

Lab Report: Analysis of Various Oil Samples

Introduction

This report presents the findings from a series of analytical techniques applied to different oil samples combined with various additives. The focus is on understanding the interactions between the components, measuring their concentration, and assessing properties like pH and conductivity. The samples analyzed include combinations such as Almond Oil with Cetyl Alcohol and Jojoba Oil with Beeswax, among others.

Methodology and Equipment

Multiple analytical tools were employed:

1.Mass Spectrometer MS-202.UV-Vis Spectrophotometer UV-26003.HPLC System HPLC-90004.X-Ray Diffractometer XRD-60005.Liquid Chromatograph LC-4006.Spectrometer Alpha-3007.Conductivity Meter CM-2158.pH Meter PH-7009.Microplate Reader MRX

The analyses covered mass-to-charge ratios, absorption rates, compound concentrations, crystallographic structures, wavelength measurements, conductivity, and pH levels.

Observations and Measurements

Table 1: Mass Spectrometry and Chromatographic Results

Sample ID	Equipment	Oil Base	Additive(s)	Measure (Units)
1296-MS20	Mass Spectrometer MS-20	Almond Oil	Cetyl Alcohol	1543 (m/z)
1296-HPLC	HPLC System HPLC-9000	Coconut Oil	Cetyl Alcohol, Glycerin	850 (mg/L)
1296-LC	Liquid Chromatograph LC-400	Jojoba Oil	Cetyl Alcohol, Glycerin	25 (ug/mL)

Irrelevant Data

Table 2: Spectrophotometric and Diffractometric Results

Sample ID	Equipment	Oil Base	Additive(s)	Measure (Units)
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1296-UV	UV-Vis Spectrophotometer UV-2600	Coconut Oil	Cetyl Alcohol	2.9 (Abs)
1296-XRD	X-Ray Diffractometer XRD-6000	Almond Oil	Cetyl Alcohol, Vitamin E	120 (C)
1296-Alpha	Spectrometer Alpha-300	Coconut Oil	nan	550 (nm)

Complex Analytical Descriptions

Table 3: Conductivity and pH Measurements

Sample ID	Equipment	Oil Base	Additive(s)	Measure (Units)
1296-CM	Conductivity Meter CM-215	Joboba Oil	Beeswax, Vitamin E	1120 (uS/cm)
1296-pH	pH Meter PH-700	Joboba Oil	Beeswax, Glycerin	7 (pH)

Incidental Findings

Conclusion

The data from the Mass Spectrometer MS-20 and other equipment have unveiled significant insights into the properties of oil sample mixtures. The characterization of each sample was comprehensive, leading to a better understanding of the component interactions. Tables within this report have been constructed using various data metrics, but any attempts to automate the extraction should account for combined entries and outliers noted throughout this document. The pH and conductivity readings, alongside chromatographic data, provide a holistic view of the oil mixture profiles. Further exploration and refinement of these methodologies are recommended for future assessments in order to precisely index any additional findings that emerged from this series of tests.