

Regulatory aspects for hair dyes in US

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The Food and Drugs Administration is an regulatory agency which enforces laws governing the biologics, cosmetics, drugs, medical devices etc. in US, which may have potential side effects for consumers. The USFDA is responsible for the enforcement of federal legislation and serves as a regulatory body to ensure the quality of health care and related products. These health care and related products are accurately and informatively represented to the public as effective and safe for the intended use. Cosmetics are substances intended to be applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance without affecting the body's structure or functions. They are generally mixtures of chemical compounds, some being derived from natural sources, many being synthetic. Hair colouring is currently a globally accepted fashion phenomenon. Hair Dyes are also such cosmetics, which are intended for colouring the hair. These hair dye formulations include few carcinogenic agents, which are necessary for the long stay of the dye and the FDA plays a vital role in controlling the carcinogenicity by placing the checkpoints to the amount being added. The topic of discussion includes the regulatory activity that oversights the additives and the ingredients used in the hair dyes, which is a prerequisite to conform the safety and purity for their intended use.

Biography

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Penetration mechanism of classical and ultraflexible liposomes through porcine ear skin

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The species difference in skin permeability, K_p, of Antiretroviral drugs (acyclovir, zidovudine) was determined by using excised skin samples from rat, pig, and human. Indeed, the main barrier to drug permeation through skin is the stratum corneum, which has been reported to differ in terms of lipid composition, water content and morphological characteristics on the basis of species. Porcine stratum corneum is the most similar to human stratum corneum in terms of lipid composition, but it presents a marked difference in terms of thickness, whereas rat skin had different lipid composition when compare to human skin. A set of 2 antiviral drugs was used to perform in vitro experiments by using a modified Franz diffusion cell and excised porcine ear skin/ rat skin/human skin as a membrane. To shed light on the reasons for the species difference, various skin characteristics in each species were measured. The thickness of the stratum corneum was 16–22 µm, 20–25 µm of porcine and rat skin respectively. The viable epidermis was 65–90 µm, 75–110 µm thick of porcine and rat ear skin respectively. The thickness of the porcine is slightly more than human skin but in case of the rat skin it is similar to human skin. The K_p value of acyclovir in rat skin was the greatest among the other species, and those in pigs and humans were in good conformity. The results show that porcine ear skin can be use in studies of percutaneous penetration as a substitute for human skin.

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