|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Honey** | **Wildflower1** | **Golden1** | **Clover1** | **Clover2** | **Clover3** | **Wildflower2** | **Alfalfa1** | **Orange1** | **Alfalfa2** | **Buckwheat1** | **Clover4** | **Orange2** | **Buckwheat2** | **Buckwheat3** | **Alfalfa3** | **Orange3** |
| **Receive date** | Apr-21 | Apr-21 | Apr-21 | Jan-22 | Sep-22 | Sep-22 | Sep-22 | Sep-22 | Apr-21 | Apr-21 | Apr-21 | Apr-21 | Feb-23 | May-23 | Feb-23 | Feb-23 |
| **Vendor** | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold | Dutch Gold |
| **Use by date** | 12/15/2023 | 3/25/2024 | 12/14/2023 | 11/22/2024 | 5/6/2024 | 5/17/2025 | 5/12/2025 | 5/12/2025 | 3/19/2021 | 2/14/2022 | 5/9/2022 | 10/9/2022 | 5/6/2025 | 5/6/2025 | 9/29/2023 | 3/23/2026 |
| **Collection location** | USA, with some contribution from Canada and Argentina from 2020 | USA, Canada and Argentina from 2020 | USA, North and South Dakota from 2020 | USA, North and South Dakota from 2020 | USA, North and South Dakota from 2021 | Aregntina, Uruguay, India during 2021-22 | USA, Wyoming | USA | USA | Midwest | USA North Dakota during 2021-22 | USA, Mexico, Brazil in 2021-22 |  |  |  |  |
|  | |
| **Floral source** | Wildflowers | Wildflower and Clover | Clover | Clover with minor input from other blossoms | Clover | Wildflowers | Alfalfa | Orange blossom | Alfalfa | Buckwheat | Clover | Orange blossom | Buckwheat | Buckwheat | Alfalfa | Orange blossom |  | |
| **Bee species** | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera | Apis Mellifera |  | |
| **Processing** | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | heated to 55 C strained through 100 mesh filter bag (raw) | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging | Flash heated to <85 C, filtered to 16 microns, and cooled to 50 C for packaging |  | |
| **Storage at provider before shipping** | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing | 6 months at room termperature before packing |  | |
| **Storage after shipping and at research location** | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC | -20 ºC |  | |
| **USDA Colour designation** | Light amber | Light amber | Dark amber | Extra light amber | Extra light amber | Light amber | Light amber | Amber | Extra light amber | Dark amber | Light amber | Light amber |  |  |  |  |  | |
| Honey from a single production was packaged in 1-pound containers for retail sale in North America was shipped directly from the supplier to our for composition testing. Within 24 hours of receipt, samples were stored at minus 20 degrees Celsius in airtight 1-pound packages. Product remained frozen until prepared for use within 10 days of removal from the freezer. | | | | | | | | | | | | | | | | | |  | |

Table S1. Sample information of tested honeys