



Effect Of Water Quality on The Overall Character of Honeybush Tea Infusions

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Abstract

Cyclopia spp. are used to produce honeybush tea, a traditional South African herbal tea. Improper brewing, the water-to-leaf ratio, and water composition, among other factors, can affect the taste of a cup of tea. In South Africa, water is a scarce commodity, with water from different regions within South Africa and different sources varying in quality (pH and mineral content). The effect of potable water quality from different sources (n = 6) on the sensory quality and physicochemical properties of honeybush infusions was investigated.

Samples of 'fermented' *C. genistoides* (n = 6), *C. intermedia* (n = 6) and *C. subternata* (n = 6), varying in quality, were used to prepare the infusions. The different waters used for this study were the following: Distilled water, still spring water (pH = 5; SSW5), still spring water (pH = 8; SSW8), Stellenbosch tap water treated with reverse osmosis (RO), brackish water and Stellenbosch tap water. Descriptive sensory analysis was conducted to determine the difference in the sensory profile of the infusions, where all samples in the sample set were infused with each of the waters. Physicochemical measurements included CIELab colour values (L*, a*, b*, C* and h* parameters), turbidity (NTU) and soluble solids (g/L) of infusions, and pH and mineral content of the different water samples.

The results indicated that infusions prepared with SSW8 and brackish water gave darker atypical coloured infusions. For these infusions, irrespective of *Cyclopia* spp. new aroma, flavour and mouthfeel attributes, not typical of honeybush infusions, were observed. Infusions prepared with SSW8 had an aroma and flavour associated with date pudding prepared with a high amount of bicarbonate of soda, as well as an uncharacteristic 'thick' mouthfeel. Infusions prepared with brackish water had a salty taste, while infusions prepared with the remaining waters (distilled, SSW5, RO and Stellenbosch tap water) had very similar aroma and flavour profiles.

In conclusion, poor water quality would negatively affect the sensory and physicochemical properties of honeybush infusions.

Biography: Helene van Schoor

Helene van Schoor obtained her BSc Food Science degree in 2019 from the University of Stellenbosch. She is currently completing her MSc Food Science degree also at the University of Stellenbosch, working with the Agricultural Research Council (ARC). Her research focuses on the quality of honeybush tea, by looking at factors which could potentially affect it.