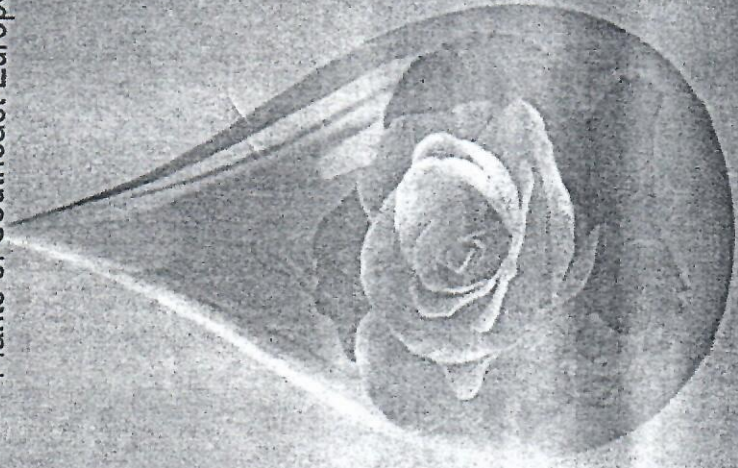


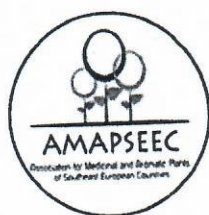


9th CMAPSEEC

Conference on Medicinal and Aromatic
Plants of Southeast European Countries



26-29 May 2016
Plovdiv, Bulgaria



**9th Conference on Medicinal and Aromatic Plants of
Southeast European Countries**

26 – 29 May 2016, Park Hotel Imperial
Plovdiv, BULGARIA

BOOK OF ABSTRACTS

<http://cmapsccc2016.cim.bg/>

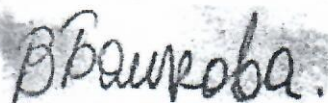
Dear 9th CMAPSEEC Participants,

I am honoured to welcome you on behalf of the Organizing Committee of the 9th Conference on Medicinal and Aromatic Plants of the Southeast European Countries. Traditionally, the Conferences of the Association for Medicinal and Aromatic Plants of the Southeast European Countries gather scientists, professionals and representatives of companies working in the exciting field of medicinal and aromatic plants not only from Southeastern Europe but also from many countries all over the world. This meeting is a great opportunity to share research results, new approaches and ideas, views and visions for the development of the application of medicinal and aromatic plants for the benefit of society. It is also a celebration of human curiosity and endeavour to explore Nature.

We know that there are many conferences to choose from these days and budgets are always tight, so we are glad to have a significant number of abstracts submitted, and we are happy to have you all here, in the beautiful historical city of Plovdiv.

We hope that you will enjoy the scientific program and the social events, meet old friends and make new ones!

Welcome to the 9th CMAPSEEC 2016!



Vassya Bankova, PhD, DSc
Chair of the Organizing Committee

**9th Conference on Medicinal and Aromatic Plants of
Southeast European Countries**
26 – 29 May 2016, Plovdiv

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President of the Bulgarian Phytochemical Society
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INVESTIGATION OF HEAVY METALS CONTENT IN FREQUENTLY UTILIZED MEDICINAL PLANTS COLLECTED FROM THE POWER PLANT AREA

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The effectiveness of medicinal plants is mainly associated with their active constituents, but one of the major quality problems frequently encountered is their high heavy metals content that can be associated to extensive pollution of the environment where medicinal plants grow. Therefore the aim of this research was to evaluate the content of Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb, Zn and As in selected and frequently used medicinal plants, including chicory, broadleaf, common comfrey and dandelion.

The plant material was collected from their wild habitats in the area of highly developed power plant activity.

Plant analyses were done according to ICP methodology, using ICAP 6300 ICP optical emission spectrometer.

The obtained results showed that the content of As, Cd, Co, Mn, Ni and Zn in the investigated medicinal plant species was below the maximum allowable concentration, while in all parts of all studied plants the concentration of Cr was toxic. The toxic concentrations of Cu were determined in root and aerial parts of chicory and common comfrey, and the toxic concentrations of Fe in root and aerial parts of dandelion and broadleaf plantain, and in aerial parts of common comfrey. However, high but not toxic content of Pb was found in aerial parts of chicory.

It can be concluded that medicinal plants from the studied growing site are not appropriate for use in alternative medicine and that a determination of heavy metals content in these plants must become a standard criterion for evaluation of their quality