

**Alliance Analytical Laboratories, Inc.**

179 West Randall Street
Coopersville, MI 49404
Phone: (616) 837-7670
Fax: (616) 837-7701



Test methods marked with ^ are accredited under the laboratory's ISO/IEC 17025 accreditation issued by ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation AT-2044

TEST RESULTS REPORT

CUSTOMER MI Local Hops
5720 S Bates Road
Williamsburg, MI 49690
Phone: 1-231-360-1222
Email: alex@milocalhops.com; jason@milocalhops.com; tabitha@milocalhops.com;

SAMPLE DESCRIPTION Kitlinger Centennial
12/18/18

SAMPLE DATE 12/18/2018

DATE RECEIVED 12/19/2018

REFERENCE NUMBER 180487: 1848742

Customer PO

TEMPERATURE AT RECEIVING



| Test Requested | Test Method | Results | Ref Number | Start Date |
|--------------------------------------|-----------------------------|-----------------------------|------------|----------------|
| HOPS:Alpha and Beta Acids- ASBC 6 | | | | |
| Alpha Acids | ASBC 6 Analyst: 24 | 8.49 % | BL10:42 | 12/20 12:00 PM |
| Beta Acids | ASBC 6 Analyst: 24 | 3.54 % | BL10:42 | 12/20 12:00 PM |
| HOPS:Brewers' Quality | ^ASBC Hops-14 | | | |
| 10% Moisture Adjusted Alpha Acids | | 9.00 % | CV23:19 | |
| | Analyst: 23 | | | |
| 10% Moisture Adjusted Beta Acids | | 3.51 % | | |
| Alpha Acid | ^ASBC Hops-14 | 9.19 % | | |
| Beta Acid | ^ASBC Hops-14 | 3.58 % | | |
| Cohumulone | ^ASBC Hops-14 | 27.6 % Relative to Alpha | | |
| Colupulone | ^ASBC Hops-14 | 53.5 % Relative to Beta | | |
| Hops Storage Index | ASBC Hops-12 Analyst: 24 | 0.32 | BL10:42 | 12/20 12:00 PM |
| Moisture | ASBC Hops-4c | 8.08 % | | |
| Xanthohumol | | 0.24 % | | |

It is the customer's responsibility to evaluate the compliance of these results to any regulatory requirement.

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Reviewed and Approved by:

Audrey Monroe - Laboratory Director

Date: 12/27/2018

Date: 12/27/2018

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| | | | | |
|--------------------------|-----------------------------|----------------------------------|-------------------------------------------------------------------------------------|----------------|
| SAMPLE DESCRIPTION | | Kitlinger Centennial 12/18/18 |  | |
| SAMPLE DATE | | 12/18/2018 | | |
| DATE RECEIVED | | 12/19/2018 | | |
| REFERENCE NUMBER | 180487: 1848742 | Customer PO | | |
| TEMPERATURE AT RECEIVING | | | | |
| Test Requested | Test Method | Results | Ref Number | Start Date |
| HOPS:Total Oil | ASBC Hops-13 Analyst: 28 | 1.7 mL/100g | LL14:96 | 12/27 12:00 PM |

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