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DESCRIPTION OF ORGANIC SUBSTANCES IN THE ROOTS OF TURPA BRASSICA RAPA L.1753 FAMILY

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ANNOTATION:

This article discusses the health benefits of medicinal plants and the properties of alkaloids and nitrogen compounds.

Keywords: plant, medicinal substance, radish, alkaloid, root, nitrogenous compounds.

INTRODUCTION:

Humanity has long used medicinal plants in the treatment of various diseases. It has been proven in the literature that plants and their derivatives have a positive effect on the human body, without causing additional complications compared to synthetic drugs. It should be noted that, along with medicinal substances, plants contain a large number of various chemical elements, which together have high biological activity and a mechanism of action on the body.

In this regard, Uzbekistan is one of the leaders in the supply of various vegetables and fruits to the world market. The Fergana Valley is a region in which a variety of fruits and vegetables are grown in favorable climatic conditions, where there is a need to study the chemical composition of vegetables and fruits grown in accordance with international standards and certificates. Therefore, the analysis of the content of biologically active substances and chemical elements in plants is one of the most pressing problems today.

Alkaloids and nitrogen compounds:

The following alkaloids and nitrogenous substances were found in the radish root: pyrrolidine, phenethylamine, N-methylphenethylamine, 1,2-pyrrolidin-3-yl-3-acid-carboxyl-1,2,3,4-tetrahydro-p-carboline, i sinapine [3, 4,5], cytokine (6-benzylamino-9-glucosylpurine) relative to the main metabolite of 6-benzylaminopurine (6-BAP). A small amount of the VAP metabolite was identified in the radish as 6-benzylamino-3-pD-glucopyranosylpurine [6]. The amount of crude amino acids in dry weight is 0.5%; proline (0.5%) was identified as the main component, methionine and cystine as traces (0.02%). Found in the form of 1,6-hexanediamine (1,6-D). When the radish grows, thymine is a powder [7]. The total protein content is 6.5% [8].

Two chitinases, RRC-A and RRC-B, were isolated from radish root. Both substances with a molecular weight of 25 kDa [3] inhibited the activity of N-bromocynimide and di-Et-

pyrocarbonatic chitanase, and arabinogalactan proteins (AGP) were found in primary and ripe radish veins. They are mainly composed of L-arabinose and D-galactose. The structure of the carbohydrate fragment is similar to the structure of the root and seed leaves in the root, and it is linked in the following order (1-3) -linked chains in the pD-galactosyl chain, with the largest number of chains (1-6) -linked PD-galactosyl residue attached to him on the outside floor. The main root of AGP is the presence of a large amount of fucose [1], PerezGutierrez and Perez: Raphanussativus (Radish). A glycoprotein containing two radish leaf extracts separated by L-arabino-D-galactan; both met with L-arabinose, D-galactose, L-fucose-4-O-methyl-D-glucuronic acid and D-glucuronic acid. Degradation Based on the degradation of the glycoconjugate, the large polysaccharide chain is conjugated to the conjugated polypeptide via the 3-OD-galactosylserine bond [11]. -Arabinofuranosyl-containing [12]. The S-allele line of stigmatic glycoproteins (S-glycoprotein) is identified in R Sativus. Two major glycoproteins were identified in the SDS-gel electrophoretic scheme. Tests show that their molecular weight is 15,000 and 100,000, respectively. The carbohydrate fraction in the glycoprotein consists mainly of 17.3% arabinose, 19.1% galactose, 8.1% xylose, 5.4% mannose, 23.7% glucose and 26.4% rhamnose or fucose. Studies have shown that in the upper layer of the diffuse stigma of R. sativus, the protein content is 16%, and carbohydrates - 11% [13].

Two isoprotein ferredoxins have been identified in R. sativusacanthiformis, indicating that the plant contains multiple ferredoxin genes.

Coumarins:

Mainly identified are hydroxycoumarins, esculetin and scopoletin [1].

Enzymes:

A number of enzymes have been identified in the cytoplasm as well as in the cell walls, some of which have been shown to be isolated from the cytoplasm in the cell wall [1].

If radishes are grown in the dark, p-fructosidase (PF) first accumulates in the cytoplasm and then slowly multiplies in the cell wall. Charged heterogeneous cytoplasmic enzymes are present in polypeptides and in the cell wall due to post-translational modification, which is inhibited by tunicamycin [2].

Cysteine synthase (ES 4.2.99.8) is purified to a homogeneous state (275 times). At baseline temperature [2], based on purified p-galactosidase (P-galase), a purified polypeptide with a molecular weight of 45 kDa, maximum active pH 4.0 relative to p-nitrophenyl-pD-galactoside and p-1,3-linked galactobiose.

It is an isoenzyme from the seeds of arabino-3,6-galactan-long to P-galase-resistant p-amylase [3], together with peroxidase or paraperoxidase. Hydroxycinnamoyltransferase (ES 2.3.1.-) is isolated from radish, which is catalyzed by inv. Provides the formation of 2-di-O-sinapoyl-pD-glucose. Indicates the activity of spermatozoa 1-O-acyl-glucose-glycacyltransferase, 1-sinapoyl-glucose: L-malate-sinapoyltransferase (SMT) and 1-(hydroxycinazole) gly (hydroxycinnamoyl) Glucose-hydroxylcinnamoyltransferase is the cause of unwanted solutes .

High activity of lung tumors was observed in L-malate-synapoyltransferase and low activity in glucose-hydroxyl-cinnamoyl-transferase 1- (hydroxycinnamoyl), while low activity was observed in L-malate synapoyltransferase grown in the dark and high activity of glycroxin transferase. 1 indicated in [2]. Two cationic isoperoxidases (Cl and C3) and four anionic isoperoxidases (Al, A2, A3n, and A3) are derivatives of the Korean radish R. sativus L. The root is separated, all six

isoperoxidases are glycoproteins, one polypeptide chain. The molecular weights of Cl, C3, Al and A2 are about 44,000, while the anionic isoperoxidases A3n and A3 have molecular weights of 31,000 and 50,000, respectively. The return of the amino acid to the N-terminus was found in Al, A3n and C3, so A2 had a blocked end [2].

During the hydrolysis of the two main C3 N-glycans, it was shown that the nuclein-fucosylated trimnosylchitobiose-specific binding is an α-1,6-native N-binding oligosaccharide from the main representative [2]. The first is protein, the second is non-protein [3], PF is an isocyte (glycoprotein) found in the cytoplasm of radish and cell walls.

The glycosylated cytoplasmic form and the PF of the cell wall have the same molecular weight, but in the glycosylated form. The sensitivity of oligosaccharides differs from amannosidase and endoglycosidase [1], 7-glucoside de zeatin, a substitute for p-glucose in the form of a glycoside, contained in radish seeds. Purine derivatives are more glucosylated, but adenine derivatives are mainly glucosylated in an alkylated chain with a length of at least three carbon atoms in the N6 state [2].

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