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Research on the content of hydroxycinnamic acids in leaves of *Actinidia arguta* Lindl.

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Introduction. The fruits of *Actinidia arguta* Lindl. have been used in traditional Chinese medicine for centuries. Many varieties of actinidia are cultivated as valuable edible plants (kiwifruit) in Ukraine. When growing fruit and berry crops, the focus is generally on fruits, whereas the leaves, as a rule, have no use. However, the leaves of *A. arguta* accumulate hydroxycinnamic acids (HCAs), which are valuable biologically active substances with a wide spectrum of biological activity [1].

The aim of this study was to detect and define the quantitative content of hydroxycinnamic acids in 18 cultivars of *A. arguta* leaves collected at M.M. Gryshko National Botanical Garden (Kyiv).

Methods. Light microscopy (trinocular microscope ULAB XSP-146T, camera Canon EOS 550 DSLR), UV spectrophotometry (Szimadzu UV-1800), high-performance liquid chromatography (HPLC Agilent Technologies 1200), and high-performance thin-layer chromatography (HPTLC CAMAG analytical system) were all used in this research. The investigation of the character of the localization of HCAs in the *A. arguta* leaves was carried out by light microscopy after reaction on cross sections of petiole and central vein of the leaf with nitrite-molybdenum reagent [2]. The objects of the study were fresh and dried leaves from female and male plants of 18 cultivars of *A. arguta*.

Results. According to the results of histochemical reactions in the *A. arguta* leaves, the formation of an intense brick-red color was observed in idioblast cells. The total content of HCAs in *A. arguta* leaves by UV-spectrophotometry was in the range from 1.51±0.04% to 2.69±0.13%. In our chromatographic research, the peculiarities of the accumulation of chlorogenic, caffeic, p-coumaric, trans-ferulic, sinapic, and trans-cinnamic acids during the growing season in the leaves of *A. arguta* were also noticed.

Conclusions. Leaves of *A. arguta*, as cultivated in Ukraine, are a promising source for obtaining extracts with a high content of HCAs, which require future research on their pharmacological activity.

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References:

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