



Certificate of analysis

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

Certificate of analysis	ICA005234		
Product name	AZACCA® ADHA 483 C.V. LUPOCORE™ BULK-INT PELLETS US	Crop year	2025
Raw hop batches	25-WA406-103,25-WA409-143,25-WA409-141,25-WA349-025	Production date	11-Nov 2025
Finished good batch	PE04653	Best before date	11-Nov 2030

Notes

Type	Description	Note
CoA Note	Product Description	LUPOCORE™ pellets are produced from raw hops for use in the production of beer to provide bitterness and hop character. LUPOCORE™ provides a more consistent aroma and flavor than raw hops. Hop pellets provide improved homogeneity, better storage stability, and reduced storage/transport costs compared to raw hops.
CoA Note	Storage	LUPOCORE™ 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.
CoA Note	Sensory Plus	Raw hop lots and processing parameters for LUPOCORE™ are selected to guarantee year-over-year consistency in chemistry and flavor performance. Lots are selected via sensory profiling by the John I. Haas Intake Panel and held to the standards of our global Sensory Plus™ Selection Program.
CoA Note	Pesticide Statement	Pesticide residues are monitored in hop products under our BarthHaas Quality Guarantee.

Test	Unit	Test value	Reference method
HSI	--	0.284	ASBC Hops-12
Total Oil	mL/100g	1.2	ASBC Hops-13
Beta-pinene	%	0.5	ASBC Hops-17
Caryophyllene	%	13.2	ASBC Hops-17
Citronellol	%	0.1	ASBC Hops-17
Farnesene	%	0.5	ASBC Hops-17
Geraniol	%	0.1	ASBC Hops-17
Humulene	%	20.6	ASBC Hops-17
Limonene	%	0.2	ASBC Hops-17
Linalool	%	0.5	ASBC Hops-17
Myrcene	%	35.9	ASBC Hops-17
Nerol	%	0.9	ASBC Hops-17
Moisture Oven	%	7.7	ASBC Hops-4C
Alpha, Spectro	%	14.8	ASBC Hops-6A
Beta, Spectro	%	5.6	ASBC Hops-6A

Release by	Date
Andrea de la Garza, QC Manager	December 4, 2025 9:20:36 AM



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Manufacturing Target	%	14.5	Calculated
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Andrea de la Garza, QC Manager

Date

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