



TotallyNaturalSolutions
aromas & flavours to inspire

Certificate of Analysis

CERTIFICATE OF ANALYSIS

Customer:	Selected Brewing Ingredients	Order #:	Pieter van Rooij
Product:	HopAlpha Tetra (9%)	Reference:	SO2136
Quantity:	20 x 5kg Net, 2 x 20kg net	Lot Number:	TF03
Production Date:	January 2019		

<u>Parameter</u>	<u>Specification</u>	<u>Actual</u>
Appearance	A golden-yellow aqueous solution	OK
Aroma	Characteristic hop aroma	OK
Tetra-hydro-iso- α -acids (THIAA) via HPLC	9.0 +/- 0.3 % w/w	8.85 % w/w
Area Purity via HPLC	>85 %	94.3 %
pH (standard solution)	8.5 – 11.0	10.8
pH (1% solution)	>9.0	10.0
Density	1.020 \pm 0.010 kg/L	1.020
Haze (1% w/w solution in deionised water, EBC 9.16)	<0.5 EBC Units	Conforms
Legal requirements	Conforms to Codex Alimentarius	

Method: EBC 7.9 using ICS-T3

Recommended storage conditions:

Store in a cool, dry place, avoiding exposure to direct sunlight.

In ambient conditions (10 – 25°C)	2 Year after packaging
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Certificate issued by:
Simon Boulden
Operations Manager
For and on behalf of Totally Natural Solutions Limited

Date: April 2019