



## METHODS FOR OBTAINING A COORDINATION COMPOUND OF NICKEL (II)-NITRATE WITH INDOLE ACETIC ACID AND STUDYING THEIR BIOLOGICAL PROPERTIES

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| Article history:                                                                                                                                                                                             | Abstract:                                                                                                                                                                                                                                  |
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| <b>Received:</b> February 1 <sup>st</sup> 2022<br><b>Accepted:</b> March 1 <sup>st</sup> 2022<br><b>Published:</b> April 14 <sup>th</sup> 2022                                                               | The method of obtaining has been studied methods for obtaining a coordination compound of nickel nitrate with indole acetic acid and studying their biological properties, biologic activity of different varieties of cotton was studied. |
| <b>Keywords:</b> The method, coordination compound, nickel nitrate, indole acetic acid, biological properties, biologic activity, varieties of cotton, formula of the combination, cis- formula, trans- case |                                                                                                                                                                                                                                            |

### INTRODUCTION

The division of all chemical compounds into so-called simple, or atomic, and complex, or molecular ones was outlined, outlined after the creation of the doctrine of valence and the introduction of Butlerov's structural concepts into chemistry. The fundamental ideas about the properties and structure of complex compounds were introduced in 1893 by Alfred Werner. On the basis of the coordination theory he created, a lot of definitions of complex compounds were proposed: O. E. Zvyagintsev expressed the opinion that the presence of a central atom in them should be emphasized in the definition of complexes [1-6].

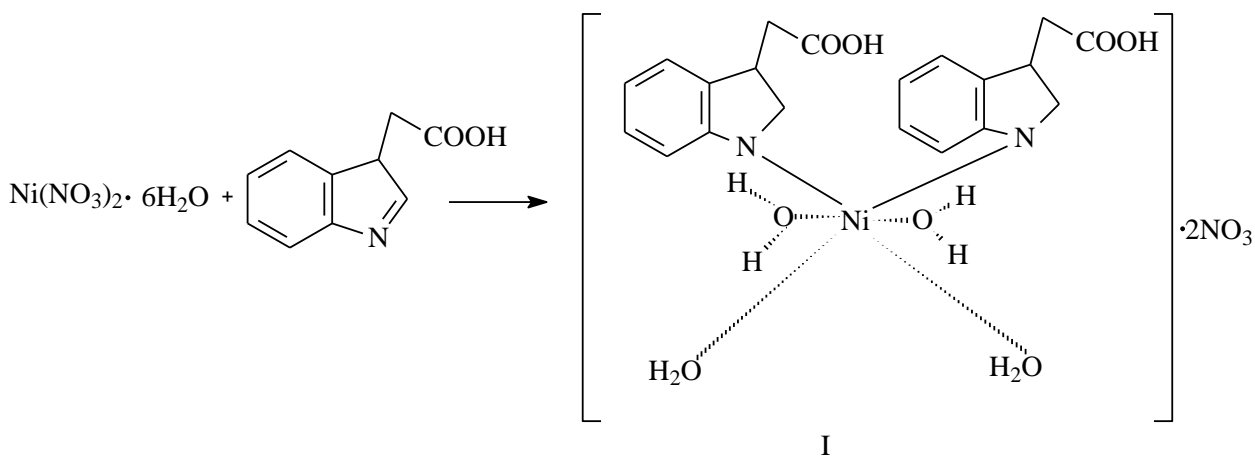
O. Gein in his monograph calls complex compounds as a special case of higher-order compounds, Calvin and Martel call a complex or coordination compound the product of a combination of a metal with an electron donor. B. F. Ormont considers complex compounds to be those compounds in whose solutions the concentration of ions that make up the complex ion is vanishingly small compared to the concentration of the latter. Mendeleev writes that it is impossible to separate molecular compounds from atomic ones, because, first

of all, it is not possible to establish a limited atomicity of elements, and the strength of compounds is a changeable matter to the point that it is impossible to put a sharp boundary between strong and non-strong compounds. Thus, having brought together all the definitions proposed above and some others, the following concept can be introduced; Complex compounds are certain molecular compounds whose components combine to form positively and negatively charged complex ions capable of existing both in a crystal and in solution. A special case of such a charge may be zero [7-9].

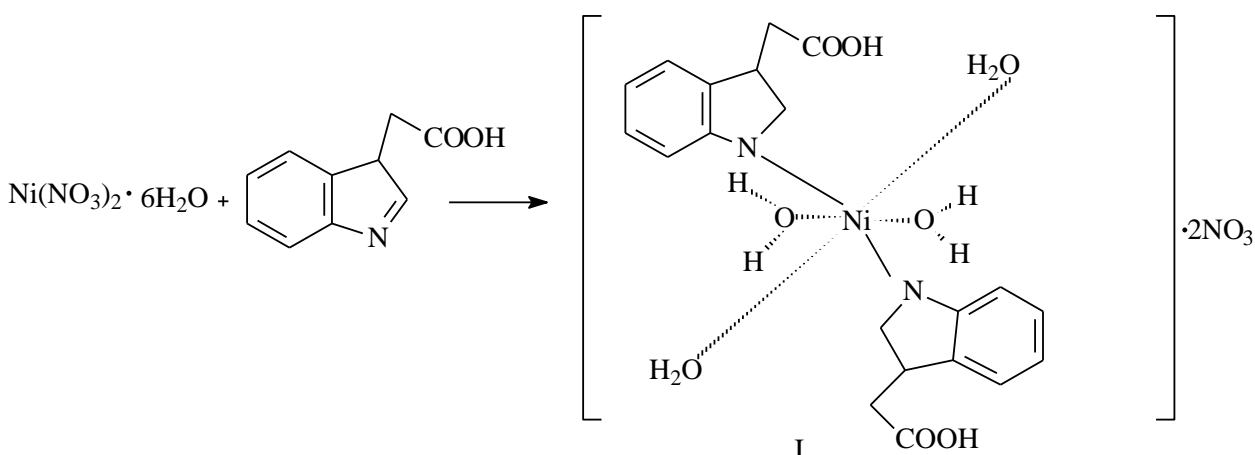
### THE EXPERIMENTAL PART

Nickel (II)-obtaining a coordinate combination of nitrate with 3-indole acetic acid.

0,2 moles 3-indolyl acetic acid 0,1 moles nickel (II)-nitrate heksagidrat porcelain is mixed mechanically for 3 hours with a mixer in a mortar. The ingredients being mixed are cleaned every 10-15 minutes by scraping around the porcelain mortar and the mixer. The formula of the combination can be expressed as follows.



From the *trans*- formula, the complex is expressed in the form. The resulting coordinate combination can be expressed as follows in the *trans*- case.



## RESULTS

Our expected results in the experiment are a technique from the following stages.

1. As a result of the experiment, I was able to prepare 2,5% and 5% li solutions of the product in distilled water.
2. From 10 grains of gooseberry" buxoro-102", "soaked-77", the seeds were soaked for 5 hours and 10 hours in a 2,5% solution.
3. From 10 grains of cereals gooseberries" buxoro-102", "namangan-77", seeds were soaked for 5 hours and 10 hours in a 5% solution.

The effect of the resulting I substance on the germination of seeds.

Seeds were placed in a thermostat in a turret petri dish at an equal distance and 1 sample of 10 pieces, total 5 petri dish. Temperature 27°C, humidity level 40%. For 5 hours, the ripening processes were observed in 2,5% solution compared to the ripening processes in 10% solution, for 5 hours, the ripening processes were observed in 5% solution compared to 10 hours in 10%

solution. The speed of growth of the roots was carried out in this way.

It is believed that if the seeds are planted in the tubers for 2,5 hours in 5% solution to the hanging wire of the root, it is desirable to count.

## CONCLUSION

Nickel is one of the trace elements necessary for the normal development of living organisms. However, little is known about its role in living organisms. Nickel is found in higher and lower plants.

There is very little information about the biological role of nickel. It is assumed that the biological role of nickel is to participate in the structural organization and functioning of the main cellular components – DNA, RNA and protein. Along with this, it is also present in the hormonal regulation of the body and provide cells with oxygen.

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