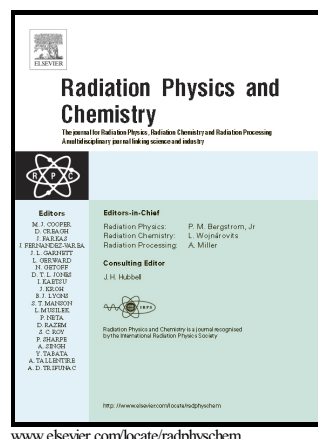


Author's Accepted Manuscript

Irradiated lanoline as a prospective substance for biomedical applications: A spectroscopic and thermal study

Zuzana Hanzlikova, Peter Hybler, Marko Fülöp, Jan Ondruska, Klaudia Jomova, Maria Porubska, Marian Valko



PII: S0969-806X(15)00166-8
DOI: <http://dx.doi.org/10.1016/j.radphyschem.2015.04.028>
Reference: RPC6795

To appear in: *Radiation Physics and Chemistry*

Received date: 8 April 2015
Revised date: 27 April 2015
Accepted date: 29 April 2015

Cite this article as: Zuzana Hanzlikova, Peter Hybler, Marko Fülöp, Jan Ondruska, Klaudia Jomova, Maria Porubska and Marian Valko, Irradiated lanoline as a prospective substance for biomedical applications: A spectroscopic and thermal study, *Radiation Physics and Chemistry*, <http://dx.doi.org/10.1016/j.radphyschem.2015.04.028>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Revised manuscript

Irradiated lanoline as a prospective substance for biomedical applications: a spectroscopic and thermal study

Zuzana Hanzlikova^a, Peter Hybler^b, Marko Fülöp^b, Jan Ondruska^a, Klaudia Jomova^a,

Maria Porubská^a, Marian Valko^{c,*}

^a*Faculty of Natural Sciences, Constantine the Philosopher University in Nitra, SK-949 74 Nitra, Slovakia*

^b*University Centre of Electron Accelerators in Trenčín, Slovak Medical University, Limbová 12, SK-833 03 Bratislava, Slovakia*

^c*Faculty of Chemical and Food Technology, Slovak University of Technology, SK-812 37 Bratislava, Slovakia*

Received:

* Author for correspondence:

Marian Valko

Department of Physical Chemistry

Faculty of Chemical and Food Technology

Slovak Technical University

SK-812 37 Bratislava

Slovakia

Tel.: +421-2-593 25 750 (land line); Tel.: +421-903467742 (mobile) Fax: +421-2-524 93 198

E-mail: marian.valko@stuba.sk;

HIGHLIGHTS

- We propose that irradiated lanoline is a substance suitable for medicinal applications
- To emulate the sterilization, lanoline was irradiated with accelerated electron beam
- Aliphatic esters and ethylene sequences (CH₂)_n with n ≥ 4 were found to be the most stable species following radiation exposure
- A trace amount of organic-in origin free radicals was observed following radiation in dose-dependent manner

ABSTRACT

Refined wool wax products, such as lanoline and lanoline derivatives are key ingredients in some of the ointments, cosmetics, pharmaceuticals, waterproof coatings and other products. Beneficial

Download English Version:

<https://daneshyari.com/en/article/8252951>

Download Persian Version:

<https://daneshyari.com/article/8252951>

[Daneshyari.com](https://daneshyari.com)