

COMPARATIVE PHYTOCHEMICAL STUDIES ON THE PRESENCE AND QUANTIFICATION OF VARIOUS BIOACTIVE COMPOUNDS IN THE THREE MAJOR ORGANS OF OKOHO PLANT (*CISSUS POPULNEA* GUILL & PERR) IN BENUE STATE NORTH CENTRAL NIGERIA, WESTERN AFRICA

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ABSTRACT

Phytochemical studies were carried out on the leaf, stem and root of *Cissus populnea* used by the Idoma people of North Central Nigeria as soup seasoner to determine the presence and abundance of various bioactive compounds. The various plant parts were collected from five(5) different locations in Ai-kwu Otukpa in Ogbadibo Local Government Area of Benue State, Nigeria. The plant parts, the leaf, stem and root were dried at room temperature, ground into fine powder to increase their surface area and subjected to series of phytochemical analysis. SPSS software package (20.0 version) was used where descriptive statistics, correlation matrix, non parametric statistics and comparison of means using the T-test were carried out. Percentages of all the mean values of the various phytochemicals were calculated. Line of mean plot, simple line plot, box plot, area plot and radar plot were also made. Results showed high saponins content in the leaf (44.46%), followed by anthraquinone (39.63%). The stem and the root also contain large amount of alkaloids, saponins, flavonoids and tannins. However, the alkaloids content in the stem was highest, with 51.84%. It was followed by flavonoids(17.44%), saponins(15.42%), and tannins(13.29%). Similarly there was high amount of flavonoids(43.48%), alkaloids(28.95%), tannins(12.29%) and saponins (11.32%) in the root. However, Chi-square, Wallis Test and comparison of two means (T-test) revealed no significant difference in the mean values of the phytochemicals across the plant parts at 95% confidence limit.

Keywords: *Cissus populnea*, phytochemical, root, stem, leaf.