



RapidOxy: Oxidation Stability of Cosmetic Oils

Cosmetic companies developed different formulas for cosmetic oils. The cosmetic oils were tested with the RapidOxy to see if there are differences in the oxidation stability.

Alternative to Traditional Stability Test Methods

The rapid small scale oxidation tester, RapidOxy, is a fast, safe and user-friendly alternative to traditional stability test methods. The instrument measures the induction period, which can be used as an indication of the oxidation and storage stability. Compared to other oxidation and storage stability test methods, the RapidOxy procedure requires only a small sample quantity to give exact test results in a short period of time.

Test Procedure

Four different cosmetic oil samples were tested in the RapidOxy with a user-defined program. A test temperature of 120 °C was chosen and 5 ml of sample were filled directly into the block. A filling pressure of 700 kPa was used. The test was finished after a pressure drop of 10 % below maximum pressure occurred.

Based on pretests the temperature of 120 °C was selected as the most suitable temperature.

Results

The following table shows the results of the cosmetic oil samples obtained with the RapidOxy:

Results for Different Cosmetic Oil Samples			
Sample	Temperature [°C]	Pressure [kPa]	Induction Period [min]
Cosmetic oil 1	120	700	158.53
Cosmetic oil 2	120	700	177.85
Cosmetic oil 3	120	700	206.10
Cosmetic oil 4	120	700	189.40



Accessories

- O-ring set, Viton®, pack of 100 (107296)
- Cleaning tissues, 150 sheets (107138)
- Pipettes, 5 mL, pack of 100 (107137)



Fig. 1 RapidOxy

Discussion

The four different samples were tested at the same temperature of 120 °C to assure comparable results. It has been shown that the oxidation stability of cosmetic oils can be determined with the RapidOxy rapidly.

The results meet the customer's expectations.

Do you have any questions?

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