International Journal of Secondary Metabolite: Vol. 1, Issue 1(Special Issue-Abstracts), June 2014, pp. 4.

ISSN:2148-6905 online Journal homepage: http://www.ijate.net/index.php/ijsm

The Comparative Analysis of Phenolic Compounds Accumulation in Leaves of Various Kinds of Kalanchoe

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Key words: phenols, *Kalanchoe*, antioxidants, ammetric and chemiluminescence methods

One of actual problems of modern pharmacology is creation of new medicines on the basis of vegetable raw materials. In this plan some succulents present a great interest in particular some kinds of the genus Kalanchoe, such as Kalanchoe pinnata (*K.pinnata*) and Kalanchoe Daigremontiana (*K.daigremontiana*). Their leaves contain useful mineral salts, organic acids and the numerous phenolic compounds (PC). Education and accumulation of these PC depends on genetic features of a plant and numerous factors of environment. Besides, these representatives of a secondary metabolism cause biological, including antioxidant activity (AOA) of this or that species of a plant, that is ability its component to inhibit oxidizing free radical processes. Use of modern methods of antioxidant properties research for plant extracts or juice of this or that plant allow to study and reveal their medicinal value at higher level.

In the present work the comparative analysis of measurement results of the total phenols content and their activity in leave juice of various kinds of Kalanchoe (*Kalanchoe* L.) is carried out by ammetric and chemiluminescence methods for the purpose of identification among them the most active producers of phenol metabolites. Objects of research were juice samples of 34 kinds of the genus Kalanchoe, grown up in a succulent collection in Timiryazev Institute of plant physiology RAS (Moscow, Russia). Among the studied samples two most active from the point of view of their antioxidant properties Kalanchoe kinds: *K.scapigera* and *K.rhombopilosa* are revealed. Both methods show considerably higher values of the phenol metabolite content in leave juice of these plants and their AOA in comparison with *K.pinnata* and *K.daigremontiana*. For possible expansion for use of specified types of Kalanchoe as sources of biologically active compounds, additional researches of biochemical structure, antibacterial, antimicrobic and other properties of these plant components is necessary. Probably, they will appear more perspective for their use in pharmacy and medicine.

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This study was presented at 2nd International Symposium Secondary Metabolites Chemistry, Biology and Biotechnology, 19-23 May 2014, Moscow