



**Chemistry Conference for Young Scientists**  
**Blankenberge, Belgium**

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# **BOOK OF ABSTRACTS**

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## Analytical and Environmental Chemistry: Oral communications

Session 1 (21/02/2018 - 14:30)

**Swati Chandrawanshi - Pt. Ravishankar Shukla University**

*Determination of nitrate by using ion-pair single-drop micro extraction (SDME) method with the attenuated total reflectance -Fourier transform infrared (ATR-FTIR) technique*

**Liselotte Neven - University of Antwerp**

*Detection of specific DNA sequences by photoelectrochemistry*

**Mathijs Baert - Ghent University**

*Investigating the potential for improved temperature responsive separations in liquid chromatography*

**Ravindra Hegade - Ghent University**

*Enhanced resolution of stereoisomers through Stationary phase optimized selectivity liquid and supercritical chromatography (SOS-LC and SOS-SFC)*

**Brecht Laforce - Ghent University**

*The Herakles 3D X-ray scanner: a novel tool for lab-based 3D analysis*

Session 2 (22/02/2018 - 08:30)

**Monica Hernandez Rodriguez - Universidad de Oriente**

*Evaluation of activation parameters of activated carbon from coffee and cocoa seed husk rests: carbon yields and Ni(II) adsorption capacity study*

**Myrthe Van Hal - University of Antwerp**

*Harvesting energy from air pollution with an un-biased gas phase photo-electrochemical cell*

**Camille Gaulier - Vrije Universiteit Brussel**

*The geochemical behaviour of trace metals in the surface water of the Belgian Coastal Zone*

**Adrian Frank Herbort - Universität Koblenz-Landau**

*Removal of Inert Organic Chemical Stressors (IOCS) from Wastewater by Adding Innovative Hybrid materials - Wasser 3.0*

Session 3 (22/02/2018 - 10:10)

**Saranya Thiruvottriyur Shanmugam - University of Antwerp**

*Wireless electrochemical sensor for on-site detection of ecstasy*

**Monika Strozynska - SAS Hagmann GmbH**

*A new derivatisation reaction for perfluorocarboxylic acids prior to GC/MS analysis*

**Ivan Bezruk - National University of Pharmacy**

*Using of the HPLC method for quantitative determination of active pharmaceutical ingredients in the process of the industrial synthesis*

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## Using of the HPLC method for quantitative determination of active pharmaceutical ingredients in the process of the industrial synthesis

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Quality of medicines depends from many factors. One of the main and defining is quality of its components and first of all active pharmaceutical ingredients (API).

Manufacturers, who plan to develop API synthesis, have to carry out scientific researches, which would allow optimizing production process for providing quality of substances and the quality of the medicine as a whole. Epilepsy is a neurological disease that affects about 9 people per thousand of population throughout the world. Nowadays, dibenzylamide of malonic acid (Dibamk) is one of the most promising substances that have anticonvulsant effect.

Developing of simple in using methods for analysis of the dibamk with needed effectiveness is necessary condition for possibility for medical application of the API. Also manufacturer should development methods of controlling the entry of starting substances (specifically benzyl amine and diethyl malonate) in the API for ensuring quality of the drug.

The "ProStar" Varian liquid chromatograph was used in the study. The chromatography was conducted in the following conditions: Waters XBridge® C18 column (150mm × 4.6 mm, 3.5 mm particle size); mobile phase A - phosphate buffer solution with pH 5.5 and mobile phase B □ acetonitrile; the gradient program for chromatography was as follows: time (min) /%; mobile phase A: 0/90; 2/90→35; 5/35; 9/35→90; 12/90; flow rate - 1.2 ml/min; column temperature — 25 °C; detection was performed at the wavelength of 254 nm; injection size — 50µL; run time — 15 min. In the specified conditions the retention time of main substance is about 8 minutes.

The HPLC method of quantitative determination of dibamk is a reliable and simple method with proper specificity. Therefore, it can be recommended for use in controlling of the yield of the product in the process of industrial synthesis as well as for the quantitative content of API in the substance.