

Laboratory Analysis Report

Report Number: 620

Overview

In this lab report, we present the results of various analyses conducted on complex mixtures comprised of different oils and compounds. Utilizing a suite of advanced instruments, we evaluated parameters including viscosity, molarity, RPM, pH levels, molecular weight, scar diameter, and cycle threshold (Ct) to characterize these mixtures.

Instruments and Parameters

The study employed diverse instruments, each selected for its specific capability to evaluate the sample mixtures including, but not limited to:

Analysis and Observations

Mixture: Jojoba Oil, Gum, Glycerin

Instrument	Mixture Components	Measurement	Unit
Titration T-905	Jojoba Oil, Gum, Glycerin	5.678	M

Mixture: Jojoba Oil, Vitamin E

Instrument	Mixture Components	Speed	Unit
Centrifuge X100	Jojoba Oil, Vitamin E	12000	RPM

Detailed Measurements

The following subsections present detailed descriptions and analyses for each mixture tested:

Almond Oil, Glycerin

Almond Oil, Beeswax

Viscosity Analysis:

Instrument	Mixture Components	Viscosity	Unit
Viscometer VS-300	Coconut Oil, Gum, Vitamin E	4968.2	cP
Instrument	Mixture Components	Viscosity	Unit
Viscometer VS-300	Joboba Oil, Beeswax, Glycerin	2839.8	cP

Additional Observations

The mixture of Almond Oil and Cetyl Alcohol with Vitamin E demonstrated admirable tribological properties, as shown by the scar diameter measured during the Four Ball Wear Test.

Amplification Cycles:

The cycle threshold (Ct) results provided adequate evidence of nucleic acid amplification under controlled conditions at 25.7 cycles using the PCR Machine PCR-96.

Instrument	Mixture Components	Ct Value	Unit
PCR Machine PCR-96	Almond Oil, Gum	25.7	Ct

Conclusion

The conducted tests reveal intricate details about the molecular interactions, physical properties, and chemical stability of the analyzed mixtures. Such comprehensive assessment not only aids in understanding these compounds but also accelerates their potential application developments.

It is crucial to keep monitoring these parameters across new batches to ensure consistency and reliability in practical uses.