STIMULATORS PROVIDING PLANT GERMINATION AND DEVELOPMENT BASED ON QUINAZOLIN-4-ONE

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Annotation: The simplest complex compounds found in living organisms are complexes of metals with amino acids. The amino acid in them acts as a dentate ligand. These compounds, by their nature, form five-membered and membered complex compounds.

Key words: more economically useful, and the development, growth.

INTRODUCTION

Complex compounds occupy an important place in the life of flora and fauna. For a long time, scientists have been interested in studying biochemical processes in plant, animal and human bodies. As a result of long-term research, by the end of the 19th century, all chemical compounds were divided into two groups: one of these was called atomic compounds and the other was named molecular (or complex) compounds. Later, the first types of compounds are called first-order compounds, and the second type are called higher-order compounds.

Substances such as Higher-order compounds are formed as a result of the interaction of a simple compound with another simple compound, and later, relatively stable higher-order compounds were called complex (coordination) compounds. A coordination compound is a compound whose molecule or ion has an ion or atom in the center, which is surrounded by several ions or molecules, that is, ligands. A complex compound tends to maintain its independence even in solutions, and dissociates into ions. If the positive charge of the central ion is greater than the sum of the negative charges of the ligands surrounding it, such a complex is a cation complex, if the charge of the central ion is less than the sum of the charges of the surrounding ligands, then the anion complex is the sum of the charges of the ligands with the charge of the central ion. If the difference between the indices is zero, it is called a neutral complex. For example, chlorophyll, a substance found in the green part of plants and

carrying out photosynthesis, is a coordination compound of magnesium, and blood hemoglobin, a substance that provides oxygen to living cells, is a coordination compound of iron. Coordinating compounds are formed by combination, exchange, oxidation-reduction reactions. Today, due to the treatment of many soils with mineral substances, the alkalinity or acidity of the soil is increasing[1-10].

Methods and results

Obtaining herbicides, dyes, plant growth enhancers, stabilizers is an important task today. The urgent problem of today is the synthesis of mineral substances necessary for the growth and development of plants, to increase their productivity. These synthesized substances are more effective than other synthesized substances, the synthesis methods are also fast, less expensive, that is, more economically useful, and the development, growth, and productivity of plants are a little faster.

The simplest complex compounds found in living organisms are complexes of metals with amino acids. The amino acid in them acts as a dentate ligand.

These compounds, by their nature, form five-membered and membered complex compounds.

Quinazolin-4-one and its homologues are of theoretical and practical importance among all heterocyclic compounds, and these compounds have high physiologically active properties among heterocyclic compounds, therefore, these compounds are used as herbicides, dyes, plant growth enhancers, stabilizers, used in obtaining [11-15].

In our earlier works, we have organized the alkylation reactions of quinazolin-4-one, -thiones and their homologues and their effects on plant and animal organisms.

We aimed to obtain stabilizers, which is an important task today, and to study their effect on the growth and development of plants.

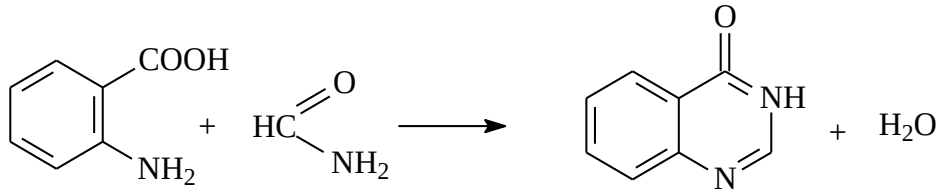
Experimental part.

1. Synthesis of quinazolin-4-one.

0.2 mol of anthranilic acid and 0.2 mol of formamide are placed in a round-bottomed flask.

The reaction mixture was refluxed at 150°C for 1 hour in Woodda alloy, then cooled to room temperature. When placed in cold water, white crystals formed, filtered, dried, recrystallized in alcohol.

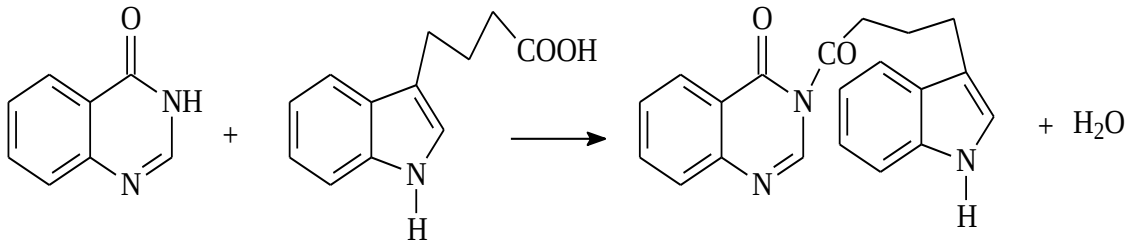
The reaction takes place as follows.



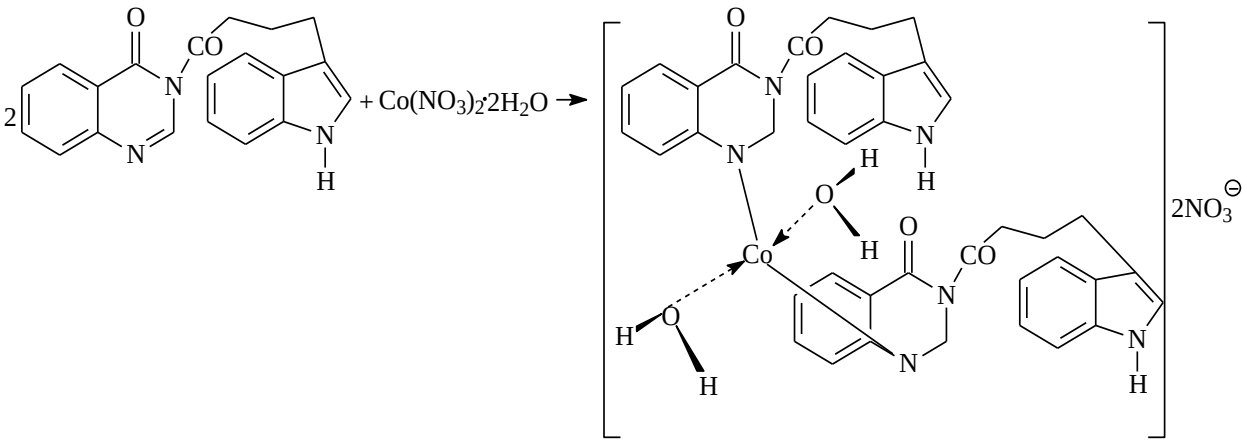
2. The effect of quinazolin-4-one with 3-indolyl butyric acid.

0.2 mol of quinazolin-4-one and 0.2 mol of 3-indolyl butyric acid are placed in a round-bottom flask.

The reaction mixture was refluxed in a water bath at 80°C for 3 h, then cooled to room temperature. When placed in cold water, yellowish crystals were formed, filtered, dried, and recrystallized in alcohol.



Coordination compound formation of N³-indolylcircaquinazolin-4-one with cobalt II-nitrate. The reaction product of 0.2 mol of quinazolin-4-one with 3-indolyl butyric acid and 0.1 mol of cobalt II-nitrate was added to a porcelain mortar and mixed with a mixer for 3 hours. Every 10-15 minutes of mixing, the surroundings of the porcelain mortar and the mixer are cleaned. The compound formula can be expressed as follows. It was established that this compound has the property of growing plants.



CONCLUSION

Obtaining biologically active substances, which is an important task today, and studying their effect on the growth and development of plants, test works were carried out on various plant varieties.

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