

Full Paper

## Voltammetric Study of the Antihistamine Drug Bilastine: Anodic Characterization and Quantification Using a Reusable MWCNTs Modified Screen Printed Carbon Electrode

Jorge Ginja Teixeira , João Oliveira

First published: 08 November 2020 | <https://doi.org/10.1002/elan.202060494>

### Abstract

The anodic behaviour and the electroanalytical quantification of the second-generation antihistamine bilastine (BIL) were investigated for the first time. A multi-walled carbon nanotubes (MWCNTs) film-coated screen printed carbon electrode (SPCE), as well as cyclic (CV) and linear sweep (LSV) voltammetry, were used for that purpose. The results showed that BIL undergoes an irreversible two-electron oxidation process at the MWCNTs-SPCE sensor. It was also found that the sensor can be reused after a simple and rapid reconditioning procedure. The proposed method was applied to the quantification of BIL in pharmaceutical formulations and spiked urine samples, and good recoveries were obtained.

### Open Research

#### Data Availability Statement

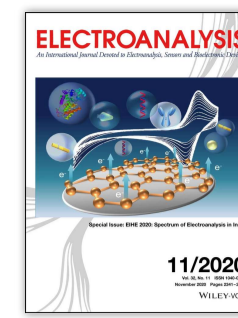
The data that support the findings of this study are available from the corresponding author upon reasonable request.

### Supporting Information

As a service to our authors and readers, this journal provides supporting information supplied by the authors. Such materials are peer reviewed and may be re-organized for online delivery, but are not copy-edited or typeset. Technical support issues arising from supporting information (other than missing files) should be addressed to the authors.

Filename	Description
elan202060494-sup-0001-misc_information.pdf 1.5 MB	Supplementary

Please note: The publisher is not responsible for the content or functionality of any supporting information supplied by the authors. Any queries (other than missing content) should be directed to the corresponding author for the article.



[Early View](#)

Online Version of Record before inclusion in an issue



Related



Information

### Metrics

### Details

© 2020 Wiley-VCH GmbH

### Keywords

Antihistamine Bilastine  
Multi-walled carbon nanotubes (MWCNTs)  
Screen printed carbon electrode (SPCE)  
Voltammetric determination.

### Publication History

**Version of Record online:**

23 November 2020

**Accepted manuscript online:**

08 November 2020

**Manuscript accepted:**

07 November 2020

**Manuscript received:**

22 September 2020

[Download PDF](#)

[About Wiley Online Library](#)

[Help & Support](#)

[Opportunities](#)

[Connect with Wiley](#)

[Privacy Policy](#)

[Contact Us](#)

[Subscription Agents](#)

[The Wiley Network](#)

[Terms of Use](#)

[Advertisers & Corporate Partners](#)

[Wiley Press Room](#)

[Cookies](#)

[Accessibility](#)

Copyright © 1999-2020 John Wiley & Sons, Inc. All rights reserved