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Formulation and characterization of a shampoo using Urmia Lake salts

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Objectives: Nowadays, health and hygiene of hair and skin are very interesting factors. Curing skin diseases, its health and freshness encourage producers use natural sources in this case. Water and mud of world salty lakes are natural products which are used in this area as a kind of products which are prepared from water, mud and salts of Dead Sea and these products are used in remedy of diseases like psoriasis, skin inflammation, rheumatoid arthritis, eczema and fungal diseases. Urmia lake respect to materials and compounds is similar to Dead Sea and from this point of view is a virgin wealth for Iran. The goal of this study was formulation of a shampoo using salts of Urmia Lake and survey of its properties in regard to foaming, viscosity, pH, moisturizing, physical stability and foam stability. **Methods:** For this purpose, different formulations with different percentage of shampoo components such as sodium lauryl ether sulfate (SLES), Coconut Fatty Acid, di ethanol Amide and triethanolamine, additives and Urmia Lake salts have been prepared. In each formulation, different percent of salt (as dissolved form in water) was used and quality control tests were carried out. **Results:** The best formulation which was obtained in this study has proper viscosity, good level of foam was (about 85 cm), lowest possible level of EDTA, proper physical stability, and 9 percent of Urmia Lake salts (as dissolved form in water). **Conclusion:** formulation of a shampoo using Urmia lake salts with good properties created a possibility for future studies about their probable therapeutic effects.

Key words: Shampoo, Urmia Lake, Formulation, Salts.

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(Merck)

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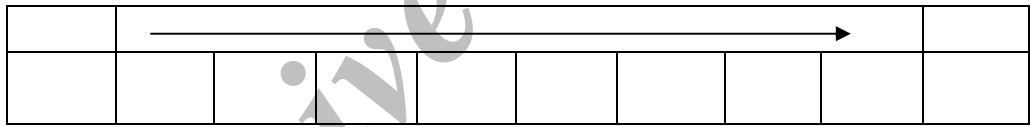
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mineral	Urmia Lake	Dead Sea
Chloride	161,550.0	212,400.0
Magnesium	17,560.0	40,650.0
Sodium	100,000.0	39,150.0
Calcium	760.0	16,860.0
Potassium	1,800.0	7,260.0
Bromide	62.5	5,120.0
Sulfate	14,308.0	470.0
Bicarbonate	300.0	220.0

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