

عنوان مقاله:

The Effect of Chloramphenicol on Atropine and Scopolamine Contents in Datura Stramonium L

محل انتشار:

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خلاصه مقاله:

Background & Aims: In regard to the importance of atropine and scopolamine as medicines with natural source, this study was aimed to investigate the effect of chloramphenicol as an inhibitor of protein synthesis on the alkaloids content of Datura stramonium. **Method:** After initial preparation of medicinal garden seeds, they were planted 5 cm apart in four different sections. Three different concentrations of chloramphenicol (100, 200 and 400 ppm) were sprayed on the plant once a week for a period of 18 weeks. Water was applied for the control group. Replicate samples were taken randomly every two weeks from each section. After extraction and separation of the samples, the quantitative analyses were carried out. The levels of atropine and scopolamine were determined using UV spectroscopy (13 CNMR, UV, IR, Mass). **Results:** The maximum levels of alkaloids were observed in young stems of the plants. The best result was obtained following applying the concentration of 200 ppm, which caused a significant increase in atropine and scopolamine levels in all parts of plant by 100% and 110% respectively in comparison with the control group ($p < 0.05$). **Conclusion:** Increase in the availability of amino acids may lead to an increase of alkaloids production following protein inhibition synthesis

کلمات کلیدی:

Atropine, Scopolamine, Datura stramonium, chloramphenicol

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