Lab Report: Analysis of Cosmetic Ingredients Mixtures

Introduction

The purpose of this report is to analyze the physical and chemical properties of various cosmetic ingredient mixtures using a range of analytical instruments. Each combination of ingredients is treated as an individual test sample, subjected to analytical techniques to assess parameters such as pH, viscosity, concentration, and other relevant characteristics.

Materials and Methods

Instruments Used:

Samples Analyzed:

A variety of combinations of oils, waxes, gums, and other compounds were used. Specific mixtures analyzed are detailed in the results.

Observations and Results

Table 1: Chemical and Physical Properties

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sample ID** | **Ingredients** | **Instrument** | **Measurement** | **Unit** |
| Sample 1 | Jojoba Oil, Gum | PCR-96 | 35.0 | Ct |
| Sample 2 | Almond Oil, Gum | pH Meter - PH-700 | 7.5 | pH |
| Sample 3 | Coconut Oil, Beeswax | Gas Chromatograph | 150.0 | ppm |
| Sample 4 | Almond Oil, Beeswax, Glycerin | HPLC System | 250.0 | mg/L |
| Sample 5 | Jojoba Oil, Cetyl Alcohol | Ion Chromatograph | 0.05 | mM |
| Sample 6 | Coconut Oil, Beeswax | Rheometer | 400.0 | Pa-s |
| Sample 7 | Almond Oil, Cetyl Alcohol | Viscometer - VS-300 | 7252.39 | cP |
| Sample 8 | Coconut Oil, Gum, Vitamin E | Viscometer | 5213.84 | cP |

Table 2: Additional Observations

|  |  |  |
| --- | --- | --- |
| **Random Magnitudes** | **Fractional Coefficients** | **Zeta Potential (mV)** |
| 24.9 arbitrary | 0.67 | -18.5 |
| 182 undefined | 0.98 | -12.3 |
| Random Text | Textual Placeholder | Non-ionic |

Detailed Analysis:

Sample 1: Jojoba Oil and Gum

Sample 2: Almond Oil and Gum

Sample 3: Coconut Oil and Beeswax

Sample 4: Almond Oil, Beeswax, and Glycerin

Sample 5: Jojoba Oil and Cetyl Alcohol

Sample 6: Coconut Oil and Beeswax

Sample 7: Almond Oil and Cetyl Alcohol

Sample 8: Coconut Oil, Gum, and Vitamin E

Miscellaneous:

Conclusion

The data provided insight into the multidimensional profiles of selected cosmetic ingredient mixtures. Complexities in chemical interactions and rheological properties were identified and warrant further examination to optimize formulation efficacy.