

PROSPECTUS



ALTO INGREDIENTS, INC.

1,282,051 shares of Common Stock

This prospectus relates to the proposed resale, from time to time, of up to 1,282,051 shares of our common stock, \$0.001 par value per share, or common stock, by the selling stockholders herein. On November 7, 2022, we entered into a credit agreement, or the Credit Agreement, with the selling stockholders and other signatories thereto under which we issued to the selling stockholders an aggregate of 1,282,051 shares of our common stock. In connection with the issuance of these shares of common stock and the potential issuance of up to an additional 320,513 shares of common stock in the event we borrow up to an additional \$25 million under the Credit Agreement, we entered into a registration rights agreement with the selling stockholders, or the Registration Rights Agreement. Pursuant to the terms of the Registration Rights Agreement, we are required to register the resale of the shares of common stock issued under the terms of the Credit Agreement.

We are not selling any shares of common stock under this prospectus and will not receive any proceeds from the sale of shares of common stock by the selling stockholders. The selling stockholders will bear all commissions and discounts, if any, attributable to the sale of the shares of common stock under this prospectus. We will bear all costs, expenses and fees in connection with the registration of the shares of common stock.

The shares of common stock may be sold by the selling stockholders to or through underwriters or dealers, directly to purchasers or through agents designated from time to time. For additional information regarding the methods of sale you should refer to the section of this prospectus entitled "Plan of Distribution" on page 14.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

Our common stock is traded on The Nasdaq Capital Market, or Nasdaq, under the symbol "ALTO." On December 12, 2022, the last reported sale price per share of our common stock on Nasdaq was \$3.07.

Investing in our common stock involves substantial risks. See "Risk Factors" beginning on page 4 of this prospectus and in any other document incorporated by reference herein, for factors you should consider before buying any of our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is December 12, 2022.

TABLE OF CONTENTS

PROSPECTUS

	PAGE
ABOUT THIS PROSPECTUS	ii
CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS	iii
PROSPECTUS SUMMARY	1
RISK FACTORS	4
USE OF PROCEEDS	5
DESCRIPTION OF CAPITAL STOCK	5
SELLING STOCKHOLDERS	12
PLAN OF DISTRIBUTION	14
LEGAL MATTERS	16
EXPERTS	16
WHERE YOU CAN FIND ADDITIONAL INFORMATION	16
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	17

ABOUT THIS PROSPECTUS

This prospectus relates to the resale by the selling stockholders of up to 1,282,051 shares of our common stock, as described below under "Selling Stockholders." We are not selling any shares of common stock under this prospectus and will not receive any proceeds from the sale of shares of common stock by the selling stockholders.

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC. It omits some of the information contained in the registration statement and reference is made to the registration statement for further information with regard to us and the shares of our common stock being offered by the selling stockholders. You should review the information and exhibits in the registration statement for further information about us and the shares of our common stock being offered hereby. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed

with the SEC are not intended to be comprehensive and are qualified by reference to the filings. You should review the complete document to evaluate these statements.

You should read this prospectus, any documents that we incorporate by reference in this prospectus and the additional information described below under “Where You Can Find Additional Information” and “Incorporation of Certain Information By Reference” before making an investment decision. You should not assume that the information in this prospectus or any documents we incorporate by reference herein is accurate as of any date other than the date on the front of such document. Our business, financial condition, results of operations and prospects may have changed since those dates. You should rely only on the information contained or incorporated by reference in this prospectus filed with the SEC. We have not authorized anyone to provide you with different information and, if you are given any information or representation about these matters that is not contained or incorporated by reference in this prospectus, you must not rely on that information. We are not making an offer to sell securities in any jurisdiction where the offer or sale of such securities is not permitted.

Neither the delivery of this prospectus nor any sale made using this prospectus implies that there has been no change in our affairs or that the information in this prospectus is correct as of any date after the date of this prospectus. You should not assume that the information in or incorporated by reference in this prospectus prepared by us is accurate as of any date other than the date on the front cover of this prospectus. Our business, financial condition, results of operations and prospects may have changed since that date.

When used in this prospectus, the terms “Alto Ingredients,” “we,” “our” and “us” refer to Alto Ingredients, Inc. and its consolidated subsidiaries, unless otherwise specified. Unless otherwise stated or indicated by context, the phrase “this prospectus” refers to the prospectus.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference into this prospectus contain “forward-looking statements” and are intended to be covered by the safe harbor provided for under Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements include, among others:

- forecasts of our anticipated future results of operations, cash flows or financial position;
- statements concerning the anticipated impact of our transactions, investments, product development and other initiatives, including synergies or costs associated with our transformational initiatives, acquisitions or dispositions;
- statements about our liquidity, profit margins, tax position, tax assets, tax rates, asset values, contingent liabilities, growth opportunities, growth rates, acquisition and divestiture opportunities, business prospects, regulatory and competitive outlook, market share, product capabilities, investment and expenditure plans, business strategies, capital allocation plans and financing alternatives; and
- other similar statements of our expectations, beliefs, future plans and strategies, anticipated developments and other matters that are not historical facts, many of which are highlighted by words such as “may,” “will,” “would,” “could,” “should,” “plan,” “believes,” “expects,” “anticipates,” “estimates,” “projects,” “intends,” “likely,” “seeks,” “hopes,” or variations or similar expressions with respect to the future.

These forward-looking statements are based upon our judgment and assumptions as of the date such statements are made concerning future developments and events, many of which are beyond our control. These forward-looking statements, and the assumptions upon which they are based, (i) are not guarantees of future results, (ii) are inherently speculative and (iii) are subject to a number of risks and uncertainties. Actual events and results may differ materially from those anticipated, estimated, projected or implied by us in those statements if one or more of these risks or uncertainties materialize, or if our underlying assumptions prove incorrect. All of our forward-looking statements are qualified in their entirety by reference to our discussion of factors that could cause our actual results to differ materially from those anticipated, estimated, projected or implied by us in those forward-looking statements. Factors that could affect actual results include but are not limited to:

- the effect of the coronavirus pandemic on our overall business operations;
- the effects of competition from a wide variety of competitive providers, including decreased demand for our specialty alcohols, essential ingredients and renewable fuels and increased pricing pressures;
- fluctuations in the market prices of our products;
- the effect of inflation, including as a result of commodity price inflation or supply chain constraints due to the war in Ukraine;
- fluctuations in the costs of key production input commodities such as corn and natural gas;
- the projected growth or contraction in the markets in which we operate;
- our strategies for expanding, maintaining or contracting our presence in these markets;
- anticipated trends in our financial condition and results of operations;
- the effects of ongoing changes in the regulation of the specialty alcohols, essential ingredients and renewable fuels industries;

- our ability to effectively adjust to changes in the industries in which we compete, and changes in the composition of our markets and product mix;
- possible changes in the demand for our products, including our ability to effectively respond to either an increase or decrease in demand for specialty alcohols, essential ingredients and renewable fuels;
- our ability to successfully maintain the quality and profitability of our existing specialty alcohol, essential ingredients and renewable fuels product offerings;
- our ability to generate cash flows sufficient to fund our financial commitments and objectives, including our capital expenditures, operating costs and debt repayments;

- our ability to implement our operating plans and corporate strategies;
- changes in our operating plans, corporate strategies or other capital allocation plans, whether based upon changes in our cash flows, cash requirements, financial performance, financial position, market conditions or otherwise;
- our ability to meet the terms and conditions of our debt obligations;
- our ability to use our net operating loss carryforwards in the amounts projected;
- any adverse developments in legal or regulatory proceedings involving us;
- the effects of changes in accounting policies, practices or assumptions, including changes that could potentially require additional future impairment charges;
- the effects of adverse weather, terrorism or other natural or man-made disasters;
- adverse effects of material weaknesses or any other significant deficiencies identified in our internal controls over financial reporting; and
- other risks referenced in this prospectus.

Additional factors or risks that we currently deem immaterial, that are not presently known to us or that arise in the future could also cause our actual results to differ materially from expected results. Given these uncertainties, investors are cautioned not to unduly rely upon our forward-looking statements, which speak only as of the date made. We undertake no obligation to publicly update or revise any forward-looking statements for any reason, whether as a result of new information, future events or developments, changed circumstances, or otherwise. Furthermore, any information about our intentions contained in any of our forward-looking statements reflects our intentions as of the date of such forward-looking statement, and is based upon, among other things, existing regulatory, technological, industry, competitive, economic and market conditions, and our assumptions as of such date. We may change our intentions, strategies or plans at any time and without notice, based upon any changes in such factors, in our assumptions or otherwise.

PROSPECTUS SUMMARY

This summary highlights selected information included elsewhere in this prospectus and does not contain all of the information you should consider before buying the shares of our common stock. You should read the entire prospectus carefully, especially the "Risk Factors" section and financial statements and the related notes incorporated by reference into this prospectus, before deciding to invest in the shares of our common stock. Some of the statements in this prospectus constitute forward-looking statements. See "Cautionary Note Regarding Forward-Looking Statements." In this prospectus, the words "we," "us," "our" and similar terms refer to Alto Ingredients, Inc., a Delaware corporation, unless the context provides otherwise.

Overview

We are a leading producer and distributor of specialty alcohols and essential ingredients, and the largest producer of specialty alcohols in the United States.

We operate five alcohol production facilities. Three of our production facilities are located in Illinois, one is located in Oregon and another is located in Idaho. We have an annual alcohol production capacity of 350 million gallons, comprised of 210 million gallons of fuel-grade ethanol and up to 140 million gallons of specialty alcohols. We market and distribute all of the alcohols produced at our facilities as well as fuel-grade ethanol produced by third parties. In 2021, we marketed and distributed approximately 480 million gallons combined of our own alcohols as well as fuel-grade ethanol produced by third parties, and over 1.2 million tons of essential ingredients.

We report our financial and operating performance in three segments: (1) marketing and distribution, which includes marketing and merchant trading for company-produced alcohols and essential ingredients on an aggregated basis and third party fuel-grade ethanol sales, (2) Pekin production, which includes the production and sale of alcohols and essential ingredients produced at our Pekin, Illinois campus, or Pekin Campus, and (3) other production, which includes the production and sale of renewable fuel and essential ingredients produced at all of our other production facilities on an aggregated basis, none of which are individually so significant as to be considered a reportable segment.

Our mission is to expand our business as a leading producer and distributor of specialty alcohols and essential ingredients. We intend to accomplish this goal in part by investing in our specialized and higher value specialty alcohol production and distribution infrastructure, expanding production in high-demand essential ingredients, expanding and extending the sale of our products into new regional and international markets, building efficiencies and economies of scale and by capturing a greater portion of the value stream.

Our wholly-owned subsidiary, Eagle Alcohol Company LLC, or Eagle Alcohol, specializes in break bulk distribution of specialty alcohols. Eagle Alcohol purchases bulk alcohol from suppliers and then stores, denatures, packages and resells alcohol products in smaller sizes, including tank trucks, totes and drums, that garner a premium to bulk alcohols. Eagle Alcohol delivers products to customers in the beverage, food, and related-process industries via its own dedicated trucking fleet and common carrier.

Production Segments

We produce specialty alcohols, fuel-grade ethanol and essential ingredients, focusing on four key markets: Health, Home & Beauty; Food & Beverage; Essential Ingredients; and Renewable Fuels. Products for the Health, Home & Beauty market include specialty alcohols used in mouthwash, cosmetics, pharmaceuticals, hand sanitizers, disinfectants and cleaners. Products for the Food & Beverage markets include grain neutral spirits used in alcoholic beverages and vinegar as well as corn germ used for corn oils. Products for Essential Ingredients markets include dried yeast, corn gluten meal, corn gluten feed, corn gluten and distillers grains and liquid feed used in commercial animal feed and pet foods. Our Renewable Fuels products include fuel-grade ethanol and distillers corn oil used as a feedstock for renewable diesel and biodiesel fuels.

We produce our alcohols and essential ingredients at our production facilities described below. Our production facilities located in Illinois are in the heart of the Corn Belt, benefit from low-cost and abundant feedstock and enjoy logistical advantages that enable us to provide our products to both domestic and international markets via truck, rail or barge. Our production facilities located in Oregon and Idaho are near their respective fuel and feed customers, offering significant timing, transportation

cost and logistical advantages.

All of our production facilities are currently operating and have been operating through all of 2022. As market conditions change, we may increase, decrease or idle production at one or more operating facilities or resume operations at any idled facility.

Production Facility	Location	Annual Alcohol Production Capacity (estimated, in gallons)	
		Fuel-Grade Ethanol	Specialty Alcohol
Pekin Campus	Pekin, IL	110,000,000	140,000,000
Magic Valley	Burley, ID	60,000,000	—
Columbia	Boardman, OR	40,000,000	—

Marketing and Distribution Segment

We market and distribute all of the alcohols and essential ingredients we produce at our facilities. We also market and distribute alcohol produced by third parties.

We have extensive and long-standing customer relationships, both domestic and international, for our specialty alcohols and essential ingredients. These customers include producers and distributors of ingredients for cosmetics, sanitizers and related products, distilled spirits producers, food products manufacturers, producers of personal health/consumer health and personal care hygiene products, and global trading firms.

Our renewable fuel customers are located throughout the Western and Midwestern United States and consist of integrated oil companies and gasoline marketers who blend fuel-grade ethanol into gasoline. Our customers depend on us to provide a reliable supply of fuel-grade ethanol and manage the logistics and timing of delivery with very little effort on their part. Our customers collectively require fuel-grade ethanol volumes in excess of the supplies we produce at our facilities. We secure additional fuel-grade ethanol supplies from third-party producers. We arrange for transportation, storage and delivery of fuel-grade ethanol purchased by our customers through our agreements with third-party service providers in the Western United States as well as in the Midwest from a variety of sources.

We market our essential ingredient feed products to dairies and feedlots, in many cases located near our production facilities. These customers use our feed products for livestock as a substitute for corn and other sources of starch and protein. We sell our corn oil to poultry and biodiesel customers. We do not market essential ingredients from other producers.

Company Information

We are a Delaware corporation formed in February 2005. Our principal executive offices are located at 1300 South Second Street, Pekin, Illinois 61554. Our telephone number is (916) 403-2123 and our Internet website is www.altoingredients.com. The content of our Internet website does not constitute a part of this prospectus.

Additional information about us and our subsidiaries can be obtained from the documents incorporated by reference herein. See “Where You Can Find Additional Information.”

The Offering

Securities offered by the selling stockholders	1,282,051 shares of common stock
Terms of this offering	The selling stockholders may sell, transfer or otherwise dispose of any or all of the shares of common stock offered by this prospectus from time to time on Nasdaq or any other stock exchange, market or trading facility on which our common stock is traded or in private transactions. The shares of our common stock offered by this prospectus may be sold at fixed prices, at market prices prevailing at the time of sale, at prices related to prevailing market price or at negotiated prices.
Nasdaq symbol	ALTO
Use of Proceeds	We will not receive any of the proceeds from the sale of the shares of common stock being offered under this prospectus. See “Use of Proceeds.”
Risk Factors	There are many risks related to our business, this offering and ownership of the shares of our common stock that you should consider before you decide to buy the shares of our common stock in this offering. You should read the information contained in the “Risk Factors” section beginning on page 4, as well as other cautionary statements throughout this prospectus, before investing the shares of our common stock.

RISK FACTORS

Investing in our common stock involves significant risks. Before making an investment decision, you should consider carefully the risks, uncertainties and other factors described in our most recent Annual Report on Form 10-K, as supplemented and updated by subsequent quarterly reports on Form 10-Q and current reports on Form 8-K that we have filed or will file with the SEC, and in documents which are incorporated by reference into this prospectus.

If any of these risks were to occur, our business, affairs, prospects, assets, financial condition, results of operations and cash flow could be materially and adversely affected. If this occurs, the market or trading price of our common stock could decline, and you could lose all or part of your investment. In addition, please read “Cautionary Note Regarding Forward-Looking Statements” in this prospectus, where we describe additional uncertainties associated with our business and the forward-looking statements included or incorporated by reference into this prospectus.

USE OF PROCEEDS

All of the shares of our common stock offered by this prospectus are being registered for the account of the selling stockholders. We will not receive any of the proceeds from the sale of these shares. We have agreed to pay all costs, expenses and fees relating to the registration of the shares of our common stock covered by this prospectus. The selling stockholders will bear all commissions and discounts, if any, attributable to the resale of the shares of common stock.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 300,000,000 shares of common stock, \$0.001 par value per share, and 10,000,000 shares of preferred stock, \$0.001 par value per share, of which 1,684,375 shares are designated as Series A Cumulative Redeemable Convertible Preferred Stock, or the Series A Preferred Stock, and 1,580,790 shares are designated as Series B Cumulative Redeemable Convertible Preferred Stock, or the Series B Preferred Stock. As of December 12, 2022, there were 75,154,495 shares of common stock, 896 shares of non-voting common stock, no shares of Series A Preferred Stock and 926,942 shares of Series B Preferred Stock issued and outstanding.

Common Stock

All outstanding shares of our common stock are fully paid and nonassessable. The following summarizes the rights of holders of our common stock:

- a holder of common stock is entitled to one vote per share on all matters to be voted upon generally by the stockholders;
- subject to preferences that may apply to shares of preferred stock outstanding, the holders of common stock are entitled to receive lawful dividends as may be declared by our Board of Directors, or the Board;
- upon our liquidation, dissolution or winding up, the holders of shares of common stock are entitled to receive a pro rata portion of all our assets remaining for distribution after satisfaction of all our liabilities and the payment of any liquidation preference of any outstanding preferred stock;
- there are no redemption or sinking fund provisions applicable to our common stock; and
- there are no preemptive or conversion rights applicable to our common stock.

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. Its telephone number is (718) 921-8200.

Non-Voting Common Stock

The rights and preferences of shares of our non-voting common stock are substantially the same in all respects to the rights and preferences of shares of our common stock, except that (i) the holders of shares of non-voting common stock are not entitled to vote, (ii) shares of non-voting common stock are convertible into shares of common stock, and (iii) shares of non-voting common stock are not listed on any stock exchange, including Nasdaq.

The following summarizes the rights of holders of our non-voting common stock:

- a holder of non-voting common stock is not entitled to vote on any matter submitted to a vote of the stockholders, however such holders are entitled to prior notice of, and to attend and observe, all meetings of the stockholders;
- subject to preferences that may apply to shares of preferred stock issued and outstanding, the holders of non-voting common stock are entitled to receive lawful dividends as may be declared by the Board on parity in all respects with the holders of common stock, provided that if the holders of common stock become entitled to receive a dividend or distribution of shares of common stock, holders of non-voting common stock shall receive, in lieu of the shares of common stock, an equal number of shares of non-voting common stock;

- upon liquidation, dissolution or winding up Alto Ingredients, the holders of shares of common stock and non-voting common stock will be entitled to receive a pro rata portion of all of our assets remaining for distribution after satisfaction of all our liabilities and the payment of any liquidation preference of any outstanding preferred stock;
- there are no redemption or sinking fund provisions applicable to our non-voting common stock; and
- there are no preemptive rights applicable to our non-voting common stock.

Conversion

Each share of non-voting common stock is convertible at the option of the holder into one share of our common stock at any time. The conversion price is subject to customary adjustment for stock splits, stock combinations, stock dividends, mergers, consolidations, reorganizations, share exchanges, reclassifications, distributions of assets and issuances of convertible securities, and the like.

No shares of non-voting common stock may be converted into common stock if the holder of such shares or any of its affiliates would, after such conversion, beneficially own in excess of 9.99% of our outstanding shares of common stock, which we refer to in this prospectus as the Blocker. The Blocker applicable to the conversion of shares of non-voting common stock may be raised or lowered at the option of the holder to any percentage not in excess of 9.99%, except that any increase will only be effective upon 61-days' prior notice to us.

When shares of non-voting common stock cease to be held by the initial holder or an affiliate of an initial holder of such shares, such shares shall automatically convert into one share of our common stock.

Preferred Stock

Our board of directors is authorized to issue from time to time, in one or more designated series, any or all of our authorized but unissued shares of preferred stock with dividend, redemption, conversion, exchange, voting and other provisions as may be provided in that particular series. The issuance need not be approved by holders of our common stock and need only be approved by holders, if any, of our Series A Preferred Stock and Series B Preferred Stock if, as described below, the shares of preferred stock to be issued have preferences that are senior to or on parity with those of our Series A Preferred Stock and Series B Preferred Stock.

The rights of the holders of our common stock, Series A Preferred Stock and Series B Preferred Stock will be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. Issuance of a new series of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of entrenching our Board and making it more difficult for a third-party to acquire, or discourage a third-party from acquiring, a majority of our outstanding voting stock. The following is a summary of the terms of the Series A Preferred Stock and the Series B Preferred Stock.

Series B Preferred Stock

As of December 12, 2022, 926,942 shares of Series B Preferred Stock were issued and outstanding and an aggregate of 1,419,210 shares of Series B Preferred Stock had been converted into shares of our common stock. The converted shares of Series B Preferred Stock have been returned to undesignated preferred stock. A balance of 653,848 shares of Series B Preferred Stock remain authorized for issuance.

Rank and Liquidation Preference

Shares of Series B Preferred Stock rank prior to our common stock as to distribution of assets upon liquidation events, which include a liquidation, dissolution or winding up of Alto Ingredients, whether voluntary or involuntary. The liquidation preference of each share of Series B Preferred Stock is equal to \$19.50, or the Series B Issue Price, plus any accrued but unpaid dividends on the Series B Preferred Stock. If assets remain after the amounts are distributed to the holders of Series B Preferred Stock, the assets shall be distributed pro rata, on an as-converted to common stock basis, to the holders of our common stock and Series B Preferred Stock. The written consent of a majority of the outstanding shares of Series B Preferred Stock is required before we can authorize the issuance of any class or series of capital stock that ranks senior to or on parity with shares of Series B Preferred Stock.

6

Dividend Rights

As long as shares of Series B Preferred Stock remain outstanding, each holder of shares of Series B Preferred Stock are entitled to receive, and shall be paid quarterly in arrears, in cash out of funds legally available therefor, cumulative dividends, in an amount equal to 7.0% of the Series B Issue Price per share per annum with respect to each share of Series B Preferred Stock. The dividends may, at our option, be paid in shares of Series B Preferred Stock valued at the Series B Issue Price. In the event we declare, order, pay or make a dividend or other distribution on our common stock, other than a dividend or distribution made in common stock, the holders of the Series B Preferred Stock shall be entitled to receive with respect to each share of Series B Preferred Stock held, any dividend or distribution that would be received by a holder of the number of shares of our common stock into which the Series B Preferred Stock is convertible on the record date for the dividend or distribution.

The Series B Preferred Stock ranks *pari passu* with respect to dividends and liquidation rights with the Series A Preferred Stock and *pari passu* with respect to any class or series of capital stock specifically ranking on parity with the Series B Preferred Stock.

Optional Conversion Rights

Each share of Series B Preferred Stock is convertible at the option of the holder into shares of our common stock at any time. Each share of Series B Preferred Stock is convertible into the number of shares of common stock as calculated by multiplying the number of shares of Series B Preferred Stock to be converted by the Series B Issue Price, and dividing the result thereof by the conversion price. The conversion price was initially \$682.50 per share of Series B Preferred Stock, subject to adjustment; therefore, each share of Series B Preferred Stock was initially convertible into 0.03 shares of common stock, which number is equal to the quotient of the Series B Issue Price of \$19.50 divided by the initial conversion price of \$682.50 per share of Series B Preferred Stock. Accrued and unpaid dividends are to be paid in cash upon any conversion.

Mandatory Conversion Rights

In the event of a Transaction which will result in an internal rate of return to holders of Series B Preferred Stock of 25% or more, each share of Series B Preferred Stock shall, concurrently with the closing of the Transaction, be converted into shares of common stock. A "Transaction" is defined as a sale, lease, conveyance or disposition of all or substantially all of our capital stock or assets or a merger, consolidation, share exchange, reorganization or other transaction or series of related transactions (whether involving us or a subsidiary) in which the stockholders immediately prior to the transaction do not retain a majority of the voting power in the surviving entity. Any mandatory conversion will be made into the number of shares of common stock determined on the same basis as the optional conversion rights above. Accrued and unpaid dividends are to be paid in cash upon any conversion.

No shares of Series B Preferred Stock will be converted into common stock on a mandatory basis unless at the time of the proposed conversion we have on file with the SEC an effective registration statement with respect to the shares of common stock issued or issuable to the holders on conversion of the Series B Preferred Stock then issued or issuable to the holders and the shares of common stock are eligible for trading on The Nasdaq Stock Market (or approved by and listed on a stock exchange approved by the holders of 66 2/3% of the then outstanding shares of Series B Preferred Stock).

7

Conversion Price Adjustments

The conversion price is subject to customary adjustment for stock splits, stock combinations, stock dividends, mergers, consolidations, reorganizations, share exchanges, reclassifications, distributions of assets and issuances of convertible securities, and the like. The conversion price is also subject to downward adjustments if we issue shares of common stock or securities convertible into or exercisable for shares of common stock, other than specified excluded securities, at per share prices less than the then effective conversion price. In this event, the conversion price shall be reduced to the price determined by dividing (i) an amount equal to the sum of (a) the number of shares of common stock outstanding immediately prior to the issue or sale multiplied by the then existing conversion price, and (b) the consideration, if any, received by us upon such issue or sale, by (ii) the total number of shares of common stock outstanding immediately after the issue or sale. For purposes of determining the number of shares of common stock outstanding as provided in clauses (i) and (ii) above, the number of shares of common stock issuable upon conversion of all outstanding shares of Series B Preferred Stock, and the exercise of all outstanding securities convertible into or exercisable for shares of common stock, will be deemed to be outstanding.

The conversion price will not be adjusted in the case of the issuance or sale of the following: (i) securities issued to our employees, officers or directors or options to purchase common stock granted by us to our employees, officers or directors under any option plan, agreement or other arrangement duly adopted by us and the grant of which

is approved by the compensation committee of our Board; (ii) the Series B Preferred Stock and any common stock issued upon conversion of the Series B Preferred Stock; (iii) securities issued on the conversion of any convertible securities, in each case, outstanding on the date of the filing of the Series B Certificate of Designations; and (iv) securities issued in connection with a stock split, stock dividend, combination, reorganization, recapitalization or other similar event for which adjustment is made in accordance with the foregoing.

Voting Rights and Protective Provisions

The Series B Preferred Stock votes together with all other classes and series of our voting stock as a single class on all actions to be taken by our stockholders. Each share of Series B Preferred Stock entitles the holder thereof to the number of votes equal to the number of shares of common stock into which each share of Series B Preferred Stock is convertible on all matters to be voted on by our stockholders, however, the number of votes for each share of Series B Preferred Stock may not exceed the number of shares of common stock into which each share of Series B Preferred Stock would be convertible if the applicable conversion price were \$682.50 (subject to appropriate adjustment for stock splits, stock dividends, combinations and other similar recapitalizations affecting the shares).

We are not permitted, without first obtaining the written consent of the holders of at least a majority of the then outstanding shares of Series B Preferred Stock voting as a separate class, to:

- increase or decrease the total number of authorized shares of Series B Preferred Stock or the authorized shares of our common stock reserved for issuance upon conversion of the Series B Preferred Stock (except as otherwise required by our certificate of incorporation or the Series B Certificate of Designations);
- increase or decrease the number of authorized shares of preferred stock or common stock (except as otherwise required by our certificate of incorporation or the Series B Certificate of Designations);
- alter, amend, repeal, substitute or waive any provision of our certificate of incorporation or our bylaws, so as to affect adversely the voting powers, preferences or other rights, including the liquidation preferences, dividend rights, conversion rights, redemption rights or any reduction in the stated value of the Series B Preferred Stock, whether by merger, consolidation or otherwise;
- authorize, create, issue or sell any securities senior to or on parity with the Series B Preferred Stock or securities that are convertible into securities senior to or on parity with the Series B Preferred Stock with respect to voting, dividend, liquidation or redemption rights, including subordinated debt;

- authorize, create, issue or sell any securities junior to the Series B Preferred Stock other than common stock or securities that are convertible into securities junior to Series B Preferred Stock other than common stock with respect to voting, dividend, liquidation or redemption rights, including subordinated debt;
- authorize, create, issue or sell any additional shares of Series B Preferred Stock other than the Series B Preferred Stock initially authorized, created, issued and sold, Series B Preferred Stock issued as payment of dividends and Series B Preferred Stock issued in replacement or exchange therefore;
- engage in a Transaction that would result in an internal rate of return to holders of Series B Preferred Stock of less than 25%;
- declare or pay any dividends or distributions on our capital stock in a cumulative amount in excess of the dividends and distributions paid on the Series B Preferred Stock in accordance with the Series B Certificate of Designations;
- authorize or effect the voluntary liquidation, dissolution, recapitalization, reorganization or winding up of our business; or
- purchase, redeem or otherwise acquire any of our capital stock other than Series B Preferred Stock, or any warrants or other rights to subscribe for or to purchase, or any options for the purchase of, our capital stock or securities convertible into or exchangeable for our capital stock.

Reservation of Shares

We initially were required to reserve 3,000,000 shares of common stock for issuance upon conversion of shares of Series B Preferred Stock and are required to maintain a sufficient number of reserved shares of common stock to allow for the conversion of all shares of Series B Preferred Stock.

Series A Preferred Stock

As of December 12, 2022, no shares of Series A Preferred Stock were issued and outstanding and an aggregate of 5,315,625 shares of Series A Preferred Stock had been converted into shares of our common stock and returned to undesignated preferred stock. A balance of 1,684,375 shares of Series A Preferred Stock remain authorized for issuance. The rights and preferences of the Series A Preferred Stock are substantially the same as the Series B Preferred Stock, except as follows:

- the Series A Issue Price, on which the Series A Preferred Stock liquidation preference is based, is \$16.00 per share;
- dividends accrue and are payable at a rate per annum of 5.0% of the Series A Issue Price per share;
- each share of Series A Preferred Stock is convertible at a rate equal to the Series A Issue Price divided by an initial conversion price of \$840.00 per share;
- holders of the Series A Preferred Stock have a number of votes equal to the number of shares of common stock into which each share of Series A Preferred Stock is convertible on all matters to be voted on by our stockholders, voting together as a single class; provided, however, that the number of votes for each share of Series A Preferred Stock shall not exceed the number of shares of common stock into which each share of Series A Preferred Stock would be convertible if the applicable conversion price were \$943.95 (subject to appropriate adjustment for stock splits, stock dividends, combinations and other similar recapitalizations affecting the shares); and

- we are not permitted, without first obtaining the written consent of the holders of at least a majority of the then outstanding shares of Series A Preferred Stock voting as a separate class, to:
 - o change the number of members of our Board to be more than nine members or less than seven members;

- o effect any material change in our industry focus or that of our subsidiaries, considered on a consolidated basis;
- o authorize or engage in, or permit any subsidiary to authorize or engage in, any transaction or series of transactions with one of our or our subsidiaries' current or former officers, directors or members with value in excess of \$100,000, excluding compensation or the grant of options approved by our Board; or
- o authorize or engage in, or permit any subsidiary to authorize or engage in, any transaction with any entity or person that is affiliated with any of our or our subsidiaries' current or former directors, officers or members, excluding any director nominated by the initial holder of the Series B Preferred Stock.

Preemptive Rights

Holders of our Series A Preferred Stock have preemptive rights to purchase a pro rata portion of all capital stock or securities convertible into capital stock that we issue, sell or exchange, or agree to issue, sell or exchange, or reserve or set aside for issuance, sale or exchange. We must deliver each holder of our Series A Preferred Stock a written notice of any proposed or intended issuance, sale or exchange of capital stock or securities convertible into capital stock which must include a description of the securities and the price and other terms upon which they are to be issued, sold or exchanged together with the identity of the persons or entities (if known) to which or with which the securities are to be issued, sold or exchanged, and an offer to issue and sell to or exchange with the holder of the Series A Preferred Stock the holder's pro rata portion of the securities, and any additional amount of the securities should the other holders of Series A Preferred Stock subscribe for less than the full amounts for which they are entitled to subscribe. In the case of a public offering of our common stock for a purchase price of at least \$12.00 per share and a total gross offering price of at least \$50 million, the preemptive rights of the holders of the Series A Preferred Stock shall be limited to 50% of the securities. Holders of our Series A Preferred Stock have a 30 day period during which to accept the offer. We will have 90 days from the expiration of this 30 day period to issue, sell or exchange all or any part of the securities as to which the offer has not been accepted by the holders of the Series A Preferred Stock, but only as to the offerees or purchasers described in the offer and only upon the terms and conditions that are not more favorable, in the aggregate, to the offerees or purchasers or less favorable to us than those contained in the offer.

The preemptive rights of the holders of the Series A Preferred Stock do not apply to any of the following securities: (i) securities issued to our employees, officers or directors or options to purchase common stock granted by us to our employees, officers or directors under any option plan, agreement or other arrangement duly adopted by us and the grant of which is approved by the compensation committee of our Board; (ii) the Series A Preferred Stock and any common stock issued upon conversion of the Series A Preferred Stock; (iii) securities issued on the conversion of any convertible securities, in each case, outstanding on the date of the filing of the Series A Certificate of Designations; (iv) securities issued in connection with a stock split, stock dividend, combination, reorganization, recapitalization or other similar event for which adjustment is made in accordance with the Series A Certificate of Designations; and (v) the issuance of our securities issued for consideration other than cash as a result of a merger, consolidation, acquisition or similar business combination by us approved by our Board.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

A number of provisions of Delaware law, our certificate of incorporation and our bylaws contain provisions that could have the effect of delaying, deferring and discouraging another party from acquiring control of Alto Ingredients. These provisions, which are summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of Alto Ingredients to first negotiate with our Board. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquiror outweigh the disadvantages of discouraging a proposal to acquire Alto Ingredients because negotiation of these proposals could result in an improvement of their terms. However, the existence of these provisions also could limit the price that investors might be willing to pay for our securities.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock makes it possible for our Board to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of Alto Ingredients.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our bylaws provide that a stockholder seeking to bring business before an annual meeting of stockholders, or to nominate candidates for election as directors, must provide timely notice of such stockholder's intention in writing. To be timely, a stockholder nominating individuals for election to the Board or proposing business must provide advanced notice to Alto Ingredients (a) not later than the close of business on the 90th day, nor earlier than the close of business on the 120th day in advance of the anniversary of the previous year's annual meeting if such meeting is to be held on a day which is not more than thirty (30) days in advance of the anniversary of the previous year's annual meeting or not later than seventy (70) days after the anniversary of the previous year's annual meeting, and (b) with respect to any other annual meeting of stockholders, the close of business on the 10th day following the date of public disclosure of the date of such meeting. In the event we call a special meeting of stockholders for the purpose of electing one or more directors to the Board, any stockholder entitled to vote in such election of directors may nominate a person or persons (as the case may be) for election to such position(s) as specified in our notice of meeting, if the stockholder's notice is delivered to us not later than the close of business on the 90th day prior to such special meeting and not earlier than the close of business on the later of the 120th day prior to such special meeting or the 10th day following the date of public disclosure of the date of the special meeting and of the nominees proposed by the Board to be elected at such meeting.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, which we refer to in this prospectus as Section 203, regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under specified circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares of voting stock outstanding (but not the outstanding voting stock owned by the stockholder) (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more

of a corporation's outstanding voting securities. We expect the existence of this provision to have an anti-takeover effect with respect to transactions the Board does not approve in advance. We also anticipate that Section 203 may also discourage attempts that might result in a premium over the market price for the shares of our common stock held by stockholders.

The provisions of Delaware law, our certificate of incorporation and our bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

SELLING STOCKHOLDERS

On November 7, 2022, we entered into the Credit Agreement with the selling stockholders listed below and other signatories thereto. Pursuant to the terms of the Credit Agreement, on November 23, 2022 we issued to the selling stockholders an aggregate of 1,282,051 shares of our common stock. In connection with entering into the Credit Agreement, we entered into the Registration Rights Agreement with the selling stockholders under which we are required to register the resale of the shares of Common Stock issued under the terms of the Credit Agreement.

This prospectus covers the offer, resale or other distribution by the selling stockholders of up to an aggregate of 1,282,051 shares of our common stock. We are registering the shares of common stock in order to permit the selling stockholders to offer the shares for resale from time to time.

The table below lists the selling stockholders and other information regarding the beneficial ownership of the shares of common stock held by each selling stockholder. The second column lists the number of shares of common stock beneficially owned by each selling stockholder, based on its ownership of shares of common stock as of December 12, 2022.

The third column lists the shares of common stock being offered by this prospectus by each selling stockholder. The selling stockholders may sell all, some or none of their shares in this offering. See "Plan of Distribution."

The fourth column assumes the sale of all of the shares of common stock offered by the selling stockholders under this prospectus.

Except as disclosed in the footnotes to the table below, each selling stockholder has represented to us that it is not a broker-dealer, or affiliated with or associated with a broker-dealer, registered with the SEC or designated as a member of the Financial Industry Regulatory Authority. The shares of common stock being offered under this prospectus may be offered for sale from time to time during the period the registration statement of which this prospectus is a part remains effective, by or for the account of the selling stockholders listed below.

Beneficial ownership is determined in accordance with the rules of the SEC, which includes voting or investment power with respect to the securities. To our knowledge, except as indicated by footnote, and subject to community property laws where applicable, the persons named in the table below have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them. Except as indicated by footnote, all shares of common stock underlying derivative securities, if any, that are currently exercisable or convertible or are scheduled to become exercisable or convertible for or into shares of common stock within 60 days after December 12, 2022 are deemed to be outstanding for the purpose of calculating the percentage ownership of each listed person or group but are not deemed to be outstanding as to any other person or group.

Because each selling stockholder may dispose of all, none or some portion of their securities, no estimate can be given as to the number of securities that will be beneficially owned by a selling stockholder upon termination of this offering. See "Plan of Distribution." For purposes of the table below, however, we have assumed that after termination of this offering none of the securities covered by this prospectus will be beneficially owned by the selling stockholders and we further assumed that the selling stockholders will not acquire beneficial ownership of any additional securities during the offering. In addition, the selling stockholders may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, our securities in transactions exempt from the registration requirements of the Securities Act after the date on which the information in the table is presented. This information is based upon our review of public filings, our stockholder register and information furnished by the selling stockholders.

Except as otherwise disclosed in the footnotes below, no selling stockholder has, or within the past three years has had, any position, office or other material relationship with us.

Information about the selling stockholders may change over time. Any changed information will be set forth in an amendment to the registration statement (of which this prospectus forms a part) or a supplement to this prospectus, to the extent required by law.

The selling stockholders may sell all, some or none of their shares in this offering. See "Plan of Distribution."

Name of Beneficial Owner	Shares of Common Stock Beneficially Owned Prior to Offering	Maximum Number of shares of Common Stock to be Sold Pursuant to this Prospectus	Shares of Common Stock Beneficially Owned After Offering(2)	
			Number	Percentage
Orion Energy Credit Opportunities Fund III, L.P.(1)	847,858	847,858	-	-
Orion Energy Credit Opportunities Fund III PV, L.P.(1)	388,747	388,747	-	-
Orion Energy Credit Opportunities Fund III GPFA, L.P.(1)	29,475	29,475	-	-
Orion Energy Credit Opportunities Fund III GPFA PV, L.P.(1)	15,971	15,971	-	-

(1) Orion Energy Credit Opportunities Fund III GP, L.P. is the general partner of the named selling stockholder. Orion Energy Credit Opportunities Fund III Holdings, LLC is the general partner of Orion Energy Credit Opportunities Fund III GP, L.P. Nazar Massouh and Gerrit Nicholas are the Chief Executive Officer and Chief Investment Officer, respectively, of Orion Energy Credit Opportunities Fund III Holdings, LLC, each of whom disclaims beneficial ownership of the shares of common stock held by the named selling stockholder.

(2) Assumes all shares being offered under this prospectus are sold.

Description of Private Placement of Common Stock

Credit Agreement

On November 7, 2022, we entered into the Credit Agreement with the lender parties thereto. The Credit Agreement contains customary terms and conditions for a transaction of this type. The representations, warranties and covenants contained in the Credit Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement and may be subject to limitations agreed upon by the contracting parties.

The foregoing description of the Credit Agreement is not complete and is subject to and qualified in its entirety by reference to the Credit Agreement, a copy of which was filed as an exhibit to our Current Report on Form 8-K filed with the SEC on November 14, 2022 and incorporated herein by reference.

Registration Rights Agreement

In connection with entering into the Credit Agreement, on November 7, 2022, we also entered into the Registration Rights Agreement with the lenders under the Credit Agreement, pursuant to which, among other things, we agreed to prepare and file a registration statement with respect to the shares of our common stock issued to the lender parties under the Credit Agreement with the SEC within 10 business days after having received all information from the selling stockholders to be included in the selling stockholder table above. The Registration Rights Agreement contains customary terms and conditions for a transaction of this type. The representations, warranties and covenants contained in the Credit Agreement and the representations and warranties of the selling stockholders relating to our issuance of shares of common stock to the selling stockholders contained in a certificate delivered by selling stockholders to us November 7, 2022 were made only for purposes of such agreement and certificate and as of specific dates, were solely for the benefit of the parties to such agreement and certificate and may be subject to limitations agreed upon by the contracting parties.

The foregoing description of the Registration Rights Agreement is not complete and is subject to and qualified in its entirety by reference to the Registration Rights Agreement, a copy of which was filed as an exhibit to our Current Report on Form 8-K filed with the SEC on November 14, 2022 and incorporated herein by reference.

This prospectus is being filed pursuant to the terms of the registration rights granted pursuant to the Registration Rights Agreement.

PLAN OF DISTRIBUTION

We are registering the shares of common stock to permit the resale of these shares of common stock by the selling stockholders from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

Each selling stockholder may sell all or a portion of the shares of common stock held by it and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent's commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, pursuant to one or more of the following methods:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales made after the date the registration statement of which this prospectus forms a part is declared effective by the SEC;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell the shares of common stock under Rule 144 promulgated under the Securities Act, or any other exemption under the Securities Act, if available, rather than under this prospectus. In addition, the selling stockholders may transfer the shares of common stock by other means not described in this prospectus. If the selling stockholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of common stock or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling stockholders may also sell the shares of common stock short and deliver the shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge the shares of common stock to broker-dealers that in turn may sell such shares.

Each selling stockholder may pledge or grant a security interest in some or all of the shares of common stock owned by it and, if it defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the selling stockholders list to include the pledgee, transferee or other successors in interest as a selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

To the extent required by the Securities Act and the rules and regulations thereunder, the selling stockholders and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be “underwriters” within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of common stock is made, a prospectus supplement, if required, will be distributed, which will set forth the aggregate amount of shares of common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions, and other terms constituting compensation from the selling stockholders and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any selling stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The selling stockholders and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling stockholders and any other participating person. To the extent applicable, Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

LEGAL MATTERS

The validity of the securities being offered by this prospectus will be passed upon by Troutman Pepper Hamilton Sanders LLP, Irvine, California.

EXPERTS

The consolidated financial statements of Alto Ingredients, Inc. as of December 31, 2021 and 2020 and for each of the years in the three-year period ended December 31, 2021, and the effectiveness of internal control over financial reporting as of December 31, 2021, incorporated in this Prospectus by reference from Alto Ingredient’s Annual Report on Form 10-K for the year ended December 31, 2021, have been audited by RSM US LLP, an independent registered public accounting firm, as stated in their reports thereon, incorporated herein by reference, and have been incorporated in this Prospectus and Registration Statement in reliance upon such reports and upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act, and the rules and regulations promulgated under the Securities Act, with respect to the securities offered under this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information contained in the registration statement and the exhibits and schedules to the registration statement. Many of the contracts and documents described in this prospectus are filed as exhibits to the registration statements and you may review the full text of these contracts and documents by referring to these exhibits.

For further information with respect to us and the securities offered under this prospectus, reference is made to the registration statement and its exhibits and schedules. We file reports, including annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K with the SEC.

The SEC maintains an Internet web site that contains reports, proxy and information statements and other information regarding issuers, including Alto Ingredients, that file electronically with the SEC. The SEC’s Internet website address is <http://www.sec.gov>. Our Internet website address is <http://www.altoingredients.com>.

We do not anticipate that we will send an annual report to our stockholders until and unless we are required to do so by the rules of the SEC.

All trademarks or trade names referred to in this prospectus are the property of their respective owners.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with the SEC. This means that we can disclose important information to you by referring you to another filed document. Any information referred to in this way is considered part of this prospectus from the date we file that document. Any reports filed by us with the SEC after the date of this prospectus and before the date that the offering of the securities by means of this prospectus is terminated will automatically update and, where applicable, supersede any information contained in this prospectus or incorporated by reference in this prospectus. Accordingly, we incorporate by reference the following documents or information filed with the SEC:

- Our Current Reports on Form 8-K, which we filed with the SEC on [March 10, 2022](#), [May 9, 2022](#), [June 1, 2022](#), [June 23, 2022](#), [August 8, 2022](#), [November 7, 2022](#) and [November 14, 2022](#);
- Our Quarterly Report on [Form 10-Q](#) for the quarterly period ended September 30, 2022, which we filed with the SEC on November 9, 2022;

- Our Quarterly Report on [Form 10-Q](#) for the quarterly period ended June 30, 2022, which we filed with the SEC on August 9, 2022;
- Our Quarterly Report on [Form 10-Q](#) for the quarterly period ended March 31, 2022, which we filed with the SEC on May 10, 2022;
- Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2021, which we filed with the SEC on March 15, 2022;
- Our revised Definitive Proxy Statement on [Form 14A](#), which we filed with the SEC on June 17, 2022;
- Our amended Definitive Proxy Statement on [Form 14A](#), which we filed with the SEC on May 2, 2022;
- Our Definitive Proxy Statement on [Form 14A](#), which we filed with the SEC on May 2, 2022;
- The description of our capital stock contained in [Exhibit 4.1](#) of our Annual Report on Form 10-K, which we filed with the SEC on March 30, 2020; and
- All documents filed by us in accordance with Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the date of this prospectus and before the termination of an offering under this prospectus, other than documents or information deemed furnished and not filed in accordance with SEC rules.

We will provide a copy of the documents we incorporate by reference, at no cost, to any person who received this prospectus. To request a copy of any or all of these documents, you should write or telephone us at: Investor Relations, Alto Ingredients, Inc., 1300 South Second Street, Pekin, Illinois 61554, (916) 403-2123. In addition, each document incorporated by reference is readily accessible on our website at www.altoingredients.com.