ANNOTATION
of report on Research Practice of a two-year student, group BT-51m
specialty 8.05140101 - Industrial Biotechnology
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on the topic «Selection of purification methods of recombinant proteins in plants»

Report on Research Practice outlined in 25 pages of printed text. The report consists of an introduction, two chapters, conclusions, list of references and contains 7 figures and 1 table.

In the report on Research Practices are listed sections:

1. Review of the literature on "Selection methods of purification of recombinant proteins in plants";
2. Experimental part.

The introduction proved the relevance of the chosen topic of the research, described the goal of practice and its problems.

The object of the research was transgenic carrot (Dáucus caróta) with gene GFP-6His.

In the research work were used materials and methods that allow you to identify and clear the reporter protein GFP.

The main result is the determination of the concentration of the purified GFP by measuring optical density test sample (GFP); determining values of fluorescence for different concentrations of the GFP drug; obtaining an extract of total proteins carrots; separation protein of plant lysates by electrophoresis in PAG; visualization of reporter GFP on gels under ultraviolet light and staining dye Coomassie brilliant; obtaining purified protein preparations from PAG (elution of proteins from gel); production of purified GFP drugs from the leaves and carrot via metal-affinity chromatography; selection of optimal conditions of determining the concentration of GFP reporter by method of fluorescence spectroscopy.

According to the results of research practice made the following conclusions:

1. Was constructed a standard curve of fluorescence values for different concentrations of the drug GFP.
2. Processed method of determining amount of protein according to values of GFP fluorescence of the drug.
3. The obtained preparations of purified GFP from the roots and leaves by simple separation of the proteins in the gel and column chromatography with Ni-NTA-agarose.
4. The level of reporter protein accumulation in the leaves and carrot.
5. Established the advantages and disadvantages of the purification of recombinant proteins by simple separation of the proteins in the gel and chromatographic column of Ni-NTA-agarose and the need to further optimize the cleaning protocol.