

Bitou Honeybush Tea Aug 2020

Cyclopi blends

Sensory quality of commercially
processed batches



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1) Introduction

The characteristic sensory profile of honeybush tea results from ‘fermentation’, a high temperature oxidation process (Du Toit & Joubert, 1999). Optimum processing time/temperature regimes have been established for *C. genistoides*, *C. subternata*, *C. maculata* and *C. longifolia* (Erasmus, Theron, Muller, Van der Rijst, & Joubert, 2017), as well as *C. intermedia* (Bergh, Muller, Van der Rijst, & Joubert, 2017) for maximum development of characteristic aroma notes of tea infusions. The characteristic sensory profile of fermented honeybush tea was previously defined as ‘fynbos-floral, woody, fynbos-sweet aroma with a sweet taste and slightly astringent mouthfeel’.

2) Materials and methods

2.1 Infusion preparation

Infusions of samples were freshly prepared before serving according a standardised protocol, as described by Erasmus *et al.* (2017), which were representative of ‘cup-of-tea’ strength: 1000 g freshly boiled distilled water was poured onto 12.5 g of the plant material and allowed to infuse for 5 min before straining through a fine-meshed strainer directly into a 1 L pre-heated stainless steel thermos flask. White porcelain tasting mugs were pre-heated in an industrial oven at 70°C before ca. 100 mL aliquots of each infusion were poured into the mugs and covered with plastic lids to prevent loss of volatiles.

2.3 Evaluation

Samples were evaluated by three assessors, and perception of aroma, flavour, taste and mouthfeel attributes are summarised in Table 1. The newly developed *fermented honeybush tea quality scorecard* was used as basis for evaluation.

3) Results

A summary of the evaluation of samples is presented in Table 1.

Date evaluated: 26 August 2020

Table 1: Evaluation of Bitou honeybush samples

Sample	Attribute	Description
<i>C. subternata-C. longifolia</i> blend 1.8 mm cut Product code: BHF60(20) C. sub : C. lon = 60 : 40	Dry leaf appearance	Even cut Stem acceptable
	Infusion turbidity	Clear Almost no sediment visible
	Infusion colour	Red-brown
	Aroma	High floral aroma with fynbos-floral, rose geranium and rose perfume notes perceptible. A very floral tea. High fruity and sweet aroma with raisin, fynbos-sweet and caramel notes Low spicy and nutty notes Low woody aroma
	Flavour and taste	High overall character Balanced in positive flavours, sweet taste and astringency Barely perceptible hay/dried grass with no bitter and no sour taste perceptible No taints perceptible
Summary	High quality tea, overall character very good, high intensities of floral, fruity and sweet notes with no taints	
<i>C. subternata-C. longifolia</i> blend 2.3 mm cut Product code: BHF60(20) C. sub : C. lon = 60 : 40	Dry leaf appearance	Even cut Stem acceptable
	Infusion turbidity	Clear Almost no sediment visible
	Infusion colour	Light red-brown
	Aroma	Moderate floral aroma with fynbos-floral notes perceptible

		Moderate fruity and sweet aroma with raisin, fynbos-sweet and caramel notes Low spicy and nutty notes Low woody aroma
	Flavour and taste	Overall character good Balanced in positive flavours, sweet taste and astringency Low hay/dried grass flavour with no sour taste but slight bitter taste perceptible. Slight dusty note perceptible
	Summary	Good quality tea, overall character good with floral, fruity and sweet aroma and flavour. Similar to the 1.8mm blend but only slightly lower in intensity of positive attributes with slight bitter taste and barely perceptible dusty note.

4) Conclusions

The *C. subternata* / *C. longifolia* blend (1.8 mm cut) was regarded as a high quality blend. The floral aroma associated with rose geranium and rose perfume were very prominent, making this an excellent tea. The intensity of the positive attributes were slightly lower in the *C. subternata* / *C. longifolia* blend (2.3 mm cut) and a slight bitter taste and dusty aroma were perceived in this blend.

5) References

- Bergh, A. J., Muller, M., Van der Rijst, M., & Joubert, E. (2017). Optimisation and validation of high-temperature oxidation of *Cyclopia intermedia* (honeybush) – From laboratory to factory. *South African Journal of Botany*, 110, 152–160. <https://doi.org/10.1016/j.sajb.2016.11.012>
- Du Toit, J., & Joubert, E. (1999). Optimization of the fermentation parameters of honeybush tea (*Cyclopia*). *Journal of Food Quality*, 22(3), 241–256.
- Erasmus, L. M., Theron, K. A., Muller, M., Van der Rijst, M., & Joubert, E. (2017). Optimising high-temperature oxidation of *Cyclopia* species for maximum development of characteristic aroma notes of honeybush herbal tea infusions. *South African Journal of Botany*, 110, 144–151. <https://doi.org/10.1016/j.sajb.2016.05.014>