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EVALUATION OF TWO MARKETLY EXISTING SHAMPOO POWDER HOLDING HERBAL INGREDIENTS

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ABSTRACT

Objective: Sebum or grease produced by sebaceous gland are rinsed off from hairs by using shampoo to make them dirt/oil free. The aim was to evaluate two markedly existing herbal shampoo powder containing natural ingredients, which will stay away from the threat posed by chemical ingredients and hence it can be preferred over the other. **Methods:** Herbal shampoo were evaluated and studied for organoleptic studies, powder characteristics, physicochemical evaluation and cleaning action. Organoleptic evaluation studies were performed by taking the samples randomly for the parameters like colour, odour, and texture. The powder characteristic like tapped density, bulk density and angle of repose were included in the study. The evaluation includes moisture content determination, pH determination, cleaning ability, foam volume and dirt dispersion. **Results:** All the two marketed formulations (K1 and M1) offered a suitable practical approach and achieved a better usage. General powder characteristics showed results in specified limits. Physicochemical evaluations, pH determination, ability to remove grease, dirt dispersion and foaming capacity were found to yield satisfactory results for the above mentioned marketed formulation. **Conclusion:** The marketed herbal shampoo powder K1 showed more foaming and the clarity of the solution is turbid but the other M1 exhibit less foam and more cleaning action, the solution is clear. The two formulations (K1 and M1) yielded satisfactory results but the M1 can be preferred over K1 based on the above mentioned observation.

KEYWORDS

Herbal shampoo powder, Organoleptic properties, Formulation and Evaluation methods.

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INTRODUCTION

To take care of their health, skin, and hair mankind have borrowed generously from nature. Herbal ingredients are natural that have preventive, protective and corrective action. The warehouse of cosmetics, nature provides such versatile natural ingredients that enhance beauty of the skin and hair. shampoo acts as a cleaning aid and to be known as hair care product. Sebum produced on hair and scalp oozed from sebaceous gland located within hair follicles. Sebum cannot be removed by water as

oil and dust. The presence scenario uses shampoo for the removal of oil and dust. A variety of Shampoos are powder, clear liquid, lotion, solid gel, medicated, liquid herbal and herbal shampoo powder, etc. Based on the nature and stability it is further divided into simple (or) plain, antiseptic (or) antidandruff and nutritional shampoo containing vitamin, amino acids, proteins hydrolysate. The primer aim of the shampoo is to dirt-free the hair and scalp. In the nearby scenario, among the consumers herbal shampoo has better and safe performance than the synthetic ones. The objective of the research work in close proximity is to evaluate an herbal shampoo powder which clears sebum, dirt, dandruff, promotes hair growth and strengthens the hair. Moreover, it also acts as a conditioning agent. This herbal shampoo powder performs all these actions without affecting or damaging hair[1].

METHODS

Evaluation of herbal shampoo powder[2-4]

Materials used Marketed herbal shampoo powder [K1] and Marketed herbal shampoo powder [M1].

Organoleptic studies

Organoleptic evaluation studies were performed by taking the samples randomly for the parameters like colour, odour, and texture.

General powder characteristics

General powder characteristics which are included in the table were evaluated plus in turn affects the external properties like flow property.

Angle of repose

On a microlab jack the glass plate was placed. Accurately weighed ten grams of marketed herbal shampoo powder was transferred into the funnel, using the thumb the orifice of the funnel was blocked. The lab jack was adjusted after that the thumb was removed. The height and the radius of the heap formed was measured.

Bulk density

It is an important property needed for packaging of the product. Hence, the bulk density depends on both the density of powder particles and the spatial arrangement of particles. A volume of 100 ml graduated cylinder was taken and required amount of herbal shampoo powders were added. This was transferred to bulk density apparatus and bulk density was calculated.

Tapped density

100 ml graduated cylinder was taken and tapped for 2 minutes with the required amount of marketed herbal shampoo powder until there is little change in the volume was observed.

Physicochemical evaluation

Moisture content determination

In a tarred porcelain dish 10 g of herbal shampoo powder was laid and set aside in a hot air oven at 105 °C for one hour. The weight loss was observed until the constant weight was attained.

pH

1 % w/v each of herbal shampoo powder formulations were prepared using water. pH was authenticated by means of pH meter.

Cleaning action

5 g of wool yarn was weighed and positioned in the grease; the same was then rested in a 0.5 % w/v solution of marketed herbal shampoo powder K1 and M1and was shaken continuously for 4 minutes. The woollen yarn was taken out, dried and weighed.

Foaming capacity

50 ml of water was transformed to250 ml graduated cylinder to which the two grams of marketed herbal shampoo powder K1 and M1 were added separately and shaken vigorously for 5-10 times thus the foaming capacities of two formulations were performed.

Dirt dispersion

Two large test tubes containing 10 ml of distilled water were taken to this two drops of each 1% of marketed herbal shampoo powder K1 and M1were added. Indian ink was added in a drop wise to the test tubes which were stoppered and shaken. The amount of ink in the foam was graded as none, moderate, or heavy.

RESULTS AND DISCUSSION

Organoleptic evaluation

The visual inspection was conducted for the two marketed herbal shampoo powders. The results were reported in Table No.1.

General powder characteristics

The General powder characteristics of marketed herbal shampoo powder K1 and M1were determined and report in the tabular column.

Cleaning action

Marketed herbal shampoo powder K1 and M1implicit a significant cleaning action in the amount of grease removed. The cleaning action were observed as 21.42% for K1 and 34.48 % for M1 respectively. M1 formulation portrayed good ability in the removal of grease compared to the other one.

Foaming capacity

The foaming characteristics in distilled water of marketed herbal shampoo powder K1 and M1 were comparable. After 1 minute shaking the total foam volume of herbal shampoo powders were ranged and graded from mild to good. In K1 it was good foam and in M1 it was mild.

Dirt dispersion

Shampoo powders that cause the ink to concentrate in the foam are considered as poor quality. The amount of ink in the foam of herbal shampoo powders were evaluated and were ranged from moderate to light respectively. K1 showed moderate dirt dispersion compared with others and the results were reported in Table No.1.

Table No.1: Evaluation of herbal shampoo powder

S.No	Evaluation parameter	K1	M1
The evaluation parameters of organoleptic studies			
1	Color	Brownish	Brownish
2	Odor	Slight	Slight
3	Texture	Fine	Smooth
The general powder characteristics			
4	Angle of repose	32.83°	38.01°
5	Bulk density	0.9090 g/cm3	0.8330 g/cm3
6	Tapped density	1.25 g/cm3	2.5 g/cm3
The physicochemical evaluation studies			
7	Moisture content	0.026% w/w	0.143 % w/w
8	pH	6.62	6.47
The cleaning evaluation parameters			
9	Cleaning action	21.42%	34.48%
10	Foaming capacity	Good foam	Mild foam
11	Dirt dispersion	Moderate	Light

CONCLUSION

The two marketed formulations (K1 and M1) offered a suitable practical approach and achieved a better usage. The results are within the prescribed limit. Physicochemical evaluations, pH determination, ability to remove grease, foaming capacity, and dirt dispersion were found to yield satisfactory results for the formulation. The marketed herbal shampoo powder K1showed more foaming and the clarity of the solution is turbid but the other M1 exhibit less foam and more cleaning action, the solution is clear. The two formulations (K1 and M1) yielded satisfactory results but theM1 can be preferred over K1 based on the above mentioned observation.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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