

World Congress on

MASS SPECTROMETRY AND ANALYTICAL TECHNIQUES

September 19-20, 2018 Singapore

Quantification of selected heavy metals in chewable part of *Chata edulis* from Gurage zone, Ethiopia

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Fresh chewable part of khat leaf samples were collected from three woredas of the zone namely 'Cheha', 'Ezha' and 'Ene'. All the collected samples were transported to Wolkite University chemistry laboratory using PE plastics. The sample was air dried and grinded to powder size. Then the powdered *Chata edulis* sample was digested using the optimized microwave digestion method. The concentration of five heavy metals (Mn, Zn, Pb, Cd and Cr) in the digested and diluted solutions of khat was analyzed with FAAS and GFAAS. Among those metals, Mn and Zn were the most abundant heavy metals. Moreover, the concentrations of toxic metals Cu, Pb and Cd in the studied *Chata edulis* leaves were too low to be detected. The order of metal mean concentration in mg/kg is Mn>Zn>Cu=Cr=Cd. Thus, the concentration of Mn (21.55 to 23.78 mg/kg), Zn (19.93 to 323.26 mg/kg), Cd, Cr and Pd were not detected. Finally, the overall results of this study implies that, there were no significant variations in the level of Mn between the *Chata edulis* samples, but there was significance difference between the khat samples of the three district for Zn metal. The variation may be attributed due to deferent factors such as age of the harvested khat, geographical and climatic variation, deference in physicochemical nature of the soil and deferent agricultural practices among khat cultivars.

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