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## Characterization of honey in terms of physicochemical parameters and trace heavy metals, Amhara region

Esubalew Adugna and Ariaya Hymetea  
Addis Ababa University, Ethiopia

The qualities of Ethiopian, Amhara region, multifloral honey samples were evaluated for moisture content, pH, free acidity, lactonic, total acidity and trace heavy metals. The values for quality parameters were in range of moisture content, 14.56-19.20%, pH, 4.50-4.80, free acidity, 33.33-42.60 meq Kg<sup>-1</sup>, lactonic acidity, 8.43-10.86 meq Kg<sup>-1</sup> and total acidity, 44.19-51.06 meq Kg<sup>-1</sup>. The concentration of trace heavy metals (Cr, Cu, Mn, Ni, Pb and Zn) were also evaluated using flame atomic absorption spectrometer after wet digestion. The contents of trace metals in honey samples were in the range of 0.15-6.66 µg g<sup>-1</sup>, 0.02-0.32 µg g<sup>-1</sup>, 0.36-7.29 µg g<sup>-1</sup>, ND, ND-2.53 µg g<sup>-1</sup> and 9.96-14.62 µg g<sup>-1</sup> for Cr, Cu, Mn, Pb and Zn, respectively. The accuracy of the method was assessed by spiking honey samples with known amounts of standard metals, and examining recovery. The analytical data showed a significant difference in honey trace heavy metal concentrations and studied physicochemical parameters. The results obtained were in agreement with data reported in other literatures.

### Biography

Esubalew Adugna has completed his master's at the age of 24 years from Addis Ababa University, School of Pharmacy. He is a lecturer now at the Department of Pharmaceutical Chemistry and Pharmacognosy. He has worked as a researcher focusing on analytical method validation, trace level environment contaminant determination, and quality evaluation of pharmaceutical product using simple analytical methods since 2012. In addition, he is a member and chairperson of Research, Publication, and Professional Development Committee of Ethiopian Pharmaceutical Association (EPA).

esubalew.adugna@aau.edu.et

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