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EXTEMPORANEOUS MICELLAR SOLUBILIZATION OF TITRATED EXTRACT OF *CENTELLA ASIATICA* IN AQUEOUS MEDIA

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Titrated Extract of *Centella asiatica* (TECA) is a poorly water-soluble extract from the *Centella asiatica*. Despite excellent wound preparation causes pain due to a low aqueous solubility and high hypertonicity and therefore, the patient's compliance of this drug is low. The objective of this study is to design a formulation of TECA with an improved therapeutic applicability via an adequate solubilization. A mixture of propylene glycol and ethoxylated hydrogenated caster oil achieved an acceptable solubilization of TECA (i.e. 10%) via a formulation of micelle. A preparation of extemporaneous TECA micelle was achieved by a dilution of the original micellar formulation with either water or saline. An estimated distribution of particle size was between 15.9 and 32.6 nm. The osmotic pressure of the formulation was found to be much lower than that found in a commercially available injectable (i.e. Madecassol®). The erythrocytic hemolysis of micellar solution was lower than that with the conventional dosage form, consistent with the osmotic pressure data. Pain score after an injection of the micellar solution was assessed by the hind-paw writhing test using ICR mice and compared with that found with the conventional injectable. The data indicated that the injection of the micellar solution was a significantly less painful. These results indicated that a micellar solubilization, followed by an extemporaneous dilution, is a novel formulation of TECA with an improved therapeutic applicability.