

Author's Accepted Manuscript

Influence of ionizing radiation on the stability of clarithromycin antibiotics

Issam Ben Salem, Mohamed Mezni, Mohamed Amine Khamassi, Afef Lagha, Fawzi Hosni, Mouldi Saidi, Haitham Sghaier



PII: S0969-806X(17)30260-8
DOI: <https://doi.org/10.1016/j.radphyschem.2017.10.014>
Reference: RPC7673

To appear in: *Radiation Physics and Chemistry*

Received date: 28 February 2017
Revised date: 11 September 2017
Accepted date: 27 October 2017

Cite this article as: Issam Ben Salem, Mohamed Mezni, Mohamed Amine Khamassi, Afef Lagha, Fawzi Hosni, Mouldi Saidi and Haitham Sghaier, Influence of ionizing radiation on the stability of clarithromycin antibiotics, *Radiation Physics and Chemistry*, <https://doi.org/10.1016/j.radphyschem.2017.10.014>

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.

Influence of ionizing radiation on the stability of clarithromycin antibiotics

Issam Ben Salem^{1*}, Mohamed Mezni², Mohamed Amine Khamassi¹, Afef Lagha⁴, Fawzi Hosni,⁵ Mouldi Saidi¹ and Haitham Sghaier¹

¹ Laboratory of Biotechnology and Nuclear Technology, National Centre for Nuclear Science and Technology (CNSTN), Sidi Thabet Technopark, 2020 Ariana, Tunisia, (phone: (+216)71537410 ; fax: (+216)71537555.

³ Laboratory of Natural Substances, National Institute of Research and Physico-chemical Analyses, Biotechnopole of Sidi Thabet, Ariana, 2020, Tunisia. (phone: (+216)71537666; fax: (+216)71537688

⁴ Division of and Technological Developpement, SAIPH Pharmaceutical Industry. Zaghouan, Phone: (216) 79 397 020, Fax: (216) 79 397 035,

*E-mail: issam.bensalem@cnstn.rnrt.tn

Mohamed Mezni : mezni.mohamed@gmail.com

Mohamed Amine Khamassi: Mohamed.amine.khamassi@cnstn.rnrt.tn

Afef Lagha: a.lagha@saiph.com.tn

Fawzi Hosni: faouzi.hosni@cnstn.rnrt.tn

Mouldi Saidi: m.saidi@cnstn.rnrt.tn

Haitham Sghaier: Sghaier.haitham@cnstn.rnrt.tn

Abstract

The growing interest centered on treatment of pharmaceuticals by ionizing radiation arises from the clear advantages this process offers compared to other methods of sterilization. In this study, the effect of ionizing radiation on clarithromycin (CLA) powder commercially named Zeclar® was investigated. The analysis by HPLC confirms the stability of Zeclar® potency at 2, 5 and 25 kGy and no degradation products were observed. The anti-microbial assays revealed that the activity of irradiated clarithromycin at 2 and 5 kGy did not reduce against *Staphylococcus aureus* ATCC 6538, *Streptococcus B* (*Streptococcus agalactiae*)

Download English Version:

<https://daneshyari.com/en/article/8251709>

Download Persian Version:

<https://daneshyari.com/article/8251709>

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