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TOXICOLOGICAL REPORT ASSESSMENT – USA

DEMODEX – Zhongzhou Cream

This risk assessment evaluates the safety of the ingredients contained in the formulation as well as the exposure to the finished product.

All regulatory documents were requested in the Formula Review US.

Legal References:

-  [Food, Drug, & Cosmetic Act](#) (16 CFR 1500.3 and 21 CFR 700-740)
-  Cosmetic Ingredient Review

Product Category: Skin product (Skincare for the Face)



Part I - Review of ingredients

Qualitative list of ingredients:

WATER (AQUA), PROPYLENE GLYCOL, STEARYL ALCOHOL, STEARIC ACID, SULFUR, ZINC OXIDE, GLYCERIN, ISOPROPYL MYRISTATE, PETROLATUM, GLYCERYL STEARATE, DIMETHICONE, MENTHOL, LANOLIN, SORBITAN STEARATE, POLYSORBATE 80, TRITICUM VULGARE (WHEAT) GERM OIL

SALICYLIC ACID, SODIUM HYPOCHLORITE, SODIUM LAURYL SULFATE

The ingredients have been reviewed based on the principles of the general toxicology, their safety and regulatory status and taking in account the category, the reasonably foreseeable conditions of use as well as the physico-chemical properties of the final product.

The skin irritation, sensitization and photo-sensitization potential of the ingredients has been reviewed.

There are no substances in the product expected to have a potential for carcinogenic, mutagenic or reprotoxic effects.

Part II - Review of exposure

The product was evaluated according to the below parameters:

- 🕒 Quantity: 0.8g
- 🕒 Frequency: 2 times a day
- 🕒 Surface: 565 cm²
- 🕒 Retention Factor: 1
- 🕒 Target Population: Adults

Part III - Review of toxicity

I - Local Toxicity

1. Skin Toxicity:

The evaluation was performed according to the following toxicological endpoints:

- Skin irritation
- Photo-toxicity
- Skin sensitization

Based on the safety profile of each ingredient and the calculation rules for these endpoints, the product is unlikely to cause photo-toxicity or skin sensitization.

2. Eye Toxicity:

The evaluation was performed according to the following criteria:

Eye irritation

Based on the safety profile of each ingredient and the calculation rules for these endpoints, the product is unlikely to cause irritation to the eyes.



II - Systemic toxicity

This evaluation comprises a systematic review of the most important toxicological endpoints (absorption, acute and systemic toxicity, sensitization, irritation, phototoxicity, genotoxicity, carcinogenicity, reproductive and developmental toxicity) and the reporting of other safety parameters where relevant. Even though the safety assessments do not contain a specific section dedicated to the toxicokinetic parameters, a quick review of the absorption, metabolism, distribution and excretion was performed on each ingredient. The absorption is always described while important conclusions related to the metabolites are mentioned in the section "Remark" of these documents only when hazardous metabolites were identified.

The hazard assessment methodology mainly consists of four successive steps which are:

An accurate review of the scientific literature,



- The use of computational tools in case no satisfactory data is available, which includes QSAR models, trend analysis and read-across from suitable analogues
- The use of the TTC model (Threshold of Toxicological Concern) when the first two steps do not allow to draw conclusions on the safety of the ingredient and provided that the substance is not present at a too high level.
- The recommendation of in vitro tests as a last resort when the three steps presented below do not lead to acceptable conclusions about the safe use of the ingredient.

Conclusion

Having regard to the product category, the systemic toxicity was evaluated on the basis of the dermal route of exposure

After investigation, it appeared that the ingredients are used in appropriate concentrations which leads to MoS of 100 or higher and supports the overall safety of the finished product. Ingredients for which no suitable NOAEL was identified were nevertheless evaluated in light of alternative qualitative or semi-quantitative toxicological data.

TOXICOLOGICAL RISK ASSESSMENT CONCLUSION

Based on the risk evaluation of the product Zhongzhou Cream performed by BIORIUS SPRL and according to the current state of knowledge, we can conclude that the product is safe when used under normal and reasonable conditions of use.

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