



## CERTIFICATE OF ANALYSIS

CUSTOMER NAME:  
**Lupulino, CZ**VARIETY:  
**Centennial**CROP YEAR: SALES ORDER NUMBER:  
**2021 V83324**NET WT (kgs):  
**160****Description**

Hop Pellets are produced from raw hops and can be added to the kettle to provide bitterness and a hop character that is indistinguishable from that achieved using raw hops. Hop Pellets provide improved homogeneity, better storage stability and reduced storage/transport costs compared to raw hops.

**Storage**

Hop Pellets should be stored cool at 0 – 5 °C (32 - 41 °F). Pellets are best used within 3 years after processing. If stored at –20 °C (-4 °F), pellets should be used within 5 years. Foils, once opened, use within a few days.

**Chemical Analysis**

| <u>Characteristic</u> | <u>Analysis Result</u> | <u>Method</u>           |
|-----------------------|------------------------|-------------------------|
| Alpha Acids           | 9,4 %                  | ASBC Spectrophotometric |
| HSI                   | 0,305                  | ASBC Spectrophotometric |
| Oil Content           | 1,9 ml/100g.           | ASBC Hops-13            |
| Alpha Acids           | 8,6 %                  | EBC 7.4 LCV             |
| Moisture              | 9,2 %                  | ASBC Hops-4C            |

**FOIL MARKS:**

CROP 2021  
CENTENNIAL  
5-KG / 11-LB NET  
BATCH NO. I-11168-1

**CARTON MARKS:**

CROP 2021  
CENTENNIAL TYPE 90 PELLETS  
ALPHA 9,4% ASBC SPECTRO  
SUPPLIER/PELLETISOR:  
JOHN I. HAAS, INC.  
DATE OF PELLETIZING: DEC 2021  
BATCH NO. I-11168-1  
20-KG / 44-LB CARTON (4 X 5-KG / 11-LB FOILS)  
MADE IN THE USA

Pesticide residues are monitored in hop products under our new BarthHaas Quality Control Guarantee.  
For more information on this program, please visit our website at, [www.BarthHaas.com](http://www.BarthHaas.com).

**Released By:**

Cheryl Kroll, Pellet Plant

**Signature:****Date:**

December 13, 2021

**Additional Information:**

Batch No: I-11168-1

Grower Lot Nos.: 21-WA302-018  
21-WA346-005

Manufactured by John I. Haas, Inc., a member of the BarthHaas Group. 1600 River Rd., Yakima, WA 98902 Telephone: (509) 469-4000



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