A New Permethyl® For Mascara and Other Applications

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Abstract

Over the last decade the Permethyl® product line has been used in a wide variety of applications including but not limited to, skin care, colour cosmetics, hair care and sun care products. In the area of colour cosmetics these products have been successfully used in mascara, lipstick, foundations and blushers just to name a few application areas. Currently, we have introduced a new Permethyl® to our current product line, Permethyl®98B. This new material was developed to provide increased film forming / waterproofing properties for those applications where this is a key attribute. Studies presented will evaluate the suitability for use in mascara.

Introduction

Mascara is one of the most commonly used cosmetics for the eyes. In modern mascara formulations the purpose of mascara is to darken, lengthen and thicken the eyelashes. For decades formulators have been working on attaining these attributes while trying to eliminate some of the problems associated with mascara such as smudging, difficult removal, clumping etc. In order to solve these problems and provide the consumer with the benefits they are looking for, mascaras must be carefully formulated to allow easy and even application without smudging.

The current liquid mascara formulations are divided into several typical systems:

- Water-based
- Solvent-based
- Water/solvent emulsion systems.

Water-based mascaras are formulated to include waxes, pigments and resins dissolved in water. They are considered to be oil-in-water emulsions and have a high concentration of water phase. In these products the water evaporates readily, creating a fast-drying product that thickens and darkens the lashes. The water-soluble nature of the product makes for easy removal but unfortunately allows it to smudge easily. Water-based mascaras have been formulated to be water-resistant by increasing the amount of wax or polymer added to improve the adherence of the pigment to the lashes.

Solvent-based mascaras make use of petroleum distillates to which the pigments and waxes are added. These petroleum based materials confer a waterproofing character. As a result, this type of product performs well with respect to being smudge resistant but removal could be difficult and requires the use of an oil-based lotion or cream to facilitate removal.

The last class of mascara formulations combines both solvent- and water-based systems to form either a water-in-oil or oil-in-water emulsion. These systems look to create an optimal product, which has the advantages of thickening with a short drying time, similar to the water-based systems, while providing waterproofing and lash separation, similar to the solvent-based mascaras.

Objective

To determine if Permethyl® 98B offer any advantages to lash curling, lengthening and waterproofing in mascara formulations.

Results and Discussion

A mascara formulation (see Appendix I) was prepared with and without Permethyl® 98B and then tested on false eyelashes to determine curling and lengthening.

In examining the photos opposite, taken from the front, it is clearly observed that the mascara formula using the Permethyl® 98B shows a fuller, thicker lash with more lash separation.

Additional photos were taken using a side view to get a better