

ABSTRACT

Shampoo is a widely used personal care product to clean hair and scalp. However, each product consists of essential ingredients called surfactants as the cleansing agent. Surfactants are amphiphilic compounds with hydrophilic and hydrophobic (lipophilic) groups in a molecule. Typically shampoo has a primary and secondary surfactant. Zwitterionic (amphoteric) surfactant is a commonly used as a secondary surfactant for shampoo. The secondary surfactant can be used as a foam booster and viscosity enhancer in shampoo.

This review was conducted to provide information about suitable characteristics of zwitterionic surfactant for shampoo, its role as a secondary surfactant, and the effect on viscosity and foaming properties in shampoo. The research was conducted in a narrative by electronic study literature in Scopus, Sciencedirect, Wiley, Pubmed, and Google Scholar. The collected articles were selected by the inclusion and exclusion criteria and analyzed for the narrative review.

The review results show that zwitterionic surfactants have characteristics of high water-soluble, biodegradable, less irritant, low CMC, and excellent skin compatibility. The application of this surfactant combined with primary surfactant in 0-5% concentration range. The presence of zwitterionic surfactant enhances shampoo viscosity, and as a foam booster, it can stabilize foam and increase the foamability of shampoo.

Keywords: zwitterionic surfactant, shampoo, viscosity, foaming