



## Certificate of analysis

John I Haas, Inc.  
1600 River Road  
Yakima, WA 98902  
USA  
1(509) 469-4000

Certificate of analysis	ICA005418		
Product name	EL DORADO® LUPOMAX® BULK-INT PELLETS US	Crop year	2025
Raw hop batches	25-ID113-036,25-ID113-015,25-ID113-016	Production date	15-Dec 2025
Finished good batch	PE04984	Best before date	15-Dec 2030

### Notes

Type	Description	Note
CoA Note	Product Description	LupoMax® 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.
CoA Note	Storage	LupoMax® Pellets should be stored cool at 0 – 5 °C (32 - 41 °F). Pellets are best used within 5 years after processing. Foils, once opened, should be used within a few days to avoid deterioration of bitter acids and essential oils.
CoA Note	HACCP Statement	Composite product sample tested for heavy metals and lead on annual basis per John I. Haas HACCP program to ensure compliance with the specification.
CoA Note	Pesticide Statement	Pesticide residues are monitored in hop products under our BarthHaas Quality Guarantee.

Test	Unit	Test value	Reference method
HSI	--	0.324	ASBC Hops-12
Total Oil	mL/100g	2.6	ASBC Hops-13
Beta-pinene	%	0.7	ASBC Hops-17
Caryophyllene	%	8.4	ASBC Hops-17
Citronellol	%	0.1	ASBC Hops-17
Farnesene	%	0.5	ASBC Hops-17
Geraniol	%	0.4	ASBC Hops-17
Humulene	%	10.9	ASBC Hops-17
Limonene	%	0.3	ASBC Hops-17
Linalool	%	0.7	ASBC Hops-17
Myrcene	%	48.4	ASBC Hops-17
Nerol	%	1.9	ASBC Hops-17
Moisture Oven	%	7.6	ASBC Hops-4C
Alpha, Spectro	%	18.0	ASBC Hops-6A
Beta, Spectro	%	7.8	ASBC Hops-6A
Manufacturing Target	%	18.0	Calculated

Release by	Date
Andrea de la Garza, QC Manager	December 18, 2025 12:01:38 PM