extractive value in different fractions reveal that *n*-butanol of *E. littorale* gives highest extractive value (25.3 %) followed by ethyl acetate extract (5.35 %).

3. Ethyl acetate: methanol: water (7.7:2.0:0.5), chloroform: methanol (9.5:1) and ethyl acetate: methanol: water (7.7:1.5:0.5), were found to be more appropriate solvent systems for aqueous extract, ethyl acetate and *n*-butanol extracts respectively.

4. TLC fingerprint profile of aqueous extract, ethyl acetate and *n*-butanol, shows presence of 7,7,8 quenched bands at UV 254 nm, while aqueous extract shows 5 bands and *n*-butanol shows 10 bands at UV 366 nm, 7 bands in aqueous extract 8 in ethyl acetate and 8 bands in *n*-butanol extract after derivatisation.

5. Aqueous extract of *E. littorale* shows dose dependent antidiabetic activity in STZ-induced Type I and Type II diabetic rats.

6. *n*-butanol and ethyl acetate fractions were found to be active, whereas toluene, chloroform and residual fractions were inactive. The active components are possibly present in *n*-butanol and ethyl acetate fractions. These results correlate well with phytochemical analysis.

7. Swertiamarin was found to be one of the major compounds in *E. littorale*. It was 7.7 % in aqueous extract 5.6 % in ethyl acetate fraction and 29.4 % in *n*-butanol fraction. TLC fingerprinting of the aqueous extract and its ethyl acetate and *n*-butanol fraction also showed relatively higher percentage of swertiamarin. The aqueous extract showed 43.70 % and its fraction ethyl acetate and *n*-butanol 10.71 % and 52 % respectively.

8. Swertiamarin showed antidiabetic activity in STZ-induced Type I rats also shows more improvement in the lipid profile.

9. In addition to antidiabetic activity aqueous extract also possesses antihyperlipidaemic antioxidant and hepatoprotective activity.

10. The mechanism of antidiabetic activity of *E. littorale* appears to be due to improved insulin sensitivity, increase in GLUT-4 levels and antioxidant activity.

11. It can be concluded that *E. littorale* can be looked upon as a potential antidiabetic plant.