

Information on Doctoral thesis of Fellows Tran Quang Hai

1. Name of PhD. candidate: Tran Quang Hai
2. Sex: Male
3. Date of birth: April 17, 1973
4. Place of birth: Ha Nam
5. Admission decision number: 5429/QD-SDH signed by President of VNU
6. Changes in academic process: None
7. Official thesis title: Quantification of selected pharmaceutical compounds using adsorptive stripping voltammetric methods
8. Major: Analytical Chemistry;
9. Code: 62 44 29 01
10. Supervisors: Prof.Dr. Tu Vong Nghi

Assoc.Prof.Dr. Duong Quang Phung

11. Summary of the new findings of the thesis

- Successfully developed the solid phase extraction protocol of using HLB to quantify ofloxacin and cefadroxil in urine samples by the differential pulse voltammetric method and the adsorptive stripping voltammetric method.
- Successfully applied the differential pulse voltammetric method and the adsorptive stripping voltammetric method for quantitative analysis of urine samples of patients treated with ofloxacin and cefadroxil. Results showed that the drugs are mostly excreted without undergoing further transformation.
- Confirmed that metronidazole and chlorpheniramine maleate in once introduced into the body and metabolized could not be by the voltammetric method.

12. Practical application:

- Findings from this thesis can be served as the foundations for the development of analytical procedures for quantifying pharmaceutical compounds using the voltammetric method. Application of this method could significantly save cost and analytical time for bioavailability and bioequivalence assessments of pharmaceutical compounds, enhancing the safe and effective use of pharmaceuticals in Viet Nam.

13. Potential research directions, if any:

Differential pulse voltammetric method and adsorptive stripping voltammetric method can be used for quantitative analysis of antibiotics in patients' urine and blood samples.

14. Thesis-related publications:

[1]. TranQuangHai, Duong Quang Phung, Tu Vong Nghi, (2011) " Study of the detamination of cefaclor by differential pulse voltammetric method using a hanging mercury dropping electrode (HMDE)", *VietNam Journal of Chemistry* T. 49 (2ABC), pp. 258-263.

[2]. TranQuangHai, Duong Quang Phung, TuVongNghi, (2012), Study of the detamination of cefaclor by the Adsorptive stripping voltammetry method (AdSV) using a hanging mercury dropping electrode (HMDE)", *Chemical Industry magazine* (4), pp. 31-36.

[3]. TranQuangHai, Duong Quang Phung, TuVongNghi, HaVanDung, (2012), "Investigation on determination of cefadroxil in antibiotic drug by differential pulse voltammetric method" *Journal of Sciences & Technology, HaNoi University of Industry* (9), pp. 34-38.

[4]. TranQuangHai, Duong Quang Phung, TuVongNghi, (2013), "Investigation on determination of cefadroxil in antibiotic drug by adsorptive stripping voltammetry method", *Journal of Analytical Sciences* 18(1), pp. 9-13.

[5]. TranQuangHai, Duong Quang Phung, TuVongNghi, (2013), "Investigation on determination of metronidazol in pharmaceutical by differential pulse voltammetric method", *VietNam Journal of Chemistry* 51(2C), pp. 915-919.

[6]. TranQuangHai, Duong Quang Phung, TuVongNghi, (2013), "Investigation on determination of cefadroxil in human urine by adsorptive stripping voltammetry method", *Journal of Analytical Sciences* 18(2), pp. 43-47

[7]. TranQuangHai, Duong Quang Phung, TuVongNghi, (2013), "Investigation on determination of cefaclor in human urine by adsorptive stripping voltammetry method", *Journal of Sciences & Technology, HaNoi University of Industry* (15), pp. 15-18.