



A service of the National Library of Medicine
and the National Institutes of Health

My NCBI
[\[Sign In\]](#) [\[R\]](#)

All Databases PubMed Nucleotide Protein Genome Structure OMIM PMC Journals

Search PubMed for

Limits Preview/Index History Clipboard Details

Display Abstract Show 20 Sort by Send to

About Entrez
NCBI Toolbar

Text Version

Entrez PubMed

Overview
Help | FAQ
Tutorials
New/Noteworthy
E-Utilities

PubMed Services

Journals Database
MeSH Database
Single Citation Matcher
Batch Citation Matcher
Clinical Queries
Special Queries
LinkOut
My NCBI

Related Resources

Order Documents
NLM Mobile
NLM Catalog
NLM Gateway
TOXNET
Consumer Health
Clinical Alerts
ClinicalTrials.gov
PubMed Central

1: [J Cosmet Sci.](#) 2003 Mar-Apr;54(2):175-92.

[Related Articles, Links](#)

Effect of mineral oil, sunflower oil, and coconut oil on prevention of hair damage.

[Rele AS](#), [Mohile RB](#).

Research and Development Department, Nature Care Division, Marico Industries Ltd., Mumbai, India.

Previously published results showed that both in vitro and in vivo coconut oil (CNO) treatments prevented combing damage of various hair types. Using the same methodology, an attempt was made to study the properties of mineral oil and sunflower oil on hair. Mineral oil (MO) was selected because it is extensively used in hair oil formulations in India, because it is non-greasy in nature, and because it is cheaper than vegetable oils like coconut and sunflower oils. The study was extended to sunflower oil (SFO) because it is the second most utilized base oil in the hair oil industry on account of its non-freezing property and its odorlessness at ambient temperature. As the aim was to cover different treatments, and the effect of these treatments on various hair types using the above oils, the number of experiments to be conducted was a very high number and a technique termed as the Taguchi Design of Experimentation was used. The findings clearly indicate the strong impact that coconut oil application has to hair as compared to application of both sunflower and mineral oils. Among three oils, coconut oil was the only oil found to reduce the protein loss remarkably for both undamaged and damaged hair when used as a pre-wash and post-wash grooming product. Both sunflower and mineral oils do not help at all in reducing the protein loss from hair. This difference in results could arise from the composition of each of these oils. Coconut oil, being a triglyceride of lauric acid (principal fatty acid), has a high affinity for hair proteins and, because of its low molecular weight and straight linear chain, is able to penetrate inside the hair shaft. Mineral oil, being a hydrocarbon, has no affinity for proteins and therefore is not able to penetrate and yield better results. In the case of sunflower oil, although it is a triglyceride of linoleic acid, because of its bulky structure due to the presence of double bonds, it does not penetrate the fiber, consequently resulting in no favorable impact on protein loss.

PMID: 12715094 [PubMed - indexed for MEDLINE]

Display | Abstract

Show 20

Sort by

Send to



[Write to the Help Desk](#)

[NCBI](#) | [NLM](#) | [NIH](#)

[Department of Health & Human Services](#)

[Privacy Statement](#) | [Freedom of Information Act](#) | [Disclaimer](#)

Dec 22 2005 16:39:56