

Amount of natural products and total alkaloid substances in fruit, root and leaves of *Physalis alkekengi*

HABIBEH ZARE

Department of Biology, Payame Noor University, Bushehr (Iran).

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ABSTRACT

This study is examined the role of alkaloids in pharmacist plant (*Physalis alkekengi*) and equilibrium of alkaloids in various growth parts of leaves, stem, root and production parts of fruit. Effective factors mingled in synthesis of alkaloids, that the most important of them is reading of amino acids (like phenyl alanine, triozin, lycin, triptophan) and also towart and matasion. The most important alkaloids are like morphins, codeins and afdrin. For searching alkaloids one can used Mayer and Dragendorff introducer in one percent acid solution of coloridric acid. The amount of production in root is measured more than that in fruit and leaves.

Key words: Natural products, Total alkaloids, *Physalis alkengi*.

INTRODUCTION

Physalis alkekengi L. belongs to the family Solanaceae. *Physalis* is a herbaceous plant with 20-60 cm height that grows wildly on calcareous grounds of European areas and some parts of Asia like Iran.

Chemical composition

The fruit of this plant have some kinds of acids like ascorbic acid, citric acid and sugar. A bitter alkalodian material named physaline is found in its fruit, leaves and root. It is noted that the amount of vitamin C in the fruit of this plant is two times of lemon juice.

Curing properties

The fruits of this plant has medromeline impact. Its leaves, stem and flower cup, strong bitter and have properties of blood filtration medicine. It can cure urine acid and urine sediments (Calcium oxalate and ocsalafes). It is extracted as a substance named cryptoxathin from its fruit and flowed that is a colourful carotenoidic material with similar characteristics as vitamin A.

Role of Alkaloids

Alkaloids play an importnat role in maintaining plant, because they have bitter taste and are toxic in nature. Herbivorous animals avoid consuming it. It is immune to pathogens and insects. Such characteristics are the regulating factors of this plant. They destroy superfluous materials like uric acid. The solution is placed in a shaker for 2 hours. This solution is clarified by a multilayer clean cloth under its system. After that it was put under 50-60°C temperature. Then it was taken out and the volume of solution was reduced to 15cc by chloroform. Then with 15 ml tartaric acid in decouner, we extract 2% alkaloid solution. Then, it was alkalize by 25% solution of ammonia under air cleaning system and kept constant its pH=9. Again, the solution was reduced to 20 ml by chloroform, which was evaporated in water bath.

Growth characteristics of this plant is a stem with sharp pointed elliptical periodical leaves and long leaves, and its production characteristic it that their flower appear during Khaordad and Shahrivas. They appear solitary on the stem and have a short tailed flower on the top. Pistil consists

of two space ovary and after ripening the fruit becomed red and it is enclosed in a red screen (persistent calyx). The screen resulted from growing and joining of flower cup.

Findings

With due to attention to that alkaloids make milk white and orange sediment invicinity of Mayer and Dragendorff introductrs, they are used to define the existence of alkaloids in various parts of *Physalis alkekengi*. Total amount of alkaloids in proportion to ML in 5 used sample is obtained. The with calculating by proportion percentage amount of alkaloids which is existent in each part is obtained 15 cc glacial acefic acid is added to each earlen and put for 10 minutes to allow alkaloids to become dissolved in it. Then 3 drops of crystal and ule introducer are added to each earlen. And they titrate with 0/05 normal perchloric acid after titration the color of crystal and ule convert from violet to blue or green.

MATERIALS AND METHODS

For searching alkaloids we can use Meyer and Dragendorff introducer to distinct the existence of alkaloids in acid solution(with 1% coloridric acid) their existence is proven by forming sediment.

Method of measuring and extracting alkaloids as whole

First, it is mixed with 5 gram of leaves, stem, fruit and roots powder with 25 ml solution of ammonia in an erlen. After 1 H 5 minutes 3.ml chloroform measurement of pharmaceutical effects of colocythis extract on aleppo boil lesion in human.

Physical characteristics of alkaloids

Alkaloids are often odourless and colorless and they are bitter and unevapovated. Some of them are colorful like kelshicine that is yellow and kanadine that is orange

Effective factors and materials in synthesis of alkaloids

Various factors effect on synthesis of alkaloids that among them readiness of Aminoacids like (phenylanine, Tyrozin, Tryptophan), geographical situation in heritage and mutation are important.

Pharmacological properties of alkaloids

Some of alkaloids like morphin and codoien are soporific, anti coughing and antipain. Some others like sterkin and brousins are inciter of central nervous system. Some of them like efedrin cause high blood pressure. In general , alkaloids have extended physiological effects on various nervous system of human and animals body. Finally, it was concluded that uric acid is harmful for plants.

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