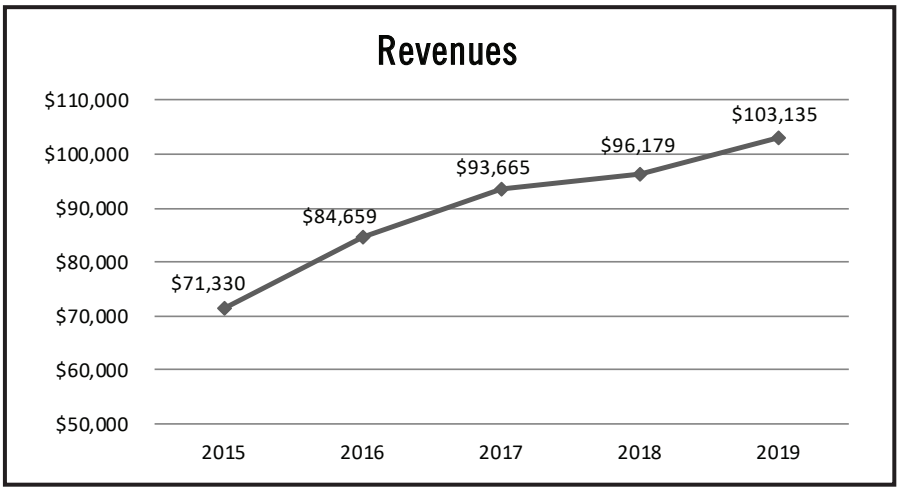
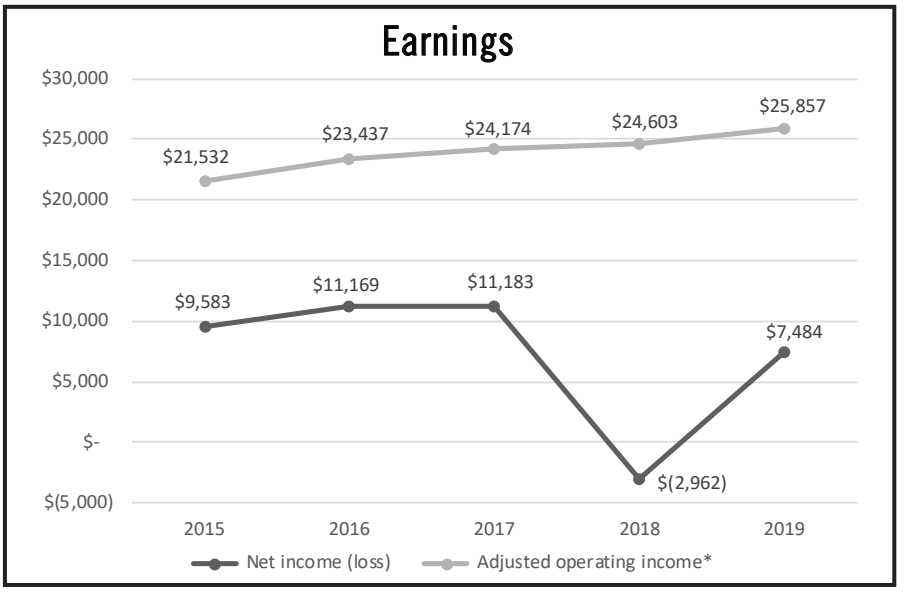
MesaLabs

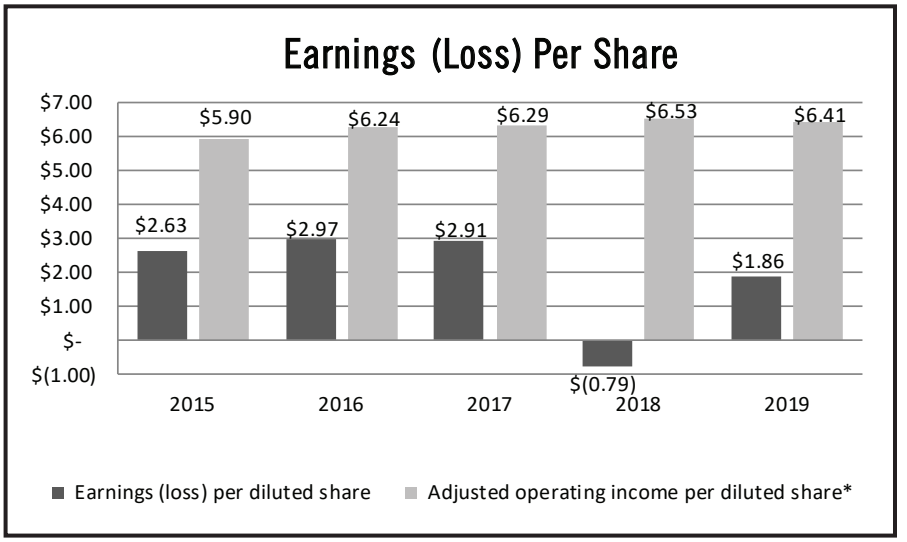
2019 Annual Report

Protecting the Vulnerable™

Year End March 31







In thousands, except per share data

* The non-GAAP measure of adjusted operating income is defined to exclude the non-cash impact of amortization of intangible assets, stock-based compensation and impairment of goodwill and long-lived assets.

Fellow Shareholders, September 25, 2019

While fiscal year 2019 was one of the Mesa's strongest financial years on record, I believe that our financial gains were a reflection of implementing the first major steps in our commitment to continuously improve the company via *The Mesa Way* and aligning around our purpose to Protect the Vulnerable™.

Every day, we *Protect* by developing and selling products that help assure the efficacy of life saving medical procedures, the integrity of the pharmaceutical supply chain, and the purity of the air we breathe. Our products help our customers to see and act on the invisible factors impacting safety. Principally these impact people at their most *Vulnerable*; whether taking life-saving medication, receiving dialysis treatment, or working in hazardous environments. To **Protect the Vulnerable™** binds the Mesa team together and inspires us to find ways to continuously improve our products and services: it is the beating of our Heart. *The Mesa Way* is our customer focused, lean-based framework that helps us identify and prioritize areas for improvement and provides the tools and language for the whole team to solve problems at root cause: it nourishes our Heads. The best intentions and brightest ideas are nothing without the will of a dedicated team to put them to work: a fully engaged Mesa employee brings skilled Hands.

By working with our Hearts, Head, and Hands we can accomplish great things for the business, and I am proud of how we have applied our whole selves to serving customers, developing our team members, and delivering results for shareholders in fiscal year 2019. We delivered 7% revenues growth with 3% organic growth, 5% growth in adjusted operating income, improved on time deliveries to customers by 10%, and reduced inventory by over 25%. The financial results we delivered were possible because of the major steps we took as part of our commitment to continuously improve our operations:

- Completed the consolidation and validation of our Sterilization and Disinfection Control business into a new facility in Bozeman, Montana
- Fully implemented our ERP system into our European operations
- Deepened our product portfolio with the acquisitions of Point Six Wireless, a part of the Cold Chain Monitoring division, and IBP in the Instruments division
- Built new muscle *The Mesa Way* via 17 kaizens and two concentrated BreakThrough kaizen events (which incorporate 4-5 simultaneous kaizen events) in the Lakewood headquarters and the new Bozeman facility
- Increased headcount dedicated to Sales, Marketing, and Product Development functions by over 10%. These new employees show our commitment to serving customers, deepen our experience with Lean, and will contribute to our long-term growth trajectory
- Began to exit the marginally profitable Packaging division to enable us to focus on our higher potential opportunities

The accomplishments above are just the beginning stages of our improvement. *The Mesa Way* provides a system to create long-term growth for our shareholders, long-term opportunity for our team members, and improves the quality of the solutions we provide to customers. It is based on four principles:

- Measure What Matters –delivering new innovation that improves product quality, streamlining the supply chain to increase responsiveness to customer demand, and more deeply engaging our team to become the employer of choice in our communities
- Empowering Teams – expanding and deepening Daily Management to improve both the pace and quality of our problem-solving efforts
- Steadily Improve – deepen the application of Lean tools with a focus on Problem Solving and ensuring broad participation in Kaizen events
- Always Learn – leveraging common processes, common language, and common tools to build the capabilities of the Mesa team and take on whatever challenges come next

Today, we retain strong competitive positions in niche applications serving a customer base with consistent long-term growth prospects. *The Mesa Way* establishes concrete goals for us to use as we improve in the next fiscal year and it also sets our team up for long term success and continued growth. While global politics, financial markets, and the broader economy have become more volatile, we believe that the Mesa team and business is stronger and more prepared than ever to capitalize on the opportunities within our core business and to continue to add strategic muscle via well targeted acquisitions.

We look forward to earning your continued support.

Sincerely,

Gary M. Owens

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark one)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended March 31, 2019

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File No: 0-11740

MESA LABORATORIES, INC.

(Exact name of registrant as specified in its charter)

Colorado	**84-0872291**
(State or other jurisdiction of Incorporation or organization)	(I.R.S. Employer Identification number)
12100 West Sixth Avenue Lakewood, Colorado	**80228**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(303) 987-8000**

Securities registered under Section 12(b) of the Act:

Title of each class	**Trading Symbol**	**Name of each exchange on which registered**
Common Stock, no par value	MLAB	The Nasdaq Stock Market LLC

Securities registered under Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
YES ☒ **NO** ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.
YES ☐ **NO** ☒

Indicate by check mark whether the registrant (1) has filed all reports to be filed by Section13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
YES ☒ **NO** ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (Section 232.405 of the chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). **YES** ☒ **NO** ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of the Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (check one):

Large accelerated filer	Accelerated filer	Non-accelerated filer	Smaller reporting company	Emerging growth company
☐	☒	☐	☐	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
YES ☐ **NO** ☒

The aggregate market value as of September 30, 2018 (the last business day of the registrant's most recently completed second fiscal quarter), of the voting and non-voting common equity of Mesa Laboratories Inc. held by non-affiliates (assuming, for this purpose, that all directors, officers and owners of 5% or more of the registrant's common stock are deemed affiliates) computed by reference to the price at which the common equity was last sold ($185.35 per share) was $644,305,144.

The number of outstanding shares of the Issuer's common stock as of May 28, 2019 was 3,901,097.

This document (excluding exhibits) contains 63 pages.

DOCUMENTS INCORPORATED BY REFERENCE

Part III is incorporated by reference from the registrant's definitive Proxy Statement for its 2019 Annual Meeting of Stockholders or an amendment to this report to be filed no later than 120 days after the close of the registrant's fiscal year.

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FORWARD-LOOKING STATEMENTS

This report includes statements of our expectations, intentions, plans and beliefs that constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and that are intended to come within the safe harbor protection provided by those sections. These statements, which involve risks and uncertainties, relate to the discussion of our business strategies and our expectations concerning future operations, margins, profitability, trends, liquidity and capital resources and to analyses and other information that are based on forecasts of future results and estimates of amounts not yet determinable. We have used words such as "may," "will," "should," "expect," "intend," "plan," "anticipate," "believe," "think," "estimate," "seek," "expect," "predict," "could," "project," "potential" and other similar terms and phrases, including references to assumptions, in this report to identify forward-looking statements. These forward-looking statements are made based on expectations and beliefs concerning future events affecting us and are subject to risks and uncertainties relating to our operations and business environments, all of which are difficult to predict and many of which are beyond our control, that could cause our actual results to differ materially from those matters expressed or implied by these forward-looking statements. Such risks and uncertainties include those listed in Item 1A. "Risk Factors," and elsewhere in this report.

When considering forward-looking statements in this report or that we make in other reports or statements, you should keep in mind the cautionary statements in this report and future reports we file with the SEC. New risks and uncertainties arise from time to time, and we cannot predict when they may arise or how they may affect us. We assume no obligation to update any forward-looking statements after the date of this report as a result of new information, future events or other developments, except as required by applicable laws and regulations.

PART I

ITEM 1. BUSINESS

In this annual report on Form 10-K, Mesa Laboratories, Inc., a Colorado corporation, together with its subsidiaries is collectively referred to as "we," "us," "our," the "Company" or "Mesa." Mesa was organized in 1982 as a Colorado corporation.

General

We design, manufacture, and market quality control products and services, many of which are required by regulatory requirements. We are organized into four segments, or divisions, across ten physical locations. Our Sterilization and Disinfection Control Division manufactures and sells biological, cleaning, and chemical indicators. Biological, cleaning, and chemical indicators are used to assess the effectiveness of sterilization and disinfection processes in the hospital, dental, medical device, and pharmaceutical industries. The division also provides testing and laboratory services, mainly to the dental industry. Our Instruments Division designs, manufactures, and markets quality control instruments and disposable products utilized in the healthcare, pharmaceutical, food and beverage, medical device, industrial hygiene, and environmental air sampling industries. Our Cold Chain Monitoring Division designs, develops, and markets systems which are used to monitor various environmental parameters such as temperature, humidity, and differential pressure to ensure that critical storage and processing conditions are maintained in hospitals, pharmaceutical and medical device manufacturers, blood banks, pharmacies, and laboratory environments. Our Cold Chain Packaging Division provides thermal packaging products such as coolers, boxes, insulation materials, and phase-change products to control temperature during the customer's transport of their own products.

Our Bozeman, Montana and Munich, Germany locations manufacture our Sterilization and Disinfection Control Division products which include the EZTest®, ProSpore, PCD®, Apex® and Simicon biological and cleaning indicators, while our Bozeman, Montana, facility also provides sterility assurance testing services to dental offices in the United States and Canada. Our Lakewood, Colorado, Hanover, Germany, and Butler, New Jersey, facilities manufacture our Instruments Division products which include the DataTrace®, DialyGuard®, DryCal®, Torqo®, SureTorque®, IBP Medical, and BGI brands. Our Lakewood, Colorado, facility also manufactures our Cold Chain Monitoring Division products which include CheckPoint®, AmegaView, ViewPoint®, FreshLoc® brands, and outsources the manufacture of our Point Six® brand. Our Markham, Ontario, facility manufactures our Mesa brand real time monitoring solutions and outsources the manufacture of our TempTrust® brand of packaging materials.

Our philosophy is to manufacture products of exceptional quality and provide a high level of ongoing service for those products. Our revenues come from product sales, which includes hardware and software, and consumables; as well as services, which include installation, discrete maintenance services, and ongoing maintenance contracts. Our strategic goals are to continue to grow revenues and profits through three key strategies – (1) improving our commercial channels, (2) introducing new products to the market, and (3) seeking out companies or product lines to acquire.

As a business, we commit to our purpose of Protecting the Vulnerable™ every day by taking a customer-focused approach to developing, building, and delivering our products. We serve a broad set of industries that require dependable quality control and calibration solutions to ensure the safety and efficacy of the products they use, and by delivering the highest quality products possible, we are committed to protecting environment, products, and people.

In addition, during the year ended March 31, 2019, we continued to develop and implement The Mesa Way!, which is our customer-centric, lean based system for continuously improving and operating a set of high-margin, niche businesses. The Mesa Way! is based on four pillars:

- **M**easure what matters: We use "True North," our customer's perspective, to measure what matters most to customers and to set high standards for performance. We manage to leading indicators, whenever possible, which drives us to proactively avoid problems before they are apparent to our customers.
- **E**mpower Teams: We move decision making as close to the customer as possible and provide the structure and real-time communication forum to align the whole organization towards surpassing customer expectations.
- **S**teadily Improve: We leverage a common and proven set of lean-based tools to identify the root cause of opportunities, prioritize our biggest opportunities, and enable change to be embraced and implemented quickly.
- **A**lways Learn: We ensure that improvements are sustained, enabling us to raise performance expectations and repeat the cycle of improvement. Equally, this cycle strengthens the Mesa team by providing endless learning opportunities for our employees and helps us to become an employer of choice in our communities.

Sterilization and Disinfection Control Division

Our Sterilization and Disinfection Control Division provides testing services, along with the manufacture and marketing of biological, chemical and cleaning indicators used to assess the effectiveness of sterilization processes, including steam, gas, hydrogen peroxide, ethylene oxide and radiation, in the hospital, dental, medical device and pharmaceutical industries. Our biological indicators are developed and manufactured according to International Standards Organization ("ISO") 11138 (Sterilization of health care products) under a quality system that complies with ISO 13485 (Medical devices) and 21 CFR 820 (Quality System Regulation).

Biological indicators consist of resistant spores of certain microorganisms that are applied on a convenient substrate, such as a small piece of filter paper. The spores are well characterized in terms of purity, numbers and resistance to sterilization. In use, the biological indicator is exposed to a sterilization process and then tested to determine the presence of surviving organisms. Our biological indicators include (1) spore strips, which require post-processing transfer to a growth media, (2) self-contained products, which have the growth media already pre-packaged in crushable ampoules, (3) culture media, and (4) process challenge devices ("PCDs") which increase the resistance of biological indicators, mimicking the packaging or other unique characteristics of a product being sterilized. Biological indicators are used to validate equipment and monitor the effectiveness of a process in any industrial or healthcare setting which uses sterilization. Key markets include healthcare, such as dental offices and hospitals, and industrial, such as medical device and pharmaceutical manufacturers.

Our biological indicators are distinguished in the marketplace by their high level of quality, consistency and flexibility. A variety of different formats allows our biological indicators to be used in many different types of processes and products. For example, the simple spore strips are used most often in the small table-top steam sterilizers in dental offices, while a more complex self-contained biological indicator, either with or without a PCD, may be used by a medical device manufacturer to assure the sterility in a complex ethylene oxide sterilization process. In either case, the number of spores contained on the carrier and the resistance of the spores to the sterilization process must be well characterized in order to accurately assess the effectiveness of sterilization. During manufacturing, extensive quality control steps are used to ensure that the microorganism spores are well-characterized and their resistance is known following placement on the target carrier.

Chemical indicators use a chemical change (generally determined by color) to assess the exposure to sterilization conditions. Biological indicators and chemical indicators are often used together to monitor processes.

Cleaning indicators are used to assess the effectiveness of cleaning processes, including washer-disinfectors and ultrasonic cleaners in healthcare settings. Cleaning is the critical first step performed prior to disinfection and sterilization. Debris left on an instrument may interfere with microbial inactivation and can compromise the disinfection or sterilization process. Cleaning indicators compliment sterilization and disinfection processes within central sterile supply departments in hospitals.

Instruments Division

Our Instruments Division designs, manufactures and markets quality control instruments and disposable products used in the healthcare, pharmaceutical, medical device, food and beverage, industrial hygiene, and environmental air sampling industries. Generally, our instrument products are used for testing, quality control, safety, validation and regulatory compliance. Our Instruments Division products include: (1) Data loggers, which are used in critical manufacturing and quality control processes in the pharmaceutical, medical device, food and tool industries; (2) Medical meters and calibration solutions, which are used for quality control in dialysis clinics and dialysis machine manufacturing operations; (3) Gas flow calibration and air sampling equipment, which are used for industrial hygiene monitoring, calibration of gas metering equipment and environmental air assessments by a variety of organizations, including metrology labs, manufacturing companies and government agencies; and 4) Torque testing systems, which are used to measure bottle cap tightness in the pharmaceutical and beverage industries.

Data Loggers

Our data logger products are self-contained, wireless, high precision instruments that are used in critical manufacturing, quality control and validation applications. They are used to measure temperature, humidity and pressure inside a process or a product during manufacturing. In addition, data loggers can be used to validate the proper operation of laboratory or manufacturing equipment, either during its installation or for annual re-certifications. The products consist of individual data loggers, a personal computer ("PC") interface, software and various accessories. A customer typically purchases a large number of data loggers along with a single PC interface and the software package. In practice, using the PC interface, the user programs the loggers to collect environmental data at a pre-determined interval, places the data loggers in the product or process, and then collects stored process data from the data logger either through the PC interface or wirelessly via a radio link. The user can then prepare tabular and graphical reports using the software. Unique aspects of our data loggers are their ability to operate at elevated temperatures and in explosive environments – important differentiating factors in the marketplace and, consequently, they are used by companies to control their most critical processes, such as sterilization. Industries using the data loggers include pharmaceutical and medical device manufacturers, and food processors.

Medical Meters and Calibration Solutions

Our medical meters are used to test various parameters of the dialysis fluid (dialysate), and the proper calibration and operation of the dialysis machine. Each meter measures some combination of temperature, pressure, pH and conductivity to ensure that the dialysate has the proper composition to promote the transfer of waste products from the blood to the dialysate. The meters provide a digital readout that the patient, physician or technician uses to verify that the dialysis machine is working within prescribed limits and delivering properly prepared dialysate. We manufacture two styles of medical meters: those designed for use by dialysis machine manufacturers and biomedical technicians, and those used primarily by dialysis nurses. The meters for technicians are characterized by exceptional accuracy, stability and flexibility, and are used by the industry as the primary standard for the calibration of dialysis machines. The meters designed for use by dialysis nurses are known primarily for their ease of use and incorporate a previously patented, built-in syringe sampling system. These meters are used as the final quality control check on the dialysate just prior to starting a treatment. In addition to the dialysate meters, we market a line of standard solutions for use in dialysis clinics for calibration of our meters. These standard solutions are regularly consumed by the dialysis clinics; thus, along with calibration services, are less impacted by general economic conditions than instrument sales. Customers that utilize these products include dialysis facilities, medical device manufacturers, and biomedical service companies.

Gas Flow Calibration and Air Sampling Equipment

We manufacture a variety of instruments and equipment for gas flow calibration and environmental air sampling. In the air sampling area, our technology is used primarily for the determination of particulate concentrations in air as a measure of urban or industrial air pollution, and for industrial hygiene assessments. The primary products include air samplers, particle separators and pumps. In the environmental area, our particle samplers were some of the first on the market and they were recognized early-on as "reference samplers" by the U.S. Environmental Protection Agency.

We also manufacture gas flow calibration instruments to support the use of our air sampling equipment, and for broader industrial applications. Our gas flow calibration instruments provide the precise standards required by laboratories and industry in the design, development, manufacture, installation and calibration of various gas flow meters and air sampling devices. Our flow calibrators are used in many industries where professionals require the superior accuracy, reliability and ease of operation that they provide, including (1) industrial hygienists, (2) calibration and research laboratories, (3) manufacturers who design, develop and manufacture gas flow metering devices, and (4) industrial engineering and manufacturing companies that utilize gas flow metering devices.

Torque Testing Systems

Our automated torque testing systems are durable and reliable motorized cap torque analyzers used throughout the packaging industry. The primary advantages of our torque instruments are their high accuracy and long-term consistency of measurement. Unlike manual torque testing instruments, our motorized torque systems eliminate the effects on the measurement results of different operators and different cap removal speeds. With a motorized torque testing system, the force applied to a cap is precisely the same in each testing cycle, regardless of who may be operating the machine, or how strong they may be. Our torque systems provide the information that helps the packaging operation track events, and potential problems during the manufacturing process so that corrections can be performed in a timely fashion. Industries utilizing these instruments include beverage, pharmaceutical, and food processing companies.

Cold Chain Monitoring Division

Our Cold Chain Monitoring Division designs, develops and markets systems which are used to monitor various environmental parameters such as temperature, humidity and differential pressure to ensure that critical storage and processing conditions are maintained. Cold chain monitoring systems are used in controlled environments such as refrigerators, freezers, warehouses, laboratory incubators, clean rooms and a number of other settings. The cold chain monitoring systems consist of wireless sensors that are placed in controlled environments, hardware modules to receive the wireless data, and various software programs to collect, store and process the data. Our systems are designed to operate continuously, providing data around the clock, 365 days per year. A critical function of our systems is the ability to provide local alarms and notifications via e-mail, text or telephone, in the case where established environmental conditions are exceeded. Key markets for our cold chain monitoring systems are hospitals, pharmaceutical and medical device manufacturers, blood banks, pharmacies and laboratory environments.

Among the important competitive differentiators of our cold chain monitoring systems are (1) their high degree of reliability and up-time; (2) a large variety of sensor types (including our newly-acquired Point Six Wireless® brand) to meet the needs of most applications; (3) a skilled, distributed installation and service team; and (4) a full-featured and 21 CFR Part 11(Electronic records; Electronic signatures) validated software program, providing extensive reporting and alarm capability. An important aspect of our cold chain monitoring business is the ability to provide post-installation service and support. For most systems, annual re-calibration of each sensor is required, and we provide this service through our dedicated service organization

Our Cold Chain Monitoring Division also provides parameter (primarily temperature) monitoring of products during transport in a cold chain and consulting services such as compliance monitoring and validation or mapping of transport and storage containers. Our compliance services help customers validate the effectiveness of their cold chain and our monitoring systems record temperature during shipment and provide alarms in case of temperature excursions throughout a cold chain, from point of manufacture or collection, all the way to point of use.

Cold Chain Packaging Division

Our Cold Chain Packaging Division provides thermal packaging products such as coolers, boxes, insulation materials and phase-change products to control temperature during transport.

Acquisitions

Year Ended March 31, 2019 Acquisitions

During the year ended March 31, 2019 we completed a business combination (the "Point Six Wireless Acquisition") whereby we acquired substantially all of the assets and certain liabilities of Point Six Wireless, LLC's continuous monitoring business, which manufactures wireless sensors that are used in healthcare, hospitality, foodservice, retail, data center, and refrigerated transport applications.

Subsequent to the year ended March 31, 2019, we completed a business acquisition (the "IBP Acquisition") whereby we acquired the common stock of IBP Medical GmbH, a company whose business manufactures medical meters used to test various parameters of dialysis fluid (dialysate), and the proper calibration and operation of a dialysis machine.

Year Ended March 31, 2018 Acquisitions

During the year ended March 31, 2018, we completed the following three acquisitions:

In November 2017, we completed a business combination (the "BAG Acquisition") whereby we acquired substantially all of the assets and certain liabilities of BAG Health Care GmbH's ("BAG") Hygiene Monitoring business which is comprised of the distribution of biological, chemical and cleaning indicator products.

In October 2017, we completed a business combination (the "Simicon Acquisition") whereby we acquired the common stock of SIMICON GmbH ("Simicon"), a company whose business manufactures both biological and cleaning indicators.

In May 2017, we completed a business combination (the "Hucker Acquisition") whereby we acquired substantially all of the assets (other than cash and accounts receivable) and certain liabilities of Hucker & Hucker GmbH's ("Hucker") business segment associated with the distribution of our biological indicator products.

Year Ended March 31, 2017 Acquisitions

During the year ended March 31, 2017, we completed the following six acquisitions:

In November 2016, we completed a business combination (the "Mydent Acquisition") whereby we acquired substantially all of the assets (other than cash and accounts receivable) and certain liabilities of Mydent International Corp's business segment associated with biological indicator mail-in testing services to the dental market in the United States.

In November 2016, we completed a business combination (the "FreshLoc Acquisition") whereby we acquired substantially all of the assets (other than cash and accounts receivable) and certain liabilities of the cold chain monitoring business of FreshLoc Technologies, Inc.

In August 2016, we completed a business combination (the "Rapid Aid Acquisition") whereby we acquired certain assets (consisting primarily of fixed assets) and certain liabilities of Rapid Aid Corp's ("Rapid Aid") business segment associated with the manufacture and sale of cold chain packaging gel products.

In July 2016, we completed a business combination (the "HANSAmed Acquisition") whereby we acquired substantially all of the assets (other than cash and accounts receivable) and certain liabilities of HANSAmed Limited's ("HANSAmed") business segment associated with the distribution of our biological indicator products and mail-in testing services to the dental market in Canada.

In April 2016, we completed a business combination (the "ATS Acquisition") whereby we acquired substantially all the assets (other than cash and certain inventories and fixed assets) and certain liabilities of Autoclave Testing Services, Inc. and Autoclave Testing Supplies, Inc., (collectively, "ATS"). ATS was in the business of supplying products and services for dental sterilizer testing in both the U.S. and Canada.

In April 2016, we completed a business combination (the "Pulse Acquisition") whereby we acquired substantially all of the assets (other than cash and accounts receivable) and certain liabilities of Pulse Scientific, Inc.'s ("Pulse") business segment associated with the distribution of our biological indicator products.

Market Factors

Product sales are dependent on several factors, including general economic conditions, both domestic and international, customer capital spending trends, competition, introduction of new products, and acquisitions. Sterilization and Disinfection Control products and most products in our Cold Chain Packaging Division are disposable and are used on a routine basis, thus product sales are less sensitive to general economic conditions. Instrument products and Cold Chain Monitoring products and systems have a longer life, and their purchase by our customers is somewhat discretionary, so sales are more sensitive to general economic conditions. Service demand is driven by our customers' quality control and regulatory environments, which require periodic repair and recalibration or certification of our instrument products and cold chain monitoring systems. We typically evaluate costs and pricing annually. Our policy is to price our products competitively and, where possible, we pass along cost increases in order to maintain our margins.

Manufacturing and Materials

We conduct product development, manufacturing and support of our Instruments Division products from our facilities in Lakewood, Colorado, Hanover Germany, and Butler, New Jersey. Our instrument products are manufactured primarily by assembling the products from purchased components and calibrating the final products prior to release. The manufacture and support of our Cold Chain Monitoring Division systems are conducted from our facility in Lakewood, Colorado and primarily involve assembling the systems from purchased components and calibrating the sensors, either at the factory or at the point of installation at the customer's facility. Our Point Six Wireless® brand sensors are manufactured by third party suppliers. Facilities in Bozeman, Montana, and Munich, Germany are used to manufacture the substantial majority of the Sterilization and Disinfection Control Division's products, although one product line is manufactured in our Lakewood, Colorado facility. Our biological indicator products are manufactured by growing microbiological spores from raw materials, forming the finished products and testing the finished biological indicators using established quality control tests. Our dental sterilizer testing products are assembled into kits containing biological indicator spore strips and our microbiological laboratory tests these kits when they are returned to us to determine the effectiveness of our customer's sterilization process. Our cleaning indicator products are manufactured by inoculating a test soil onto a stainless-steel coupon. The test soil is designed to mimic the challenge of removing blood and tissue from surgical instruments and evaluates the effectiveness of our customer's cleaning process. Our Cold Chain Packaging products are manufactured by third party suppliers.

Most of the materials and components used in our product lines are available from a number of different suppliers. We generally maintain multiple sources of supply, but we are dependent on a single source for certain items. We believe that in most cases, alternative sources could be developed, if required, for present single supply sources. Although our dependence on these single supply sources may involve a degree of risk, to date we have been able to source sufficient stock to meet our production requirements. During the year ended March 31, 2019, we had no raw material shortages that had a material effect on the business.

Marketing and Distribution

Domestically, we generate sales to end users through our sales and marketing staff and distributors. Internationally, we use approximately 220 distributors throughout Europe, Africa, Asia, South America, Australia, Canada and Central America for sales and distribution. Sales promotions include trade shows, direct mail campaigns, internet and other digital forms of advertising.

Our Sterilization and Disinfection Control Division commercial efforts focus on providing quality test products in a variety of different formats, which minimize incubation and test result time and provide the highest levels of sterility assurance. Customers include hospitals, dental offices, contract sterilization providers and various industrial users involved in pharmaceutical and medical device manufacturing.

Our Instruments Division commercial efforts focus on offering quality products to our customers that will aid them in containing cost, improving the quality of their products and services, and helping them meet their regulatory requirements. Customers include dialysis clinics, pharmaceutical, medical device and food and beverage manufacturers, contract sterilizing services, governmental agencies and environmental testing labs.

Our Cold Chain Monitoring Division commercial efforts focus on providing quality systems to our customers that monitor various environmental parameters such as temperature, humidity and differential pressure to ensure that critical storage and processing conditions are maintained. Customers include hospitals, pharmaceutical and medical device manufacturers, blood banks, pharmacies and laboratory environments.

Our Cold Chain Packaging Division commercial efforts focus on providing thermal packaging products such as coolers, boxes, insulation materials and phase-change products to control temperature during transport. Customers primarily include pharmaceutical manufacturers and distribution companies.

As of and for the years ended March 31, 2019, 2018 and 2017, no individual customer represented more than 10% of our accounts receivable or revenues.

Competition

Our products compete across several industries with a variety of companies, many of which are well established, with substantially greater capital resources and sales forces and larger research and development capabilities. Furthermore, many of these companies have established product lines and a significant operating history. Accordingly, we may be at a competitive disadvantage with some competitors due to their respective size and market presence.

Companies with which our Instruments Division products compete include the Myron L Company, Amphenol Corporation, Ellab, TMI Orion, Fortive Corporation, Thermo Fisher Scientific, Inc., Mecmesin, Steinfurth, Met One Instruments, Inc. and Tisch Environmental. Our Sterilization and Disinfection Control Division products compete with 3M, Crosstex, Terragene, and Steris, among others. Our Cold Chain Monitoring Division systems compete with Rees Scientific Corporation, Amphenol Corporation and Cooper-Atkins/Emmerson, among others. Our Cold Chain Packaging Division products compete with Sonoco Thermosafe, Cold Chain Technologies, Inc., Pelican Biothermal LLC and Cryopak.

Backlog

We define backlog as firm orders from customers for products and services where the order will be fulfilled within the next 12 months. Backlog as of March 31, 2019 and 2018 was approximately $8.3 million and $10.2 million, respectively.

Research and Development

We are committed to an active research and development program dedicated to innovating new products and improving the quality and performance of our existing products.

Intellectual Property

We own numerous patents, trademarks, and customer lists, each of which are important to the various facets of our business. None of the intellectual property that we own, taken alone of as a group, is so important, however, that its loss would significantly affect our operations as a whole. Where appropriate, we seek patent protection for inventions and developments made by our personnel that are incorporated into our products or otherwise fall within our fields of interest.

Government Regulation

While our quality system and manufacturing processes are generally the same throughout the Instruments Division, specific products are compliant under ISO 13485, ISO 17025, ISO 9001 and certain U.S. Federal regulations. Compliance requires us to obtain third party certification for certain products.

Several products in both the Instruments and Sterilization and Disinfection Control Divisions are medical devices subject to the provisions of the Federal Food, Drug and Cosmetic Act, as amended by the Medical Device Amendments of 1976 (hereinafter referred to as the "Act"). The Act requires any company proposing to market a medical device to notify the Food and Drug Administration ("FDA") of its intention at least 90 days before doing so and in such notification must advise the FDA as to whether the device is substantially equivalent to a device marketed prior to May 28, 1976. We have received permission from the FDA to market all of our products requiring such permission.

Some of our facilities are subject to FDA regulations and inspections, which may be time-consuming and costly. This includes on-going compliance with the FDA's current Good Manufacturing Practices regulations that require, among other things, the systematic control of manufacture, packaging and storage of products intended for human use. Failure to comply with these practices renders the product adulterated and could subject us to an interruption of manufacturing and selling these products, and possible regulatory action by the FDA.

The manufacture and sale of medical devices is also regulated by some states. Although there is substantial overlap between state regulations and the regulations of the FDA, some state laws may apply. We do not anticipate that complying with state regulations, however, will create any significant problems. Foreign countries also have laws regulating medical devices sold in those countries, which may cause us to expend additional resources on compliance.

We are also subject to anti-bribery laws in the U.S. and abroad, and to various U.S. export/import control and economic sanctions laws.

Government Contracts

Although we transact business with various government agencies, no government contract is of such magnitude that a renegotiation of profits or termination of the contract at the election of the government agency would have a material adverse effect on our financial results

Working Capital

We maintain an adequate level of working capital to support our business needs. There are no unusual industry practices or requirements relating to working capital items. In addition, our sales and payment terms are generally similar to those of our competitors.

Employees

On March 31, 2019, we had 347 employees, of which 167 are employed for manufacturing and quality assurance, 29 for research and development and engineering, 94 for sales and marketing, and 57 for administration.

Available Information

Our 10-K reports, along with all other reports and amendments filed with or furnished to the Securities and Exchange Commission ("SEC"), are publicly available free of charge on the Investor Relations section of our website at mesalabs.com/investor-relations.com or at www.sec.gov as soon as reasonably practicable after these materials are filed with or furnished to the SEC. Our corporate governance policies, code of ethics and Board committee charters and policies are also posted on the Investor Relations section of our website. The information on our website is not part of this or any other report Mesa Laboratories, Inc. files with, or furnishes to, the SEC.

ITEM 1A. RISK FACTORS

In addition to the other information set forth in this Annual Report on Form 10-K and other documents we filed with the SEC, you should carefully consider the following factors, which could materially affect our business, financial condition or results of operations in future periods. The risks and uncertainties described below are those that we have identified as material, but these are not the only risks and uncertainties facing us. Our business is also subject to general risks and uncertainties that affect many other companies, such as market conditions, economic conditions, geopolitical events, changes in laws, regulations or accounting rules, fluctuations in interest rates, terrorism, wars or conflicts, major health concerns, natural disasters or other disruptions of expected business conditions. Additional risks and uncertainties not currently known to us or that we currently believe are immaterial also may impair our business, including our results of operations, liquidity and financial condition.

Conditions in the global economy, the markets we serve, and the financial markets may adversely affect our business and financial statements.

Our business is sensitive to general economic conditions. Slower global economic growth, actual or anticipated default on sovereign debt, volatility in the currency and credit markets, high levels of unemployment or underemployment, reduced levels of capital expenditures, changes or anticipation of potential changes in government fiscal, tax, trade and monetary policies, changes in capital requirements for financial institutions, government deficit reduction and budget negotiation dynamics, sequestration, austerity measures and other challenges that affect the global economy adversely could adversely affect us and our distributors, customers and suppliers, including having the effect of:

- reducing demand for our products and services, limiting the financing available to our customers and suppliers, increasing order cancellations and resulting in longer sales cycles;
- increasing the difficulty in collecting accounts receivable and the risk of excess and obsolete inventories;
- increasing price competition in our served markets;
- supply interruptions, which could disrupt our ability to produce our products;
- increasing the risk of impairment of goodwill and other long-lived assets, and the risk that we may not be able to fully recover the value of other assets such as tax assets;
- increasing the risk that counterparties to our contractual arrangements will become insolvent or otherwise unable to fulfill their contractual obligations, which could increase the risks identified above; and
- adversely impacting market sizes and growth rates.

There can be no assurances that the capital markets will be available to us, or that the lenders participating in our revolving credit facility will be able to provide financing in accordance with their contractual obligations.

If growth in the global economy or in any of the markets we serve slows for a significant period, if there is significant deterioration in the global economy or such markets or if improvements in the global economy do not benefit the markets we serve, our business and results of operations could be adversely affected.

Significant developments or uncertainties stemming from the U.S. administration, including changes in U.S. trade policies, tariffs, and the reaction of other countries thereto, could have an adverse effect on our business.

Changes, potential changes or uncertainties in U.S. social, political, regulatory and economic conditions or laws and policies governing foreign trade, manufacturing, and development and investment in the territories and countries where we or our customers operate or governing the health care system could adversely affect our business and financial statements. For example, the U.S. administration has increased tariffs on certain goods imported in the United States, raised the possibility of imposing significant, additional tariff increases and called for substantial changes to trade agreements. These could further adversely affect our business and financial statements.

Our growth could suffer if the markets into which we sell our products and services decline, do not grow as anticipated or experience cyclicality.

Our growth depends in part on the growth of the markets which we serve, and visibility into our markets is limited (particularly for markets into which we sell through distributors). Our quarterly results of operations depend substantially on the volume and timing of orders received during the quarter, which are difficult to forecast. Any decline or lower than expected growth in our served markets could diminish demand for our products and services, which could adversely affect our results of operations and financial statements. Certain of our businesses operate in industries that may experience periodic, cyclical downturns. In addition, in certain of our businesses, demand depends on customers' capital spending budgets as well as government funding policies, and matters of public policy and government budget dynamics, as well as product and economic cycles which can affect the spending decisions of these entities. Demand for our products and services is also sensitive to changes in customer order patterns, which may be affected by announced price changes, new product introductions, competition and customer inventory levels. Any of these factors could adversely affect our growth and results of operations in any given period.

We face competition and if we are unable to compete effectively, we may experience decreased demand and decreased market share. Even if we compete effectively, we may be required to reduce prices for our products and services.

The markets for our current and potential products are competitive. Because of the range of products and services we sell and the variety of markets we serve, we encounter a wide variety of competitors, including several that possess both larger sales forces and greater capital resources. In order to compete effectively, we must maintain longstanding relationships with major customers, continue to grow our business by establishing relationships with new customers, develop new products and services to maintain and expand our brand recognition and leadership position in various product and service categories, and penetrate new markets, including in developing countries and high growth markets. In addition, significant shifts in industry market share can occur in connection with product problems, safety alerts and publications about products, reflecting the competitive significance of product quality, product efficacy and quality systems in our industries. Our failure to compete effectively and/or pricing pressures resulting from competition may adversely impact our results of operations, and our expansion into new markets may result in greater-than-expected risks, liabilities and expenses.

Changing industry trends may affect our results of operations.

Various changes within the industries we serve may limit future demand for our products and may include the following:

- changes in dialysis reimbursements;
- mergers within the dialysis provider industry, concentrating our medical meter and solutions sales with a few, large customers;
- mergers within other industries we serve, making us more dependent upon fewer, larger customers for our sales;
- decreased product demand, driven by changes in our customers' regulatory environments or standard industry practices; and
- price competition for key products.

Our growth depends in part on the timely development and commercialization, and customer acceptance, of new and enhanced products and services based on technological innovation and the efforts of third party distributors.

Our growth depends on the acceptance of our products and services in the marketplace, the penetration achieved by the companies which we sell to, and rely on to distribute and represent our products, and our ability to introduce new and innovative products that meet the needs of the various markets we serve. We can offer no assurance that we will be able to continue to introduce new and enhanced products, that the products we introduce, or have introduced, will be widely accepted by the marketplace, or that the companies that we contract with to distribute and represent our products will continue to successfully penetrate our various markets. Our failure to continue to introduce new and enhanced products or gain widespread acceptance of our products and services could adversely affect our financial statements. In order to successfully commercialize our products and services in new markets, we need to enter into distribution arrangements with companies that can successfully distribute and represent our products and services into various markets.

If we fail to accurately predict future customer needs and preferences or fail to produce viable technologies, we may invest heavily in research and development of products and services that do not lead to significant revenues, which could adversely affect our profitability. Even if we successfully innovate and develop new and enhanced products and services, we may incur substantial costs in doing so, and our profitability may suffer. Competitors may also develop after-market services and parts for our products which attract customers and adversely affect our return on investment for new products.

A substantial portion of our senior management team is new, which may pose challenges, and our success may depend on the continued service and availability of key personnel.

Gary Owens was promoted to Chief Executive Officer in September 2017, and we added a new Senior Vice President of Commercial Operations, Greg DiNoia, in November 2017. These officers have, in turn, hired a substantial number of new direct reports, and as a result, our senior management team is relatively new and may face challenges working together as a unit, aligning on strategic priorities and objectives, or integrating their new teams with one another. Our Board of Directors has experienced recent changes as well, including the addition of Mr. Owens, as well as David Perez and Jenny Alltoft, and the departure of Stu Campbell and Michael Brooks, and these changes may add to the challenges inherent in assimilating a new management team. Failure to meet these challenges successfully may adversely impact our operations, business results or long-term growth prospects. Each of our executive officers is an at-will employee, and any turnover among our executive officers may disrupt our progress in implementing our business strategies or otherwise negatively impact our growth prospects or future operating results. Additionally, if our company culture or operations were to deteriorate following any additional changes in leadership, we may be adversely impacted as well.

Our reputation, ability to do business and financial statements may be impaired by improper conduct by any of our employees, agents or business partners.

We cannot provide assurance that our internal controls and compliance systems will always protect us from acts committed by employees, agents or business partners of ours (or of businesses we acquire or partner with) that would violate U.S. and/or non-U.S. laws, including the laws governing payments to government officials, bribery, fraud, kickbacks and false claims, pricing, sales and marketing practices, conflicts of interest, competition, export and import compliance, money laundering and data privacy. In particular, the U.S. Foreign Corrupt Practices Act and similar anti-bribery laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business. Any such improper actions or allegations of such acts could damage our reputation and subject us to civil or criminal investigations in the United States and in other jurisdictions and related shareholder lawsuits, could lead to substantial civil and criminal, monetary and non-monetary penalties and could cause us to incur significant legal and investigatory fees. In addition, the government may seek to hold us liable for violations committed by companies in which we invest or that we acquire. We also rely on our suppliers to adhere to our supplier standards of conduct and material violations of such standards of conduct could occur that could have a material effect on our business, reputation and financial statements.

Certain of our businesses are subject to extensive regulation by the U.S. Food and Drug Administration ("FDA") and by comparable agencies of other countries. Failure to comply with those regulations would likely adversely affect our reputation and our financial statements.

Certain of our products are medical devices and other products that are subject to regulation by the U.S. FDA, by other federal and state governmental agencies, by comparable agencies of other countries and regions and by regulations governing radioactive or other hazardous materials. We cannot guarantee that we will be able to obtain regulatory clearance (such as 510(k) clearance) or approvals for our new products or modifications to (or additional indications or uses of) existing products within our anticipated timeframe or at all, and if we do obtain such clearance or approval it may be time-consuming, costly and subject to restrictions. Our ability to obtain such regulatory clearances or approvals will depend on many factors and the process for obtaining such clearances or approvals could change over time and may require the withdrawal of products from the market until such clearances are obtained.

Failure to comply with applicable regulations could result in the adverse effects referenced below under "Our businesses are subject to extensive regulation; failure to comply with those regulations could adversely affect our financial statements and our business, including our reputation." Compliance with regulations may also require us to incur significant expenses.

The health care industry and related industries that we serve have undergone, and are in the process of undergoing, significant changes in an effort to reduce costs, which could adversely affect our financial statements.

The health care industry and related industries that we serve have undergone, and are in the process of undergoing, significant changes in an effort to reduce costs, including the following:

- Many of the end-users to whom our customers supply products, rely on government funding of and reimbursement for health care products and services and research activities. The U.S. Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act (collectively, the "PPACA"), health care austerity measures in other countries and other potential health care reform changes and government austerity measures have reduced and may further reduce the amount of government funding or reimbursement available to customers or end-users of our products and services and/or the volume of medical procedures using our products and services. Global economic uncertainty or deterioration can also adversely impact government funding and reimbursement; and
- the PPACA imposes on medical device manufacturers, such as Mesa, a 2.3% excise tax on U.S. sales of certain medical devices. The excise tax has been suspended until the end of calendar year 2019, we will be subject to the tax beginning in calendar year 2020.

These changes as well as other impacts from market demand, government regulations, third-party coverage and reimbursement policies and societal pressures have started changing the way healthcare is delivered, reimbursed and funded and may cause participants in the health care industry and related industries that we serve to purchase fewer of our products and services, reduce the prices they are willing to pay for our products or services, reduce the amounts of reimbursement and funding available for our products and services from governmental agencies or third-party payors, affect the acceptance rate of new technologies and products and increase our compliance and other costs. All of the factors described above could adversely affect our business and financial statements.

Any inability to consummate acquisitions at our historical rate and at appropriate prices could negatively impact our growth rate and stock price.

Our ability to grow revenues, earnings and cash flows at or above our historic rates depends in part upon our ability to identify and successfully acquire and integrate businesses at appropriate prices and realize anticipated synergies. We may not be able to consummate acquisitions at rates similar to the past, which could adversely impact our growth rate and our stock price. Promising acquisitions are difficult to identify and complete for a number of reasons, including high valuations, competition among prospective buyers, the availability of affordable funding in the capital markets and the need to satisfy applicable closing conditions. In addition, competition for acquisitions may result in higher purchase prices. Changes in accounting or regulatory requirements, or instability in the credit markets, could also adversely impact our ability to consummate acquisitions.

Our acquisition of businesses could negatively impact our results of operations.

As an important part of our business strategy, we acquire businesses, some of which may be material. Please see "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" for additional details. These acquisitions involve a number of financial, accounting, managerial, operational, legal, compliance and other risks and challenges, including the following, any of which could adversely affect our business and our results of operations:

- any business, technology, service or product that we acquire could under-perform relative to our expectations and the price that we paid for it, or not perform in accordance with our anticipated timetable, or we could fail to make such business profitable;
- we may incur or assume significant debt in connection with our acquisitions;
- acquisitions could cause our results of operations to differ from our own or the investment community's expectations in any given period, or over the long-term;
- pre-closing and post-closing acquisition-related earnings charges could adversely impact our results of operations in any given period, and the impact may be substantially different from period to period;
- acquisitions could create demands on our management, operational resources and financial and internal control systems that we are unable to effectively address, or for which we may incur additional costs;
- we could experience difficulty in integrating personnel, operations, financial and other systems, and in retaining key employees and customers;
- we may be unable to achieve cost savings or other synergies anticipated in connection with an acquisition;
- we may assume by acquisition unknown liabilities, known contingent liabilities that become realized, known liabilities that prove greater than anticipated, internal control deficiencies or exposure to regulatory sanctions resulting from the acquired company's activities. The realization of any of these liabilities or deficiencies may increase our expenses, adversely affect our financial position or cause us to fail to meet our public financial reporting obligations;
- in connection with acquisitions, we often enter into post-closing financial arrangements such as purchase price adjustments, earn-out obligations and indemnification obligations, which may have unpredictable financial results; and
- as a result of our acquisitions, we have recorded significant goodwill and intangible assets on our consolidated balance sheet. If we are not able to realize the value of these assets, we may be required to incur charges relating to the impairment of these assets, which could materially impact our financial statements.

The indemnification provisions of acquisition agreements by which we have acquired companies may not fully protect us and as a result we may face unexpected liabilities.

Certain of the acquisition agreements by which we have acquired companies require the former owners to indemnify us against certain liabilities related to the operation of the company before we acquired it. In most of these agreements, however, the liability of the former owners is limited, and certain former owners may be unable to meet their indemnification responsibilities. We cannot guarantee that these indemnification provisions will protect us fully or at all, and as a result we may face unexpected liabilities that could adversely impact our results of operations.

Divestitures or other dispositions could negatively impact our business.

We continually assess the strategic fit of our existing businesses and may divest or otherwise dispose of businesses that are deemed not to fit with our strategic plan or are not achieving the desired return on investment. Transactions such as these pose risks and challenges that could negatively impact our business and our results of operations. For example, when we decide to sell or otherwise dispose of a business or assets, we may be unable to do so on satisfactory terms within our anticipated timeframe or at all, and even after reaching a definitive agreement to sell or dispose a business the sale may be subject to satisfaction of pre-closing conditions which may not become satisfied. In addition, divestitures or other dispositions may dilute our earnings per share, have other adverse financial, tax, and accounting impacts and distract management, and disputes may arise with buyers. We expect to exit our Cold Chain Packaging Division during the year ending March 31, 2020, which could negatively impact our financial statements. Refer to Note 5. "Goodwill and Long-Lived Assets" in our Consolidated Financial Statements included in Item 8. *Financial Statements and Supplementary Data.*

The contingent consideration associated with certain of our acquisitions may negatively impact our available cash and financial statements.

As part of certain of our acquisitions, we are required to make contingent consideration payments based on defined growth metrics over a specified earn-out period. The ultimate amount we pay may differ significantly from the liability we recorded at the time of the acquisition. If we are required to pay more than the amount initially recorded, the difference is recorded as expense in our consolidated statements of operations, which could materially impact our financial statements.

A significant disruption in, or breach in security of, our information technology systems or data or violation of data privacy laws could adversely affect our business, reputation and financial statements.

We rely on information technology systems, some of which are provided and/or managed by third-parties, to process, transmit and store electronic information (including sensitive data such as confidential business information and personally identifiable data relating to employees, customers, other business partners and patients), and to manage or support a variety of critical business processes and activities (such as receiving and fulfilling orders, billing, collecting and making payments, shipping products, providing services and support to customers and fulfilling contractual obligations). In addition, some products or software we sell to customers may connect to our systems for maintenance or other purposes. These systems, products and services (including those we acquire through business acquisitions) may be damaged, disrupted or shut down due to attacks by computer hackers, computer viruses, ransomware, human error or malfeasance, power outages, hardware failures, telecommunication or utility failures, catastrophes or other unforeseen events, and in any such circumstances our system redundancy and other disaster recovery planning may be ineffective or inadequate. Attacks may also target hardware, software and information installed, stored or transmitted in our products after such products have been purchased and incorporated into third-party products, facilities or infrastructure. Security breaches of systems provided or enabled by us, regardless of whether the breach is attributable to a vulnerability in our products or services, could result in the misappropriation, destruction or unauthorized disclosure of confidential information or personal data belonging to us or to our employees, partners, customers, patients or suppliers. Like most multinational corporations, our information technology systems have been subject to computer viruses, malicious codes, unauthorized access and other cyber-attacks and we expect the sophistication and frequency of such attacks to continue to increase. Unauthorized tampering, adulteration or interference with our products may also adversely affect product functionality and result in loss of data, risk to patient safety and product recalls or field actions. Any of the attacks, breaches or other disruptions or damage described above could interrupt our operations or the operations of our customers and partners, delay production and shipments, result in theft of our and our customers' intellectual property and trade secrets, damage customer, patient, business partner and employee relationships and our reputation or result in defective products or services, legal claims and proceedings, liability and penalties under privacy laws and increased costs for security and remediation, each of which could adversely affect our business, reputation and financial statements.

If we are unable to maintain reliable information technology systems and appropriate controls with respect to global data privacy and security requirements and prevent data breaches, we may suffer adverse regulatory consequences, business consequences and litigation. As a global organization, we are subject to data privacy and security laws, regulations, and customer-imposed controls in numerous jurisdictions as a result of having access to and processing confidential, personal and/or sensitive data in the course of our business. The new EU General Data Protection Regulation, which became effective in May 2018, has imposed significantly stricter requirements in how we collect and process personal data, including, among other things, a requirement for prompt notice of data breaches to data subjects and supervisory authorities in certain circumstances and significant fines for non-compliance. Government enforcement actions can be costly and interrupt the regular operation of our business, and data breaches or violations of data privacy laws can result in fines, reputational damage and civil lawsuits, any of which may adversely affect our business, reputation and financial statements. In addition, compliance with the varying data privacy regulations around the world may require significant expenditures, and may require changes in our products or business models that increase competition or reduce revenues.

If we do not or cannot adequately protect our intellectual property, or if third parties infringe our intellectual property rights, we may suffer competitive injury or expend significant resources enforcing our rights.

We own patents, trademarks, copyrights, trade secrets and other intellectual property and licenses to intellectual property owned by others, which in the aggregate are important to our business. The intellectual property rights that we obtain, however, may not be sufficiently broad or otherwise may not provide us a significant competitive advantage, and patents may not be issued for pending or future patent applications owned by or licensed to us. In addition, the steps that we and our licensors have taken to maintain and protect our intellectual property may not prevent it from being challenged, invalidated, circumvented or designed-around, particularly in countries where intellectual property rights are not highly developed or protected. In some circumstances, enforcement may not be available to us because an infringer has a dominant intellectual property position or for other business reasons, or countries may require compulsory licensing of our intellectual property. We also rely on nondisclosure and noncompetition agreements with employees, consultants and other parties to protect, in part, trade secrets and other proprietary rights. There can be no assurance that these agreements will adequately protect our trade secrets and other proprietary rights and will not be breached, that we will have adequate remedies for any breach, that others will not independently develop substantially equivalent proprietary information or that third parties will not otherwise gain access to our trade secrets or other proprietary rights. Our failure to obtain or maintain intellectual property rights that convey competitive advantage, adequately protect our intellectual property, detect or prevent circumvention or unauthorized use of such property, and the cost of enforcing our intellectual property rights, could adversely impact our competitive position and results of operations.

Our businesses are subject to extensive regulation; failure to comply with those regulations could adversely affect our financial statements and our business, including our reputation.

The process of obtaining and maintaining required regulatory approvals is lengthy, expensive and uncertain. Although we have not experienced any substantial regulatory delays to date, we can offer no assurance that delays will not occur in the future, which could have a significant adverse effect on our ability to introduce new products on a timely basis. Regulatory agencies periodically inspect our manufacturing facilities to ascertain compliance with "good manufacturing practices" and can subject approved products to additional testing and surveillance programs. Failure to comply with applicable regulatory requirements can, among other things, result in fines, suspension of regulatory approvals, product recalls, operating restrictions and criminal penalties. If we fail to comply with regulatory requirements it could have an adverse effect on our results of operations and financial condition.

Our restructuring actions could have long-term adverse effects on our business.

In the year ended March 31, 2019, we announced restructuring activities that impact our Canadian operations. These restructuring activities and our regular ongoing cost reduction activities (including in connection with the integration of acquired businesses) may reduce our available talent, assets and other resources and could slow improvements in our products and services, adversely affect our ability to respond to customers, particularly those in Canada, limit our ability to increase production quickly if demand for our products increases and trigger adverse public attention. In addition, delays in implementing planned restructuring activities, unexpected costs or failure to meet targeted improvements may diminish the operational or financial benefits we expect to realize from such actions. Any of the circumstances described above could adversely impact our business and financial statements.

We may be required to recognize additional impairment charges for our goodwill and other intangible assets.

As of March 31, 2019, the net carrying value of our goodwill and other intangible assets totaled $99.596 million, after recording a $4.774 million charge to impair certain goodwill and long-lived assets related to our Cold Chain Packaging Division during the third and fourth quarters of our year ended March 31, 2019 as a result of higher costs and lower sales in that business segment, as well as the loss of the segment's largest customer in the three months ended March 31, 2019. In accordance with generally accepted accounting principles, we periodically assess these assets for all segments to determine if they are impaired. Significant negative industry or economic trends, disruptions to our business, inability to effectively integrate acquired businesses, unexpected significant changes or planned changes in use of our assets, changes in the structure of our business, divestitures, market capitalization declines, or increases in associated discount rates may impair our goodwill and other intangible assets. Any charges relating to such impairments would adversely affect our financial statements in the periods recognized.

Foreign currency exchange rates may adversely affect our financial statements.

Sales and purchases in currencies other than the U.S. dollar expose us to fluctuations in foreign currencies relative to the U.S. dollar and may adversely affect our financial statements. Increased strength of the U.S. dollar increases the effective price of our products sold in U.S. dollars into other countries, which may require us to lower our prices or adversely affect sales to the extent we do not increase local currency prices. Decreased strength of the U.S. dollar could adversely affect the cost of materials, products and services we purchase overseas. Sales and expenses of our non-U.S. businesses are also translated into U.S. dollars for reporting purposes and the strengthening or weakening of the U.S. dollar could result in unfavorable translation effects. In addition, certain of our businesses may invoice customers in a currency other than the business' functional currency, and movements in the invoiced currency relative to the functional currency could also result in unfavorable translation effects. We also face exchange rate risk from our investments in subsidiaries owned and operated in foreign countries.

Product defects and unanticipated use or inadequate disclosure with respect to our products or services could adversely affect our business, reputation and our financial statements.

Manufacturing or design defects in, unanticipated use of, safety or quality issues (or the perception of such issues) with respect to, or inadequate disclosure of risks relating to the use of products and services that we make or sell (including items that we source from third parties) can lead to personal injury, property damage or other liability. These events could lead to recalls or safety alerts, result in the removal of a product or service from the market and result in product liability or similar claims being brought against us. Recalls, removals and product liability and similar claims (regardless of their validity or ultimate outcome) can results in significant costs, as well as negative publicity and damage to our reputation that could reduce demand for our products and services.

Catastrophic events or environmental conditions may disrupt our business.

A disruption or failure of our systems or operations because of a major weather event, cyber-attack, terrorist attack, or other catastrophic event could cause delays in completing sales, providing services or performing other mission-critical functions. A catastrophic event that results in the destruction or disruption of any of our critical business or IT systems could harm our ability to conduct normal business operations. Abrupt political change, terrorist activity, and armed conflict pose a risk of general economic disruption in affected countries, which may increase our operating costs or adversely affect our revenues. These conditions also may add uncertainty to the timing and budget for purchase/investment decisions by our customers and may result in supply chain disruptions for hardware manufacturers, either of which may adversely affect our revenues. The long-term effects of climate change on the global economy in general are unclear. Environmental regulations or changes in the supply, demand or available sources of energy may affect the availability or cost of goods and services, including natural resources, necessary to run our business. Changes in weather where we operate may increase the costs of powering and maintaining the equipment we need to produce our product lines.

Significant developments stemming from the United Kingdom's referendum decision could have an adverse effect on us.

In a referendum on June 23, 2016, voters in the United Kingdom ("UK") voted for the UK to exit the EU (referred to as Brexit). As it stands, the UK is expected to depart the EU on or before October 31, 2019, but the terms of its withdrawal and the nature of its future relationship with the EU are still being decided. This referendum has caused and may continue to cause political and economic uncertainty, including significant volatility in global stock markets and currency exchange rate fluctuations. Even if no agreement is reached, the UK's separation still becomes effective unless all EU members unanimously agree on an extension. Negotiations have commenced to determine the future terms of the UK relationship with the EU, including, among other things, the terms of trade between the UK and the EU. If no agreement is reached by October 31, 2019, the UK's membership in the EU could terminate under a so-called "hard Brexit". The effects of Brexit will depend on many factors, including any agreements that the UK makes to retain access to EU markets either during a transitional period or more permanently. Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the UK determines which EU laws to replace or replicate. In a "hard Brexit" scenario, there could be increased costs from re-imposition of tariffs on trade between the UK and EU, shipping delays because of the need for customs inspections and procedures, and temporary shortages of certain goods. In addition, trade and investment between the UK, the EU, the United States and other countries will be impacted by the fact that the UK currently operates under the EU's tax treaties. The UK will need to negotiate its own tax and trade treaties with countries all over the world, which could take years to complete. Any new regulations could add time and expense to the conduct of our business, as well as the process by which our products receive regulatory approval in the UK, the EU and elsewhere. Any of these factors could adversely affect customer demand, our relationships with customers and suppliers and our business and financial statements. For the year ended March 31, 2019, about 1% of our sales were derived from customers located in the UK, however, the impact of Brexit could also impact our sales and operations outside the UK.

Changes in accounting standards could affect our reported financial results.

New accounting standards or pronouncements that may become applicable to our Company from time to time, or changes in the interpretation of existing standards and pronouncements, could have a significant effect on our reported results of operations for the affected periods.

Changes in our tax rates or exposure to additional income tax liabilities or assessments could affect our profitability. In addition, audits by tax authorities could result in additional tax payments for prior periods.

We are subject to income taxes in the U.S. and in various non-U.S. jurisdictions. On December 22, 2017, the Tax Cuts and Jobs Act ("TCJA") was enacted. The TCJA significantly revises the U.S. federal corporate income tax law by, among other things, lowering the corporate income tax rate to 21%, implementing a territorial tax system, and imposing a one-time tax on unremitted cumulative non-U.S. earnings of foreign subsidiaries ("Transition Tax"). The U.S. Treasury Department and IRS continue to issue regulations with respect to implementing the TCJA and further regulations are expected to be issued.

Due to the potential for changes to tax laws and regulations or changes to the interpretation thereof (including regulations and interpretations pertaining to the TCJA), the ambiguity of tax laws and regulations, the subjectivity of factual interpretations, the complexity of our intercompany arrangements, uncertainties regarding the geographic mix of earnings in any particular period, and other factors, our estimates of effective tax rate and income tax assets and liabilities may be incorrect and our financial statements could be adversely affected. The impact of the factors referenced in the first sentence of this paragraph may be substantially different from period-to-period.

In addition, the amount of income taxes we pay is subject to ongoing audits by U.S. federal, state and local tax authorities and by non-U.S. tax authorities. If audits result in payments or assessments different from our reserves, our future results may include unfavorable adjustments to our tax liabilities and our financial statements could be adversely affected. Any further significant changes to the tax system in the United States or in other jurisdictions (including changes in the taxation of international income as further described below) could adversely affect our financial statements.

Changes in tax law relating to multinational corporations could adversely affect our tax position.

The U.S. Congress, government agencies in non-U.S. jurisdictions where we and our affiliates do business, and the Organisation for Economic Co-operation and Development ("OECD") have recently focused on issues related to the taxation of multinational corporations. One example is in the area of "base erosion and profit shifting," where profits are claimed to be earned for tax purposes in low-tax jurisdictions, or payments are made between affiliates from a jurisdiction with high tax rates to a jurisdiction with lower tax rates. The OECD has released several components of its comprehensive plan to create an agreed set of international rules for addressing base erosion and profit shifting. As a result, the tax laws in the United States and other countries in which we do business could change on a prospective or retroactive basis, and any such changes could adversely affect our business and financial statements.

Our business is subject to sales tax in numerous states.

The application of indirect taxes, such as sales tax, is a complex and evolving issue. A company is required to collect and remit state sales tax from certain of its customers if that company is determined to have "nexus" in a particular state. The determination of nexus varies by state and often requires knowledge of each jurisdiction's tax case law. The application and implementation of existing, new or future laws could change the states in which we are required to collect and remit sales taxes. If any jurisdiction determines that we have "nexus" in additional locations that we have not contemplated, it could have an adverse effect on our financial statements.

We are subject to the possibility of a variety of litigation and other legal and regulatory proceedings in the course of our business that could adversely affect our financial statements.

We are subject to the possibility of a variety of litigation and other legal and regulatory proceedings incidental to our business, including claims for damages arising out of the use of products or services and claims relating to intellectual property matters, employment matters, tax matters, commercial disputes, marketing matters, competition and sales and trading practices, environmental matters, personal injury, insurance coverage and acquisition or divestiture-related matters, as well as regulatory investigations or enforcement. We may also become subject to lawsuits as a result of past or future acquisitions or as a result of liabilities retained from, or representations, warranties or indemnities provided in connection with, divested businesses. Any of these lawsuits may include claims for compensatory damages, punitive and consequential damages and/or injunctive relief. The defense of these lawsuits may divert our management's attention, we may incur significant expenses in defending these lawsuits, and we may be required to pay damage awards or settlements or become subject to equitable remedies that could adversely affect our operations and financial statements. Moreover, any insurance or indemnification rights that we may have may be insufficient or unavailable to protect us against such losses. In addition, developments in proceedings in any given period may require us to adjust the loss contingency estimates that we have recorded in our financial statements, record estimates for liabilities or assets previously not susceptible of reasonable estimates or pay cash settlements or judgments. Any of these developments could adversely affect our financial statements in any given period. We cannot make assurances that our liabilities in connection with litigation and other legal regulatory proceedings will not exceed our estimates or adversely affect our financial statements and business. Please see Note 12. "Commitments and Contingencies" of Notes to Consolidated Financial Statements contained in Item 8. *Financial Statements and Supplementary Data* for additional discussion.

Defects and unanticipated use or inadequate disclosure with respect to our products or services (including software), or allegations thereof, could adversely affect our business, reputation and financial statements.

Manufacturing or design defects or "bugs" in, unanticipated use of, safety or quality issues (or the perception of such issues) with respect to, "off label" use of, or inadequate disclosure of risks relating to the use of products and services that we make or sell (including items that we source from third-parties) can lead to property damage, loss of profits or other liability. These events could lead to recalls or safety alerts, result in the removal of a product or service from the market and result in product liability or similar claims being brought against us. Recalls, removals and product liability and similar claims (regardless of their validity or ultimate outcome) can result in significant costs, as well as negative publicity and damage to our reputation that could reduce demand for our products and services.

The manufacture of many of our products is a highly exacting and complex process, and if we directly or indirectly encounter problems manufacturing products, our reputation, business and financial statements could suffer.

The manufacture of many of our products is a highly exacting and complex process, due in part to strict regulatory requirements. Problems may arise during manufacturing for a variety of reasons, including equipment malfunction, failure to follow specific protocols and procedures, problems with raw materials, natural disasters and environmental factors, and if not discovered before the product is released to market could result in recalls and product liability exposure. Because of the time required to approve and license certain regulated manufacturing facilities and other stringent regulations of the FDA and similar agencies regarding the manufacture of certain of our products, an alternative manufacturer may not be available on a timely basis to replace such production capacity. Any of these manufacturing problems could result in significant costs, liability and lost revenue, loss of market share as well as negative publicity and damage to our reputation that could reduce demand for our products.

We are utilizing variable rate financing.

As of March 31, 2019, we had $23 million in outstanding indebtedness which bears interest at either: (1) LIBOR, as defined, plus an applicable margin ranging from 1.5% to 2.5%; or (2) the alternate base rate ("ABR"), which is the greater of JPMorgan's prime rate or the federal funds effective rate or the overnight bank funding rate plus 0.5%. A change in interest rate market conditions could increase our interest costs in the future and may have an adverse effect on our results of operations.

Our indebtedness may limit our operations and our use of our cash flow, and any failure to comply with the covenants that apply to our indebtedness could adversely affect our liquidity and financial statements.

As of March 31, 2019, we had $23 million in outstanding indebtedness and, based on the remaining availability under our Credit Facility, we have the ability to incur an additional $74 million of indebtedness. Our debt level and related debt service obligations can have negative consequences, including (1) requiring us to dedicate significant cash flow from operations to the payment of principal and interest on our debt, which would reduce the funds we would have available for other purposes such as acquisitions and capital investment; (2) reducing our flexibility in planning for or reacting to changes in our business and market conditions; and (3) exposing us to interest rate risk since our debt obligations are at variable rates. We may incur significantly more debt in the future, particularly to finance acquisitions.

If global credit market conditions deteriorate, our financial performance could be adversely affected.

The cost and availability of credit are subject to changes in the global economic environment. If conditions in major credit markets deteriorate, our ability to obtain debt financing or the terms associated with that debt financing may be negatively affected, which could affect our results of operations.

Adverse changes in our relationships with, or the financial condition, performance, purchasing patterns or inventory levels of, key distributors and other channel partners could adversely affect our financial statements.

Certain of our businesses sell a significant amount of their products to key distributors and other channel partners that have valuable relationships with customers and end-users. Some of these distributors and other partners also sell our competitors' products or compete with us directly, and if they favor competing products for any reason they may fail to market our products effectively. Adverse changes in our relationships with these distributors and other partners, or adverse developments in their financial condition, performance or purchasing patterns, could adversely affect our business and financial statements. The levels of inventory maintained by our distributors and other channel partners, and changes in those levels, can also negatively impact our results of operations in any given period.

If we cannot adjust our manufacturing capacity or the purchases required for our manufacturing activities to reflect changes in market conditions and customer demand, our profitability may suffer. In addition, our reliance upon sole or limited sources of supply for certain materials, components and services could cause production interruptions, delays and inefficiencies.

We purchase materials, components and equipment from third-parties for use in our manufacturing operations. Our results of operations could be adversely impacted if we are unable to adjust our purchases to reflect changes in customer demand and market fluctuations, including those caused by seasonality or cyclicality. During a market upturn, suppliers may extend lead times, limit supplies or increase prices. If we cannot purchase sufficient products at competitive prices and quality and on a timely enough basis to meet increasing demand, we may not be able to satisfy market demand, product shipments may be delayed, our costs may increase or we may breach our contractual commitments and incur liabilities.

In addition, some of our businesses purchase certain requirements from sole or limited source suppliers for reasons of quality assurance, regulatory requirements, cost effectiveness, availability or uniqueness of design. If these or other suppliers encounter financial, operating or other difficulties or if our relationship with them changes, we might not be able to quickly establish or qualify replacement sources of supply. The supply chains for our businesses could also be disrupted by supplier capacity constraints, bankruptcy or exiting of the business for other reasons, decreased availability of key raw materials or commodities and external events such as natural disasters, pandemic health issues, war, terrorist actions, governmental actions and legislative or regulatory changes. Any of these factors could result in production interruptions, delays, extended lead times and inefficiencies.

Because we cannot always immediately adapt our production capacity and related cost structures to changing market conditions, our manufacturing capacity may at times exceed or fall short of our production requirements. Any or all of these problems could result in the loss of customers, provide an opportunity for competing products to gain market acceptance and otherwise adversely affect our financial statements.

Changes in governmental regulations may reduce demand for our products or services or increase our expenses.

We compete in markets in which we and our customers must comply with federal, state, and other jurisdictional regulations, such as regulations governing health and safety, food and drugs, privacy and electronic communications. We develop, configure and market our products and services to meet customer needs created by these regulations. These regulations are complex, change frequently, have tended to become more stringent over time and may be inconsistent across jurisdictions. Any significant change in any of these regulations (or in the interpretation or application thereof) could reduce demand for, increase our costs of producing or delay the introduction of new or modified products and services, or could restrict our existing activities, products and services. In addition, in certain of our international markets our growth depends in part upon the introduction of new regulations. In these markets, the delay or failure of governmental and other entities to adopt or enforce new regulations, the adoption of new regulations which our products and services are not positioned to address or the repeal of existing regulations, could adversely affect demand. In addition, regulatory deadlines may result in substantially different levels of demand for our products and services from period-to-period.

International economic, political, legal, compliance and business factors could negatively affect our financial statements.

In the year ended March 31, 2019, approximately 37% of our sales were derived from customers outside the United States. In addition, many of our manufacturing operations, suppliers and employees are located outside the United States. Since our growth strategy depends in part on our ability to further penetrate markets outside the United States and increase the localization of our products and services, we expect to continue to increase our sales and presence outside the United States, particularly in the high-growth markets. Our international business (and particularly our business in high-growth markets) is subject to risks that are customarily encountered in non-U.S. operations, including:

- interruption in the transportation of materials to us and finished goods to our customers;
- differences in terms of sale, including potential for negotiation of different payment terms;
- local product preferences and product requirements;
- changes in a country's or region's political or economic conditions, such as the devaluation of particular currencies;
- trade protection measures, embargos and import or export restrictions and requirements;
- unexpected changes in laws or regulations, including changes in tax laws;
- capital controls and limitations on ownership and on repatriation of earnings and cash;
- limitations on legal rights and the ability to enforce such rights;
- difficulty in staffing and managing widespread operations;
- differing labor regulations;
- differing protection of intellectual property; and
- greater uncertainty, risk, expense and delay in commercializing products in certain foreign jurisdictions, including with respect to product and other regulatory approvals

Any of these risks could negatively affect our financial statements and business, including our growth rate.

We may face continuing challenges in complying with certain sections of the Sarbanes-Oxley Act.

Like many public companies, we face challenges in complying with the internal control requirements of the Sarbanes-Oxley Act (Section 404). Under current frameworks, compliance in areas such as separation of duties, information system controls, etc. may prove problematic for a smaller company with limited human resources. We may also be forced to incur on-going expense in order to comply with the law under current control frameworks or if the framework changes. These expenses may have a material adverse effect on our financial statements.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

As of June 3, 2019, our major facilities are as follows:

Location	Segment	Character	
Lakewood, Colorado	Administrative Offices	Global headquarters	Leased
Bozeman, Montana	Sterilization and Disinfection Control	Manufacturing, research and development, marketing and administration	Owned
Chassieu, France	Sterilization and Disinfection Control	Marketing and administration	Leased
Munich, Germany	Sterilization and Disinfection Control	Manufacturing, research and development, marketing and administration	Leased
Traverse City, Michigan	Sterilization and Disinfection Control	Marketing and administration	Leased
Butler, New Jersey	Instruments	Manufacturing, research and development, marketing and administration	Leased
Hanover, Germany	Instruments	Manufacturing, research and development, marketing and administration	Leased
Lakewood, Colorado	Instruments, Cold Chain Monitoring	Manufacturing, research and development, marketing and administration	Owned
Addison, Texas	Cold Chain Monitoring	Marketing and administration	Leased
Markham, Canada	Cold Chain Packaging, Cold Chain Monitoring	Manufacturing, research and development, marketing and administration	Leased

ITEM 3. LEGAL PROCEEDINGS

For information regarding legal proceedings, refer to Note 12. "Commitments and Contingencies" in our Consolidated Financial Statements included in Item 8. *Financial Statements and Supplementary Data*.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded on the Nasdaq Global Market ("Nasdaq") under the symbol "MLAB."

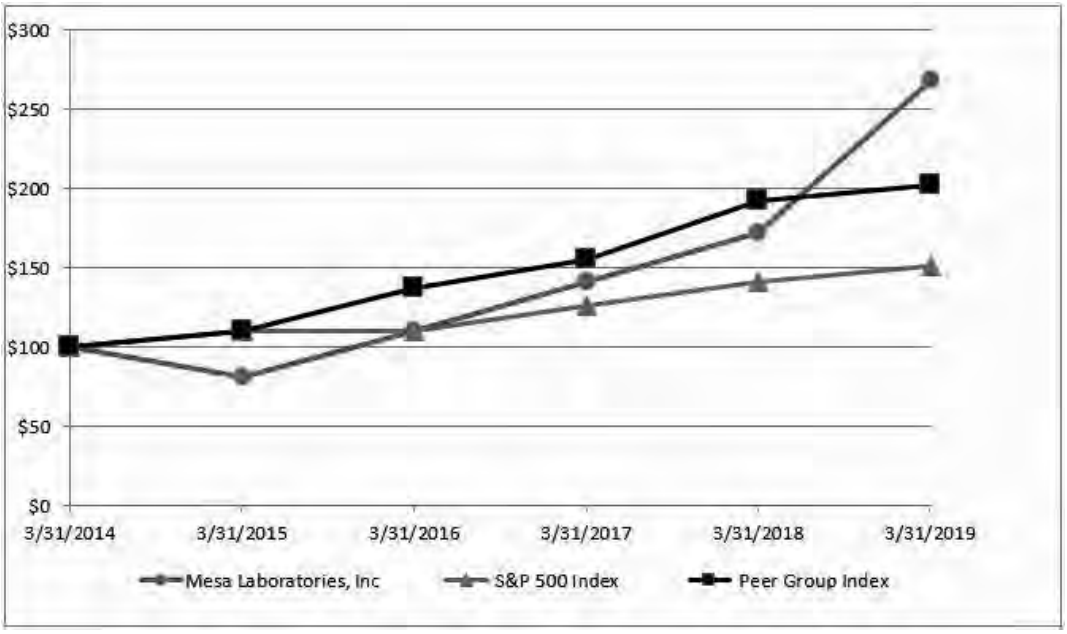
While we have paid dividends to holders of our common stock on a quarterly basis since 2003, the declaration and payment of future dividends will depend on many factors, including, but not limited to, our earnings, financial condition, business development needs and regulatory considerations, and is at the sole discretion of our Board of Directors.

As of March 31, 2019, there were 92 record holders of our common stock. This amount does not include "street name" holders or beneficial holders of our common stock, whose holders of record are banks, brokers and other financial institutions.

During the year ended March 31, 2019, we did not sell any equity securities that were not registered under the Securities Act of 1933, as amended.

On November 7, 2005, our Board of Directors adopted a share repurchase plan which allows for the repurchase of up to 300,000 of our common shares. This plan will continue until the maximum is reached or the plan is terminated by further action of the Board of Directors. We made no repurchases of our common stock, during the years ended March 31, 2019, March 31, 2018, or March 31, 2017. As of March 31, 2019, 137,514 shares remained available to repurchase pursuant to the repurchase plan.

Set forth below is a line graph comparing, for the period March 31, 2014 through March 31, 2019, the cumulative total shareholder return on our common stock against the cumulative total return of (a) the S&P Composite Stock Index and (b) a self-selected peer group, comprised of the following companies: Danaher Corp., ARCA Biopharma, Inc., Steris Corp., Utah Medical Products, Inc., Cantel Medical Corp., Fortive Corporation, Merit Medical Systems, Inc., Transcat Inc., Electro-Sensors Inc., and Rudolph Technologies Inc. The graph shows the value at March 31 of each year, assuming an original investment of $100 in each and reinvestment of cash dividends.



ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data should be read in conjunction with "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and Consolidated Financial Statements and notes thereto contained in Item 8. *Financial Statements and Supplementary Data* of this report.

	As of and for the Year Ended March 31, (in thousands, except per share data)				
	2019	2018	2017	2016	2015
Cash and cash equivalents	$ 10,185	$ 5,469	$ 5,820	$ 5,695	$ 2,034
Total assets	$ 156,767	$ 164,101	$ 171,733	$ 160,748	$ 117,320
Long-term debt, net of debt issuance costs and current portion	$ 20,613	$ 44,635	$ 53,675	$ 42,250	$ 23,250
Cash dividends declared per share	$ 0.64	$ 0.64	$ 0.64	$ 0.64	$ 0.64
Working capital	$ 9,962	$ 14,698	$ 19,218	$ 13,215	$ 14,965
Average return on:					
Stockholder investments [1]	7%	(3%)	12%	14%	14%
Assets	5%	(2%)	7%	8%	9%
Invested capital [2]	6%	(2%)	8%	10%	11%
Revenues	$ 103,135	$ 96,179	$ 93,665	$ 84,659	$ 71,330
Gross profit	$ 60,916	$ 54,619	$ 53,239	$ 51,413	$ 43,392
Gross margin	59%	57%	57%	61%	61%
Operating income	$ 9,781	$ 2,183	$ 16,313	$ 16,323	$ 15,864
Operating income margin	9%	2%	17%	19%	22%
Net income (loss)	$ 7,484	$ (2,962)	$ 11,183	$ 11,169	$ 9,583
Net income (loss) margin	7%	(3%)	12%	13%	13%
Earnings (loss) per share, diluted	$ 1.86	$ (0.79)	$ 2.91	$ 2.97	$ 2.63
Adjusted operating income [3]	$ 25,857	$ 24,603	$ 24,174	$ 23,437	$ 21,532
Adjusted operating income per diluted share	$ 6.41	$ 6.53	$ 6.29	$ 6.24	$ 5.90
Average return on:					
Adjusted invested capital [4]	21%	17%	17%	20%	24%

(1) Average return on stockholder investment is calculated by dividing total net income (loss) by the average of end and beginning of year total stockholders' equity.

(2) Average return on invested capital (invested capital = total assets – current liabilities – cash and cash equivalents) is calculated by dividing total net income (loss) by the average of end and beginning of year invested capital.

(3) Adjusted operating income is a non-GAAP measure and is defined to exclude the non-cash impact of amortization of intangible assets, stock-based compensation, and impairment of goodwill and long-lived assets.

(4) Adjusted invested capital is a non-GAAP measure which substitutes adjusted operating income for net income (loss) in the average return on invested capital calculation (2).

Reconciliation of Non-GAAP Measure

Adjusted operating income (which excludes the non-cash impact of amortization of intangible assets, stock-based compensation and impairment of goodwill and long-lived assets) is used by management as a supplemental performance and liquidity measure, in order to compare current financial performance to historical performance, assess the ability of our assets to generate cash and the evaluation of potential acquisitions.

Adjusted operating income should not be considered an alternative to, or more meaningful than, net income (loss), operating income, cash flow from operating activities or any other measure of financial performance presented in accordance with GAAP as measures of operating performance or liquidity.

The following table sets forth our reconciliation of adjusted operating income, a non-GAAP measure:

	Year Ended March 31,				
	2019	2018	2017	2016	2015
Operating income	$ 9,781	$ 2,183	$ 16,313	$ 16,323	$ 15,864
Amortization of intangible assets	7,090	6,929	6,450	5,787	4,675
Stock-based compensation	4,212	1,672	1,411	1,327	993
Impairment loss on goodwill and long-lived assets	4,774	13,819	--	--	--
Adjusted Operating income	$ 25,857	$ 24,603	$ 24,174	$ 23,437	$ 21,532

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS
(Dollars in thousands, unless specified)

Overview

We pursue a strategy of focusing primarily on quality control products and services, which are sold into niche markets that are driven by regulatory requirements. We prefer markets in which we can establish a strong presence and achieve high gross margins. We are organized into four segments, or divisions, across ten physical locations. Our Sterilization and Disinfection Control Division manufactures and sells biological, cleaning, and chemical indicators. Biological, cleaning, and chemical indicators are used to assess the effectiveness of sterilization and disinfection processes in the hospital, dental, medical device, and pharmaceutical industries. The division also provides testing and laboratory services, mainly to the dental industry. Our Instruments Division designs, manufactures, and markets quality control instruments and disposable products utilized in the healthcare, pharmaceutical, food and beverage, medical device, industrial hygiene, and environmental air sampling industries. Our Cold Chain Monitoring Division designs, develops, and markets systems which are used to monitor various environmental parameters such as temperature, humidity, and differential pressure to ensure that critical storage and processing conditions are maintained in hospitals, pharmaceutical and medical device manufacturers, blood banks, pharmacies, and laboratory environments. Our Cold Chain Packaging Division provides thermal packaging products such as coolers, boxes, insulation materials, and phase-change products to control temperature during the customer's transport of their own products.

Our revenues come from product sales, which includes hardware and software, and consumables; as well as services, which include installation, discrete maintenance services, and ongoing maintenance contracts. Product sales are dependent on several factors, including general economic conditions, both domestic and international, customer capital spending trends, competition, introduction of new products and acquisitions. Sterilization and disinfection control products and most products in our Cold Chain Packaging Division are disposable and are used on a routine basis, thus product sales are less sensitive to general economic conditions. Instrument products and cold chain monitoring products and systems have a longer life, and their purchase by our customers is somewhat discretionary, so sales are more sensitive to general economic conditions. Cold chain monitoring and instruments products may be sold in conjunction with a perpetual or subscription-based software license, which may be required for the related hardware to function. Service demand is driven by our customers' quality control and regulatory environments, which require periodic repair and recalibration or certification of our instrument products and cold chain monitoring systems. We typically evaluate costs and pricing annually. Our policy is to price our products competitively and, where possible, we pass along cost increases in order to maintain our margins.

Gross profit is affected by our product mix, manufacturing efficiencies, and price competition. Historically, as we have integrated our acquisitions and taken advantage of manufacturing efficiencies, our gross margin percentages for some products have improved. There are, however, differences in gross margin percentages between product lines, and ultimately the mix of sales will continue to impact our overall gross margin.

During the year ended March 31, 2019, we completed a business combination (the "Point Six Wireless Acquisition") whereby we acquired substantially all of the assets (other than current assets) and certain liabilities of Point Six Wireless, LLC's continuous monitoring business, which manufactures wireless sensors that are used in healthcare, hospital, food service, retail, data center, and refrigerated transport applications.

Subsequent to the year ended March 31, 2019, we completed a business acquisition (the "IBP Acquisition") whereby we acquired the common stock of IBP Medical GmbH, a company whose business manufactures medical meters used to test various parameters of dialysis fluid (dialysate), and the proper calibration and operation of a dialysis machine.

General Trends and Outlook

Our strategic objectives include growth both organically and through further acquisitions. During the year ended March 31, 2019, we continued to build our infrastructure to prepare for future growth, including completing the relocation and sale of the old Bozeman manufacturing facility, moving those operations into the new Bozeman building, the addition of key personnel to our operations, sales and marketing, and research and development teams, and the continued rollout of phase three of our ERP implementation project (European operations), which was completed as of March 31, 2019.

The markets for Sterilization and Disinfection Control products remain strong, as the disposable nature of these products makes them less sensitive to general economic conditions. The worldwide market for sterilization and disinfection control products is growing as more countries focus on verifying the effectiveness of sterilization and disinfection processes.

Demand for our instruments products and cold chain services and monitoring systems remains solid and we strive to continue to grow revenues going forward. In general, our instruments products and cold chain monitoring systems are more impacted by general economic conditions than our sterilization and disinfection control and cold chain packaging products. As a result, uncertainty about global economic conditions may cause businesses to postpone spending in response to tighter credit, unemployment, negative financial news and/or declines in income or asset values. Worldwide and regional economic conditions could also reduce the demand for our products and services, as our customers reduce or delay capital equipment and other types of purchases.

Overall revenues increased 7% for the year ended March 31, 2019. Organic revenues growth increased 3% and growth by reporting segment was as follows:

	Year Ended March 31, 2019
Sterilization and Disinfection Control	--%
Instruments	6%
Cold Chain Monitoring	3%
Cold Chain Packaging	18%
Total Company	3%

Cold Chain Packaging

During the years ended March 31, 2019 and 2018, we focused on improving the growth and profitability of the Packaging Division through customer acquisitions, strategic price increases, and cost cutting measures. However, these strategies did not deliver the results we expected, and profit margins for the division continued to lag behind our other segments. During the three months ended December 31, 2018, we explored various strategic alternatives, including the sale of the business, but we were not able to identify a buyer at an appropriate price. As a result, we made the decision to exit the packaging business by or before March 31, 2020. We have stopped providing consulting services, and we are no longer seeking or accepting new customers. We expect to significantly reduce the division's costs by relocating most of the administrative functions to our corporate headquarters in Lakewood, Colorado beginning in March 2019. During our year ending March 31, 2020, we intend to assist our customers in transitioning their business to other packaging vendors.

During the three months ended March 31, 2019, we received 90-day notice from the Cold Chain Packaging Division's largest customer that they are terminating their purchase contract with us. In addition, during the three months ended December 31, 2018, we performed a financial analysis of the Division, which revealed that gross profits for the segment continue to decline, primarily due to rising commodity costs. As a result of each of these events, we performed impairment tests in each of the related reporting periods on the Cold Chain Packaging reporting segment, and recognized non-cash impairment charges totaling $1,075 on goodwill, $3,378 on long-lived assets, and $229 on property, plant and equipment, in impairment loss on goodwill and long-lived assets on the accompanying Consolidated Statements of Operations during the year ended March 31, 2019. We expect that the remaining $313 of goodwill and intangible assets will be recognized as non-cash charges as we complete the exit of the business over the course of the year ending March 31, 2020.

Results of Operations

The following table sets forth, for the periods indicated, condensed consolidated statements of operations data. The table and the discussion below should be read in conjunction with the accompanying Consolidated Financial Statements and the notes thereto appearing elsewhere in Item 8. *Financial Statements and Supplementary Data* (in thousands, except percent data):

	Year Ended March 31,			2019 vs 2018		2018 vs 2017	
	2019	2018	2017	Change	Percent Change	Change	Percent Change
Revenues	$ 103,135	$ 96,179	$ 93,665	$ 6,956	7%	$ 2,514	3%
Cost of revenues	42,219	41,560	40,426	659	2%	1,134	3%
Gross profit	$ 60,916	$ 54,619	53,239	$ 6,297	12%	$ 1,380	3%
Gross profit margin	59%	57%	57%	2%		--%	
Operating expenses:							
Selling	$ 8,260	$ 8,823	9,955	$ (563)	(6%)	$ (1,132)	(11%)
General and administrative	31,295	26,255	22,814	5,040	19%	3,441	15%
Research and development	3,506	3,539	4,157	(33)	(1%)	(618)	(15%)
Impairment loss on goodwill and long-lived assets	4,774	13,819	--	(9,045)	(65%)	13,819	100%
Legal Settlement	3,300	--	--	3,300	100%	--	--%
	$ 51,135	$ 52,436	36,926	$ (1,301)	(2%)	$ 15,510	42%
Operating income	$ 9,781	$ 2,183	16,313	$ 7,598	348%	$ (14,130)	(87%)
Net income (loss)	$ 7,484	$ (2,962)	11,183	$ 10,446	353%	$ (14,145)	(126%)
Net income (loss) margin	7%	(3%)	12%	10%		(15%)	

Revenues

The following table summarizes our revenues by source (in thousands, except percent data):

	Year Ended March 31,			2019 vs 2018		2018 vs 2017	
	2019	2018	2017	Change	Percent Change	Change	Percent Change
Sterilization and Disinfection Control							
Product	$ 40,250	$ 37,361	$ 32,544	$ 2,889	8%	$ 4,817	15%
Service	6,047	5,899	6,091	148	3%	(192)	(3%)
Segment Total	46,297	43,260	38,635	3,037	7%	4,625	12%
Instruments							
Product	27,601	26,425	27,015	1,176	4%	(590)	(2%)
Service	8,524	7,679	7,390	845	11%	289	4%
Segment Total	36,125	34,104	34,405	2,021	6%	(301)	(1%)
Cold Chain Monitoring							
Product	7,375	5,312	6,923	2,063	39%	(1,611)	(23%)
Service	6,431	7,666	5,661	(1,235)	(16%)	2,005	35%
Segment Total	13,806	12,978	12,584	828	6%	394	3%
Cold Chain Packaging							
Product	6,572	5,288	7,028	1,284	24%	(1,740)	(25%)
Service	335	549	1,013	(214)	(39%)	(464)	(46%)
Segment Total	6,907	5,837	8,041	1,070	18%	(2,204)	(27%)
Total	$ 103,135	$ 96,179	$ 93,665	$ 6,956	7%	$ 2,514	3%

Year ended March 31, 2019 versus March 31, 2018

Sterilization and Disinfection Control revenues increased 7%, primarily as a result of the acquisitions of BAG, and SIMICON GmbH, during the year ended March 31, 2018.

Instruments revenues increased by 6%, primarily due to the timing of orders and modest price increases.

Cold Chain Monitoring revenues increased 6% as a result of organic revenues growth of 3% and the acquisition of Point Six Wireless during the year ended March 31, 2019. Revenues in this division historically fluctuate quarter over quarter due to the timing of customer acceptance of certain installations and the nature and timing of orders within any given quarter.

Cold Chain Packaging revenues increased by 18% primarily due to the normalization in the order rate of the division's largest customer. During the three months ended March 31, 2019, the division's largest customer provided 90-day notice that they are terminating their purchase contract with us. As a result, we expect this division's revenues will decline substantially during the year ending March 31, 2020 (see *General Trends and Outlook* above for additional discussion).

Year ended March 31, 2018 versus March 31, 2017

Sterilization and Disinfection Control revenues increased 12%, primarily due to the 2018 Acquisitions of BAG, SIMICON GmbH, and Hucker & Hucker GmbH and organic growth of 6%, which was achieved through existing customers, expansion into new markets, price increases and strengthening of the Euro.

Instruments revenues decreased by 1%, primarily due to the slower than expected adoption of an updated medical product, although we realized a normalization of the adoption rate of this product towards the end of the year ended March 31, 2018.

Cold Chain Monitoring revenues increased 3% primarily due to the FreshLoc Acquisition, partially offset by organic decreases of 3%. Revenues in this division fluctuate quarter over quarter due to the timing of customer acceptance of certain installations and the nature and timing of orders within any given quarter.

Cold Chain Packaging revenues decreased by 27% primarily due to a lower order rate based on timing issues with our largest customer (which accounted for approximately half of division revenues for the year ended March 31, 2017) and longer than expected sales cycles. The order rate from our largest customer did begin to normalize during the three months ending March 31, 2018, which continued through the year ended March 31, 2019.

Gross Profit

The following table summarizes our gross profit by operating segment (in thousands, except percent data):

	Year Ended March 31,			2019 vs 2018		2018 vs 2017	
	2019	2018	2017	Change	Percent Change	Change	Percent Change
Sterilization and Disinfection Control	$ 31,861	$ 29,333	25,674	$ 2,528	9%	$ 3,659	14%
Gross profit margin	69%	68%	66%	1%		2%	
Instruments	22,866	20,395	21,037	2,471	12%	(642)	(3%)
Gross profit margin	63%	60%	61%	3%		(1%)	
Cold Chain Monitoring	5,582	3,854	4,557	1,728	45%	(703)	(15%)
Gross profit margin	40%	30%	36%	10%		(6%)	
Cold Chain Packaging	607	1,037	1,971	(430)	(41%)	(934)	(47%)
Gross profit margin	9%	18%	25%	(9%)		(7%)	
Total gross profit	$ 60,916	$ 54,619	53,239	$ 6,297	12%	$ 1,380	3%
Gross profit margin	59%	57%	57%	2%		–%	

Year ended March 31, 2019 versus March 31, 2018

Sterilization and Disinfection Control gross profit margin percentage increased primarily due to $573 of relocation costs incurred in the year ended March 31, 2018 that did not recur in the current year. Excluding these costs, gross margin percentage would have been essentially flat as compared to the prior year.

Instruments gross margin percentage increased by three percentage points, primarily due to volume-based efficiencies associated with increased revenues, product and service mix, and to a lesser extent, as a result of a $163 inventory reserve charge recorded in the year ended March 31, 2018 as a result of the decision to discontinue the sale of certain instruments products.

Cold Chain Monitoring gross profit margin percentage increased primarily due to a $1,916 inventory reserve charge recorded during the year ended March 31, 2018. Excluding the charge recorded in the prior year, gross margin percentage would have declined four percentage points primarily as a result of timing of orders and unfavorable product and service mix.

Cold Chain Packaging gross profit margin percentage decreased primarily as a result of significantly higher commodities costs than previous periods, and to a lesser extent, sales volumes related to a large customer contract containing lower-than-standard contractual pricing. We are currently implementing a commercial initiative to pass some of our increasing commodities costs on to our customers. We also announced during the three months ended March 31, 2019 that we are restructuring operations of this division by relocating its administrative functions to our corporate offices in Colorado to gain efficiencies. Even if both of these initiatives are successful, we expect that our Cold Chain Packaging gross profit margin percentage will continue to be substantially lower than the historical results of our other segments due to the nature of these products, and we intend to exit this business during our year ending March 31, 2020 (see *General Trends and Outlook* above for additional discussion).

Year ended March 31, 2018 versus March 31, 2017

Sterilization and Disinfection Control gross profit margin percentage increased primarily due to volume-based efficiencies associated with increased revenues and the impact of using internally manufactured biological indicators for our dental sterilizer testing business as opposed to the prior year where we were contractually committed to purchase a significant portion of those biological indicators from an outside supplier at a significantly higher price. Included in gross profit margin percentage are $573 and $680 of Bozeman relocation costs for the years ended March 31, 2018 and 2017, respectively. Without these costs, gross margin percentages would have been 69% and 68% for the years ended March 31, 2018 and 2017, respectively.

Instruments gross margin percentage decreased by one percentage point, primarily due to product and service mix and the loss of certain volume-based efficiencies associated with a decrease in revenues and a $163 increase in the related inventory reserve due to the decision to discontinue for sale certain instruments products.

Cold Chain Monitoring gross profit margin percentage decreased primarily due to a $1,916 increase in the related inventory reserve, partially offset by product and service mix. Excluding the impact of these additional reserves for inventory, gross profit percentage would have been 45% for the year ended March 31, 2018.

Cold Chain Packaging gross profit margin percentage decreased primarily due to lower revenues. A certain portion of the cost of revenues are personnel and warehousing costs which are primarily fixed and as a result, fluctuations in revenues significantly impact the gross profit margin percentage for this division.

Operating Expenses

Operating expenses for the year ended March 31, 2019 decreased 2% in total compared to the year ended March 31, 2018. Operating expenses increased 42% in total during the year ended March 31, 2018 compared to the year ended March 31, 2017.

Selling

Selling expense is driven primarily by labor costs, including salaries and commissions; accordingly, it may vary with sales levels.

Year ended March 31, 2019 versus March 31, 2018

Selling expense decreased 6% for the year ended March 31, 2019 as compared to the year ended March 31, 2018, primarily due to timing of the reduction and replacement of selling personnel. As a percentage of revenues, selling expense was 8% and 9% for the years ended March 31, 2019 and March 31, 2018, respectively. We plan to continue to strategically reinvest in sales and marketing resources in an effort to further increase organic revenues growth.

Year ended March 31, 2018 versus March 31, 2017

Selling expense decreased primarily due to reductions of selling personnel, trade show activities and outside commissions. As a percentage of revenues, selling expense was 9% as compared to 11% in the prior year.

General and Administrative

Labor costs, non-cash stock-based compensation, and amortization of intangible assets drive the substantial majority of general and administrative expense.

Year ended March 31, 2019 versus March 31, 2018

General and administrative expenses increased $5,040 during the year ended March 31, 2019, due primarily to increased stock-based compensation, short term incentive compensation as a result of the Company's financial performance, and higher salary expense. We expect to strategically increase our headcount in the future as we continue to invest in future organic revenues growth.

During the year ended March 31, 2019, we implemented a new full-administration equity compensation platform, and as a result, changed the methodology used to account for forfeitures from a static method to a dynamic method. This change resulted in a one-time cumulative increase in expense of $945, recognized during the year ended March 31, 2019.

Year ended March 31, 2018 versus March 31, 2017

General and administrative expense increased primarily due to increases in personnel (including those associated with the 2017 Acquisitions), amortization and employee moving costs, partially offset by a decrease in professional services expenses.

Research and Development

Research and development expense is predominantly comprised of labor costs and third-party consultants.

Year ended March 31, 2019 versus March 31, 2018

Research and development expenses for the year ended March 31, 2019 decreased 1%, due to streamlining the necessary engineers, materials, and supplies required to support existing businesses in the prior year. During the year ended March 31, 2019, we began to make incremental investments in research and development to enhance existing products.

Year ended March 31, 2018 versus March 31, 2017

Research and development costs decreased primarily due to a streamlining of the necessary engineers and materials and supplies required to support existing businesses.

Impairment Loss on Goodwill and Long-Lived Assets

Year ended March 31, 2019 versus March 31, 2018

Impairment loss on goodwill and long-lived assets of $4,774 recorded during the year ended March 31, 2019 is primarily associated with our Packaging Division. See *General Trends and Outlook* above for additional discussion.

Year ended March 31, 2018 versus March 31, 2017

Impairment loss on goodwill is associated with a $13,819 impairment charge related to our Packaging Division, which was taken in response to lower than forecasted expected revenues and gross margin.

Legal Settlement

Year ended March 31, 2019 versus March 31, 2018

During the year ended March 31, 2019, we recorded a $3,300 legal settlement expense; see Note 12. "Commitments and Contingencies" within Item 8. *Financial Statements and Supplementary Data.*

Other Expense, net

Other expense, net for the year ended March 31, 2019 is comprised primarily of interest expense associated with our Credit Facility, offset by a $288 gain recorded on the sale of our Bozeman facility; see Note 6. "Restructuring and Relocation Costs" within Item 8. *Financial Statements and Supplementary Data.*

Other expense, net for the year ended March 31, 2018 is comprised primarily of interest expense associated with our Credit Facility and $300 related to an additional accrual for the PCD earn-out (see Liquidity and Capital Resources for additional discussion), partially offset by a $116 gain from the sale of our Omaha facility.

Net Income

Our income tax rate varies based upon many factors but in general, we anticipate that on a go-forward basis, our effective tax rate will be approximately 26%, plus or minus the impact of excess tax benefits and deficiencies associated with share-based payment awards to employees; (please see Note 11. "Income Taxes" within Item 8. *Financial Statements and Supplementary Data*). The excess tax benefits and deficiencies associated with share-based payment awards to our employees have caused and, in the future, may cause large fluctuations in our realized effective tax rate based on timing, volume, and nature of stock options exercised under our share-based payment program. Net income for the year ended March 31, 2019 varied with the changes in revenues, gross profit, and operating expenses (which includes $7,090 and $4,212 of non-cash amortization of intangible assets and stock-based compensation expense, respectively). Net income for the year ended March 31, 2019 was also significantly impacted by a $4,774 impairment loss on goodwill and long-lived assets (see Note 5. "Goodwill and Long-Lived Assets" within Item 8. *Financial Statements and Supplementary Data*) and a $3,300 charge related to a legal settlement.

Liquidity and Capital Resources

Our sources of liquidity include cash generated from operations, working capital, capacity under our Credit Facility, and potential equity and debt offerings. We believe that cash generated from these sources will be sufficient to meet our short-term and long-term needs. Our more significant uses of resources have historically included long-term capital equipment expenditures, payment of debt obligations, quarterly dividends to shareholders, and acquisitions. Working capital is the amount by which current assets exceed current liabilities. We had working capital of $9,962 and $14,698, respectively, at March 31, 2019 and 2018.

Given our cash flow projections and unused capacity on our line of credit that is available until March 1, 2022, our liquidity is strong and is expected to meet our ongoing cash and debt service requirements for our general business needs. Interest-bearing debt of $23,000 and $46,625 was outstanding at March 31, 2019 and March 31, 2018, respectively. The Term Loan requires 20 quarterly principal payments, which began on March 31, 2017, in the amount of $250 (increasing by $125 each year up to $750 in the fifth year). The remaining balance of principal and accrued interest are due on March 1, 2022. We were in compliance with all loan agreements at March 31, 2019 and for all prior years presented and have met all debt payment obligations.

Subsequent to March 31, 2019, we made a $2,500 payment under our line of credit.

During the year ended March 31, 2019, we completed the move of our Traverse City and old Bozeman manufacturing facilities to our new facility in Bozeman, Montana. We also completed the sale of our old Bozeman facility, which resulted in a gain of $288. During the three months ended March 31, 2019, we announced our plans to consolidate most of our sales and administration functions from our offices in Markham, Canada to Lakewood, CO, which we expect will result in $150-$200 of cash payments in the year ending March 31, 2020.

We recorded a litigation accrual of $3,300, which we expect to pay during the year ending March 31, 2020; see Note 12. “Commitments and Contingencies” within Item 8. *Financial Statements and Supplementary Data*.

We routinely evaluate opportunities for strategic acquisitions. Future material acquisitions may require that we obtain additional capital, assume third party debt or incur other long-term obligations. We believe that we have the option to utilize both equity and debt instruments as vehicles for the long-term financing of our investment activities and acquisitions. At March 31, 2019, we had $74,000 of unused capacity under our line of credit, subject to covenant restrictions. In addition, in June 2018, the SEC declared effective our Universal Shelf Registration Statement which allows us to sell, in one or more public offerings, common stock or warrants, or any combination of such securities for proceeds in an aggregate amount of up to $300,000. The terms of any offering, including the type of securities involved, would be established at the time of sale.

Cash Flows

Our cash flows from operating, investing, and financing activities were as follows:

	Year Ended March 31,		
	2019	2018	2017
Net cash provided by operating activities	$ 30,554	$ 25,719	$ 17,304
Net cash used in investing activities	(3,880)	(17,184)	(18,405)
Net cash (used in) provided by financing activities	(21,672)	(9,024)	1,154

Critical Accounting Policies and Estimates

Our Consolidated Financial Statements are prepared in accordance with accounting principles generally accepted in the United States, which require management to make estimates, judgments, and assumptions that affect the amounts reported in our Consolidated Financial Statements and accompanying notes. We believe that the following are the more critical judgment areas in the application of our accounting policies that currently affect our financial condition and results of operations. Management has discussed the development, selection, and disclosure of critical accounting policies and estimates with the Audit Committee of our Board of Directors. While our estimates and assumptions are based on our knowledge of current events and actions we may undertake in the future, actual results may ultimately differ from these estimates and assumptions. For a discussion of our significant accounting policies, please see Note 1. “Description of Business and Summary of Significant Accounting Policies” in Item 8. *Financial Statements and Supplementary Data*.

Accounts Receivable

We estimate an allowance for doubtful accounts based on overall historic write-offs, the age of our receivable balances, and the payment history and creditworthiness of the customer. If actual results are not consistent with our assumptions and judgments or our assumptions and estimates change due to new information, we may experience material changes in our allowance for doubtful accounts and bad debt expense.

Inventories

Inventories are stated at the lower of cost or net realizable value, using the weighted average method to determine cost. We evaluate labor and overhead costs annually, unless specific circumstances necessitate a mid-year evaluation for specific items. Our work in process and finished goods inventory includes raw materials, labor and overhead, which are estimated based on trailing twelve months of expense and standard labor hours for each product. Our biological indicator inventory is tracked by lot number thus labor is generally based on actual hours.

We monitor inventory cost compared to selling price in order to determine if a lower of cost or reserve is necessary. Throughout the year, we perform various physical cycle count procedures on our inventories and we estimate and maintain an inventory reserve, as needed, for such matters as obsolete inventory, shrink and scrap. This reserve may fluctuate as our assumptions change due to new information, discrete events, or changes in our business, such as entering new markets or discontinuing a specific product.

Recoverability of Goodwill and Long-lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Goodwill is reviewed for impairment at least annually, and more often if events or changes in circumstances indicate that the carrying amount of the goodwill may not be recoverable. Monitoring these conditions requires significant management judgment, including evaluating general economic conditions, industry and market considerations, changes in production costs, cash flow trends, and other relevant entity-specific events such as changes in management, key personnel, strategy or customers.

The fair value measurement for asset impairment is based on Level 3 inputs. We first compare the carrying value of the asset to the asset's estimated future undiscounted cash flows. If the estimated undiscounted future cash flows are less than the carrying value of the asset, we determine if we have an impairment loss by comparing the carrying value of the asset to the asset's estimated fair value. The estimated fair value of the asset is generally determined using a discounted cash flow projection model. In certain cases, management uses other market information, when available, to estimate the fair value of an asset. The impairment charges represent the excess of each asset's carrying amount over its estimated fair value. We make significant judgments to estimate future undiscounted cash flows and asset fair values. Estimates of future cash flows are highly subjective judgments based on internal projections and knowledge of our operations, historical performance, and trends in sales and operating costs, and can be significantly impacted by changes in our business or economic conditions. The determination of asset fair value is also subject to significant judgment and utilizes valuation techniques including discounting estimated future cash flows and market-based analyses to determine resale value. If our estimates or underlying assumptions, including discount rate, change in the future, our operating results may be materially impacted.

We recorded an impairment charge related to goodwill and long-lived assets associated with the Cold Chain Packaging Division during the years ended March 31, 2019 and March 31, 2018 (for additional discussion, please see Note 5. "Goodwill and Long-Lived Assets" in Item 8. *Financial Statements and Supplementary Data*). If actual results are not consistent with our assumptions and estimates, or our assumptions and estimates change due to new information, we may be exposed to an additional impairment charge in the future.

Purchase Accounting for Acquisitions

We apply the acquisition method of accounting for a business combination. In general, this methodology requires us to record assets acquired and liabilities assumed at their respective fair values at the date of acquisition. Any amount of the purchase price paid that is in excess of the estimated fair value of the net assets acquired is recorded as goodwill. For certain acquisitions, we also record a liability for contingent consideration based on estimated future business performance. We monitor our assumptions surrounding these estimated future cash flows and, if there is a significant change, would record an adjustment to the contingent consideration liability and a corresponding adjustment to either income or expense. We determine fair value using widely accepted valuation techniques, primarily discounted cash flow and market multiple analyses. These types of analyses require us to make assumptions and estimates regarding industry and economic factors, the profitability of future business strategies, discount rates and cash flow.

If actual results are not consistent with our assumptions and estimates, or our assumptions and estimates change due to new information, we may be exposed to an impairment charge in the future. If the contingent consideration paid for any of our acquisitions differs from the amount initially recorded, we would record either income or expense.

Stock-based Compensation

We recognize compensation expense for equity awards over the vesting period based on the award's fair value. We use the Black-Scholes valuation model to determine the fair value of our stock options. The Black-Scholes model requires assumptions to be made regarding our stock price volatility, the expected life of the award and expected dividend rates. The volatility assumption is based on our historical data, and the expected life assumptions are based on our historical data. Similarly, the compensation expense of performance share awards is based in part on the estimated probability of achieving levels of performance associated with particular levels of payout for performance shares. We determine the probability of achievement of future levels of performance by comparing the relevant performance level with our internal estimates of future performance. Those estimates are based on a number of assumptions, and different assumptions may have resulted in different conclusions regarding the probability of our achieving future levels of performance relevant to the payout levels for the awards. Had we arrived at different assumptions of stock price volatility or expected lives of our options, or different assumptions regarding the probability of our achieving future levels of performance with respect to performance share awards, our stock-based compensation expense and results of operations could have been different.

Income Taxes

Our provision for income taxes requires the use of estimates in determining the timing and amounts of deductible and taxable items including impacts on effective tax rates, deferred tax items and valuation allowances based on management's interpretation and application of complex tax laws and accounting guidance. We establish reserves for uncertain tax positions for material, known tax exposures relating to deductions, transactions and other matters involving some uncertainty as to the measurement and recognition of the item. While we believe that our reserves are adequate, issues raised by a tax authority may be finally resolved at an amount different than the related reserve and could materially increase or decrease our income tax provision in the current and/or future periods.

Contingencies for Litigation and Other Matters

From time to time, we are involved in claims and legal actions that arise in the ordinary course of business. We record an accrual for legal contingencies when we determine that it is probable that we have incurred a liability and we can reasonably estimate the amount of the loss. We have recorded liabilities related to legal actions, but our estimates used to determine the amount of these liabilities may not be accurate, and there may be other legal actions for which we have not recorded a liability. As a result, in the event legal actions for which we have not accrued a liability or for which our accrued liabilities are not accurate are resolved, such resolution may affect our operating results and cash flows.

Recent Accounting Standards and Pronouncements

For a discussion of the new accounting standards impacting the Company, refer to Note 1. "Description of Business and Summary of Significant Accounting Policies" in Item 8. *Financial Statements and Supplementary Data.*

Contractual Obligations, Commitments and Off-Balance Sheet Arrangements

Off-Balance Sheet Arrangements
As of March 31, 2019, we have no obligations or interests which qualify as off-balance sheet arrangements.

Contractual Obligations
As of March 31, 2019, our contractual obligations, including payments due by period, are as follows:

		Payments Due for Years Ended March 31, (in thousands)			
	Total	2020	2021-2022	2023-2024	Thereafter
Purchase Commitments	$ 3,559	$ 3,559	$ --	$ --	$ --
Lines of Credit	$ 6,000	$ --	$ 6,000	$ --	$ --
Debt	$ 17,000	$ 2,125	$ 14,875	$ --	$ --
Other	$ 1,374	$ 653	$ 673	$ 48	$ --
Total	$ 27,933	$ 6,337	$ 21,548	$ 48	$ --

Our purchase commitments consist primarily of open purchase orders, which we have established to take advantage of volume discounts for materials and to ensure a reliable supply of critical parts.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We have no derivative instruments and minimal exposure to commodity market risks. A portion of our operations consist of activities outside of the U.S. and we have currency risk on the transactions in other currencies and translation adjustments resulting from the conversion of our international financial results into the U.S. dollar. However, a substantial majority of our operations and investment activities are transacted in U.S. dollars and therefore our foreign currency risk is not material at this date.

We are subject to interest rate volatility with regard to existing and future issuances of debt, as our current credit facility is variable-rate. Based on annualized variable-rate debt for the year ended March 31, 2019, a one percentage point increase in interest rates would have increased interest expense by $356.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Stockholders and Board of Directors
Mesa Laboratories, Inc.
Lakewood, Colorado

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheet of Mesa Laboratories, Inc. (the "Company") as of March 31, 2019, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for the year then ended, and the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of March 31, 2019, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO framework").

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of March 31, 2019, and the results of its operations and its cash flows for the year then ended, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of March 31, 2019, based on criteria established in the COSO framework.

Basis for Opinion

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying financial statements. Our responsibility is to express an opinion on the Company's financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audit of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Plante & Moran, PLLC

We have served as the Company's auditor since 1986.

Denver, Colorado

June 3, 2019

Report of Independent Public Accounting Firm

To the Shareholders and Board of Directors of
Mesa Laboratories, Inc.
Lakewood, Colorado

OPINION ON THE CONSOLIDATED FINANCIAL STATEMENTS

We have audited the accompanying consolidated balance sheet of Mesa Laboratories, Inc. (the "Company") as of March 31, 2018, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows, for each year in the two year period ended March 31, 2018, and the related notes (collectively referred to as the "financial statements").

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of March 31, 2018, and the results of its operations and its cash flows for each year in the two year period ended March 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

BASIS FOR OPINION

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud.

/s/ EKS&H LLLP

June 5, 2018
Denver, Colorado

Mesa Laboratories, Inc.
Consolidated Balance Sheets
(In thousands, except share amounts)

	March 31, 2019	March 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 10,185	$ 5,469
Accounts receivable, less allowances of $121 and $179, respectively	12,516	14,302
Inventories, net	6,772	9,228
Prepaid income taxes	2,552	273
Prepaid expenses and other	1,598	782
Assets held for sale	--	1,934
Total current assets	33,623	31,988
Property, plant and equipment, net	22,225	23,593
Deferred taxes	1,323	127
Intangibles, net	33,219	42,850
Goodwill	66,377	65,543
Total assets	$ 156,767	$ 164,101
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 2,898	$ 2,380
Accrued salaries and payroll taxes	7,324	4,284
Current portion of long-term debt	2,125	1,625
Unearned revenues	3,965	3,921
Current portion of contingent consideration	45	709
Income taxes payable	--	1,008
Legal liability	3,300	--
Other accrued expenses	4,004	3,363
Total current liabilities	23,661	17,290
Deferred income taxes	1,077	2,621
Long-term debt, net of debt issuance costs and current portion	20,613	44,635
Other long-term liabilities	105	194
Total liabilities	45,456	64,740
Stockholders' equity:		
Common stock, no par value; authorized 25,000,000 shares; issued and outstanding, 3,890,138 and 3,801,439 shares, respectively	39,823	30,516
Retained earnings	73,303	68,281
Accumulated other comprehensive (loss) income	(1,815)	564
Total stockholders' equity	111,311	99,361
Total liabilities and stockholders' equity	$ 156,767	$ 164,101

See accompanying notes to consolidated financial statements.

Mesa Laboratories, Inc.
Consolidated Statements of Operations
(In thousands, except per share data)

	Year Ended March 31,		
	2019	**2018**	**2017**
Revenues			
Product	$ 81,798	$ 74,386	$ 73,510
Service	21,337	21,793	20,155
Total revenues	103,135	96,179	93,665
Cost of revenues			
Cost of products	30,250	29,877	26,548
Cost of services	11,969	11,683	13,878
Total cost of revenues	42,219	41,560	40,426
Gross profit	60,916	54,619	53,239
Operating expenses			
Selling	8,260	8,823	9,955
General and administrative	31,295	26,255	22,814
Research and development	3,506	3,539	4,157
Impairment loss on goodwill and long-lived assets	4,774	13,819	--
Legal settlement	3,300	--	--
Total operating expenses	51,135	52,436	36,926
Operating income	9,781	2,183	16,313
Other expense, net	1,158	1,882	2,017
Earnings before income taxes	8,623	301	14,296
Income tax expense	1,139	3,263	3,113
Net income (loss)	$ 7,484	$ (2,962)	11,183
Earnings (loss) per share:			
Basic	$ 1.95	$ (0.79)	$ 3.04
Diluted	1.86	(0.79)	2.91
Weighted-average common shares outstanding:			
Basic	3,839	3,770	3,679
Diluted	4,033	3,770	3,844

See accompanying notes to consolidated financial statements.

Mesa Laboratories, Inc.
Consolidated Statements of Comprehensive Income (Loss)
(In thousands except per share data)

	Year Ended March 31,		
	2019	**2018**	**2017**
Net income (loss)	$ 7,484	$ (2,962)	11,183
Other comprehensive (loss) income, net of tax:			
Foreign currency translation adjustments	(2,379)	2,324	(609)
Comprehensive income (loss)	$ 5,105	$ (638)	$ 10,574

See accompanying notes to consolidated financial statements.

Mesa Laboratories, Inc.
Consolidated Statements of Stockholders' Equity
(In thousands, except share amounts)

	Common Stock				
	Number of Shares	Amount	Retained Earnings	AOCI*	Total
March 31, 2016	3,637,273	$ 21,001	$ 64,828	$ (1,151)	$ 84,678
Common stock issued for conversion of stock options net of 13,964 shares returned as payment	97,431	3,513	--	--	3,513
Dividends paid, $0.64 per share	--	--	(2,355)	--	(2,355)
Stock-based compensation	--	1,411	--	--	1,411
Foreign currency translation	--	--	--	(609)	(609)
Net income	--	--	11,183	--	11,183
March 31, 2017	3,734,704	25,925	73,656	(1,760)	97,821
Common stock issued for conversion of stock options net of 8,562 shares returned as payment	66,735	2,919	--	--	2,919
Dividends paid, $0.64 per share	--	--	(2,413)	--	(2,413)
Stock-based compensation	--	1,672	--	--	1,672
Foreign currency translation	--	--	--	2,324	2,324
Net loss	--	--	(2,962)	--	(2,962)
March 31, 2018	3,801,439	30,516	68,281	564	99,361
Common stock issued for conversion of stock options net of 4,853 shares returned as payment	88,699	5,095	--	--	5,095
Dividends paid, $0.64 per share	--	--	(2,462)	--	(2,462)
Stock-based compensation	--	4,212	--	--	4,212
Foreign currency translation	--	--	--	(2,379)	(2,379)
Net income	--	--	7,484	--	7,484
March 31, 2019	3,890,138	$ 39,823	$ 73,303	$ (1,815)	$ 111,311

*Accumulated Other Comprehensive (Loss) Income.

See accompanying notes to consolidated financial statements.

Mesa Laboratories, Inc.
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended March 31,		
	2019	**2018**	**2017**
Cash flows from operating activities:			
Net income (loss)	$ 7,484	$ (2,962)	$ 11,183
Adjustments to reconcile net income to net cash and cash equivalents provided by operating activities:			
Depreciation and amortization	9,428	9,471	8,737
Stock-based compensation	4,212	1,672	1,411
Impairment loss on goodwill and long-lived assets	4,774	13,819	--
Change in inventory reserve	(380)	2,474	194
Gain on disposition of assets	(288)	(116)	--
Deferred taxes	(2,472)	(2,704)	(630)
Foreign currency adjustments	(108)	(490)	93
Adjustment to contingent consideration	(32)	300	--
Other	45	110	--
Cash provided by changes in operating assets and liabilities:			
Accounts receivable, net	1,592	680	994
Inventories, net	2,574	2,286	101
Prepaid expenses and other current assets	(2,898)	755	(830)
Accounts payable	1,092	212	(655)
Accrued liabilities and taxes payable	5,477	408	(3,066)
Unearned revenues	54	(196)	(228)
Net cash provided by operating activities	30,554	25,719	17,304
Cash flows from investing activities:			
Acquisitions	(4,840)	(15,518)	(6,800)
Proceeds from sale of assets	2,222	1,133	--
Purchases of property, plant and equipment	(1,262)	(2,799)	(11,605)
Net cash used in investing activities	(3,880)	(17,184)	(18,405)
Cash flows from financing activities:			
Proceeds from the issuance of debt	2,000	11,000	66,550
Payments on debt	(25,625)	(19,625)	(57,000)
Contingent consideration	(680)	(905)	(9,554)
Dividends	(2,462)	(2,413)	(2,355)
Proceeds from the exercise of stock options	5,095	2,919	3,513
Net cash (used in) provided by financing activities	(21,672)	(9,024)	1,154
Effect of exchange rate changes on cash and cash equivalents	(286)	138	72
Net increase (decrease) in cash and cash equivalents	4,716	(351)	125
Cash and cash equivalents at the beginning of the year	5,469	5,820	5,695
Cash and cash equivalents at the end of the year	$ 10,185	$ 5,469	$ 5,820
Cash paid for:			
Income taxes paid	$ 5,870	$ 4,551	$ 5,605
Interest paid	1,637	1,956	$ 1,384

See accompanying notes to consolidated financial statements.

Note 1. Description of Business and Summary of Significant Accounting Policies

Description of Business

In this annual report on Form 10-K, Mesa Laboratories, Inc., a Colorado corporation, together with its subsidiaries is collectively referred to as "we," "us," "our," the "Company" or "Mesa."

We pursue a strategy of focusing primarily on quality control products and services which are sold into niche markets that are driven by regulatory requirements. We prefer markets in which we can establish a strong presence and achieve high gross margins. We are organized into four segments, or divisions across ten physical locations. Our Sterilization and Disinfection Control Division manufactures and sells biological, cleaning, and chemical indicators. Biological, cleaning, and chemical indicators are used to assess the effectiveness of sterilization and disinfection processes in the hospital, dental, medical device, and pharmaceutical industries. The division also provides testing and laboratory services, mainly to the dental industry. Our Instruments Division designs, manufactures, and markets quality control instruments and disposable products utilized in the healthcare, pharmaceutical, food and beverage, medical device, industrial hygiene, and environmental air sampling industries. Our Cold Chain Monitoring Division designs, develops, and markets systems which are used to monitor various environmental parameters such as temperature, humidity, and differential pressure to ensure that critical storage and processing conditions are maintained in hospitals, pharmaceutical and medical device manufacturers, blood banks, pharmacies, and laboratory environments. Our Cold Chain Packaging Division provides thermal packaging products such as coolers, boxes, insulation materials, and phase-change products to control temperature during the customer's transport of their own products.

Principals of Consolidation and Basis of Presentation

Our Consolidated Financial Statements are prepared in accordance with accounting principles generally accepted in the United States ("GAAP") and include our accounts and our wholly owned subsidiaries after elimination of all intercompany accounts and transactions.

Reclassification

Certain prior period amounts have been reclassified to conform to the current year presentation. Specifically, $2,214 and $2,455 have been reclassified out of revenues from services and into product revenues for the years ended March 31, 2018 and March 31, 2017, respectively. Additionally, $905 and $9,554 was reclassified out of cash flows from operating activities and into cash flows from financing activities for the years ended March 31, 2018 and March 31, 2017, respectively.

Management Estimates

The preparation of our Consolidated Financial Statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities in our Consolidated Financial Statements and accompanying notes. Actual results could differ from our estimates under different assumptions or conditions.

Summary of Significant Accounting Policies

Revenue Recognition
Our revenues come from product sales, which include hardware and software, and consumables; as well as services, which include installation, discrete maintenance services, and ongoing maintenance contracts. We generally recognize revenues as follows:

Product sales: Substantially all of our revenues and related receivables are generated from contracts with customers that are 12 months or less in duration. Evidence of an arrangement is typically in the form of a purchase order. Revenue is recognized when performance obligations under the terms of the contracts with our customers are satisfied, typically by shipping ordered products.

Services: We generally generate service revenues from three categories: 1) discrete installation of our hardware and software, 2) discrete but recurring calibration and maintenance of our hardware or, 3) contracted and recurring testing and maintenance services and software license subscriptions. Evidence of a service arrangement may be in the form of a formal contract or a purchase order. Typically, discrete service revenue is recognized upon customer's acknowledgment of completion of the service, while contracted revenue is recognized over a period of time reflective of the performance obligation period in the applicable contract.

For all revenue arrangements, prices are fixed at the time of purchase and no price protections or variables are offered. Collectability is reasonably assured through our customer credit and review process, and payment is typically due within 60 days or less. We adopted the practical expedient available in Accounting Standards Update 606 and we expense commission costs as incurred. For the vast majority of our contracts that have an original duration of one year or less, we have elected the practical expedient applicable to such contracts and have not disclosed the transaction price for future performance obligations as of the end of each reporting period or when the company expects to recognize sales.

Shipping and handling
Payments by customers to us for shipping and handling costs are included in revenues on the consolidated statements of operations, while our expense is included in cost of revenues. Shipping and handling for inventory and materials purchased by us is included as a component of inventory on the consolidated balance sheets, and in cost of revenues when the product is sold.

Unearned Revenues
Certain of our products have associated annual service contracts whereby we provide repair, technical support, and various other analytical or maintenance services. In the event that these contracts are paid up front by the customer, the associated amounts are deferred and recognized ratably over the term of the service period, generally one year.

Accrued Warranty Expense
We provide limited product warranty on our products and, accordingly, accrue an estimate of the related warranty expense at the time of sale.

Cash and Equivalents
We classify all highly liquid investments with a maturity of three months or less at the date of purchase as cash equivalents.

Accounts Receivable and Allowance for Doubtful Accounts
All trade accounts are reported at net realizable value on the accompanying Consolidated Balance Sheets, adjusted for any write-offs and net of allowances for doubtful accounts. The allowance for doubtful accounts represents our best estimate of the credit losses expected from our trade accounts. We use judgment about the timing, frequency, and severity of credit losses to determine the allowances, and a difference from our original judgment could materially affect the provision for credit losses and, therefore, net earnings. We regularly perform detailed reviews of our receivables to determine if an impairment has occurred and we evaluate the collectability of receivables based on a combination of various financial and qualitative factors that may affect customers' ability to pay, including customers' financial condition, and history of payment. In circumstances where we are aware of a specific customer's inability to meet its financial obligations, a specific reserve is recorded against amounts due to reduce the recognized receivable to the amount reasonably expected to be collected. Additions to the allowances for doubtful accounts are charged to current period earnings, amounts determined to be uncollectible are charged directly against the allowances, while amounts recovered on previously written-off accounts increase the allowances. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional reserves would be required. We do not believe that trade accounts receivable represent significant concentrations of credit risk because of the diversified portfolio of individual customers and geographical areas. We recorded $13, $17 and $68 of expense associated with doubtful accounts for the years ended March 31, 2019, 2018 and 2017, respectively.

Inventories
Inventories include the costs of materials, labor, and overhead. Inventories are stated at the lower of cost or net realizable value, using the weighted average method to determine cost. We evaluate labor and overhead costs annually, unless specific circumstances necessitate a mid-year evaluation. Our work in process and finished goods inventory includes raw materials, labor and overhead, which are estimated based on trailing twelve months of expense and standard labor hours for each product. Our biological indicator inventory is tracked by lot number, thus it is generally based on actual hours.

We monitor inventory cost compared to selling price in order to determine if a lower of cost or net realizable value reserve is necessary. Throughout the year, we perform various physical cycle count procedures on our inventories and we estimate and maintain an inventory reserve, as needed, for such matters as obsolete inventory, shrink and scrap.

Property, Plant and Equipment
Property, plant and equipment are stated at cost. Expenditures for major renewals and improvements are capitalized, while expenditures for minor replacements, maintenance and repairs are expensed as incurred. Depreciation is calculated using the straight-line method over the estimated useful lives of our assets. Upon retirement or disposal of assets, the accounts are relieved of cost and accumulated depreciation and any related gain or loss is reflected in other expense, net in the accompanying Consolidated Statements of Operations. At least annually, we evaluate, and adjust when necessary, the estimated lives of property, plant and equipment. Any changes in estimated useful lives are recorded prospectively. Estimated useful lives of depreciable assets are as follows:

Category	Useful Lives
Buildings (years)	40
Manufacturing Equipment (years or less)	7
Computer equipment (years or less)	3

Land is not depreciated and construction in progress is not depreciated until placed in service.

Goodwill and Intangible Assets
Goodwill and other intangible assets result from our acquisition of existing businesses. Goodwill and indefinite-lived intangible assets (trademarks) are not subject to amortization, but instead are tested for impairment at least annually or when events or changes in circumstances indicate that the carrying amount may not be recoverable, and we are required to record any necessary impairment adjustments. Impairment is measured as the excess of the carrying value over the fair value of the goodwill. We perform impairment tests of goodwill at our reporting unit level, which is one level below our operating segments.

We determine the useful lives of our finite intangible assets after considering the specific facts and circumstances related to each intangible asset. Factors we consider when determining useful lives include the contractual term of any agreement related to the asset, the historical performance of the asset, our long-term strategy for using the asset, any laws or other local regulations which could impact the useful life of the asset and other economic factors, including competition and specific market conditions. Intangible assets that are deemed to have definite lives are amortized on a straight-line basis, over their useful lives, generally ranging from three to 16 years (See Note 5. "Goodwill and Long-Lived Assets"). Finite-lived intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. For the purposes of reviewing finite-lived assets for potential impairment, assets are grouped at the asset group level.

The fair value measurement for asset impairment is based on Level 3 inputs. See "Fair Value Measurements" below for a description of level inputs. We first compare the carrying value of the asset to the asset's estimated future undiscounted cash flows. If the estimated undiscounted future cash flows are less than the carrying value of the asset, we determine if we have an impairment loss by comparing the carrying value of the asset to the asset's estimated fair value. The estimated fair value of the asset is generally determined using a discounted cash flow projection model. In certain cases, management uses other market information, when available, to estimate the fair value of an asset. The impairment charges represent the excess of each asset's carrying amount over its estimated fair value.

Research & Development Costs

We conduct research and development activities for the purpose of developing new products and enhancing the functionality, effectiveness, reliability, and accuracy of existing products. Research and development expense is predominantly comprised of labor costs and third-party consultants. Research and development costs are expensed as incurred.

Stock-based Compensation

We issue shares in the form of stock options and full-value awards as part of employee compensation pursuant to the Mesa Laboratories, Inc. 2014 Equity Plan ("The 2014 Equity Plan"). Stock options and stock awards generally vest equally over five years and stock options generally expire after six years. Stock-based compensation expense is generally recognized on a straight-line basis over the vesting period of the award. We estimate forfeitures based on historical data when determining the amount of stock-based compensation costs to be recognized in each period and changed our methodology to applying the forfeiture to using a dynamic forfeiture model, instead of a static forfeiture model during the year ended March 31, 2019. Stock awards with performance conditions generally vest based on our achievement versus stated targets or criteria over a three-year performance and approximately three-year service period. Compensation expense on stock awards subject to performance conditions, which is based on the quantity of awards we have determined are probable of vesting, is recognized over the longer of the estimated performance goal attainment period or time vesting period. We allocate stock-based compensation expense to cost of revenues and general and administrative expense in the Consolidated Statements of Operations. Refer to Note 8. "Stock Transactions and Stock-Based Compensation" for additional information on stock-based compensation expense.

Income Taxes

Income tax expense includes U.S., state, local and international income taxes, plus a provision for U.S. taxes on undistributed earnings of foreign subsidiaries and other prescribed foreign entities not deemed to be indefinitely reinvested. Deferred tax assets and liabilities are recognized for the tax consequences of temporary differences between the financial reporting basis and the tax basis of existing assets and liabilities. The tax rate used to determine the deferred tax assets and liabilities is the enacted tax rate for the year and manner in which the differences are expected to reverse. Valuation allowances are recorded to reduce deferred tax assets to the amount that will more likely than not be realized.

We are involved in various tax matters, with respect to some of which the outcome is uncertain. We establish reserves to remove some or all of the tax benefit of any of our tax positions at the time we determine that it becomes uncertain based upon one of the following conditions: (1) the tax position is not "more likely than not" to be sustained, (2) the tax position is "more likely than not" to be sustained, but for a lesser amount, or (3) the tax position is "more likely than not" to be sustained, but not in the financial period in which the tax position was originally taken. For purposes of evaluating whether or not a tax position is uncertain, (1) we presume the tax position will be examined by the relevant taxing authority that has full knowledge of all relevant information; (2) the technical merits of a tax position are derived from authorities such as legislation and statutes, legislative intent, regulations, rulings and case law and their applicability to the facts and circumstances of the tax position; and (3) each tax position is evaluated without consideration of the possibility of offset or aggregation with other tax positions taken. A number of years may elapse before a particular uncertain tax position is audited and finally resolved or when a tax assessment is raised. The number of years subject to tax assessments varies depending on the tax jurisdiction. The tax benefit that has been previously reserved because of a failure to meet the "more likely than not" recognition threshold would be recognized in income tax expense in the first interim period when the uncertainty disappears under any one of the following conditions: (1) the tax position is "more likely than not" to be sustained, (2) the tax position, amount, and/or timing is ultimately settled through negotiation or litigation, or (3) the statute of limitations for the tax position has expired (See Note 11. "Income Taxes").

Acquisition Related Contingent Consideration Liabilities

Acquisition related contingent consideration liabilities consist of estimated amounts due under various acquisition agreements and is typically based on either revenues growth or specified profitability growth metrics. At each reporting period, we evaluate the expected future payments and the associated discount rate to determine the fair value of the contingent consideration, and record any necessary adjustments in other expense, net on the Consolidated Statements of Operations.

Legal Contingencies

We are involved in various claims and legal proceedings that arise in the normal course of business. We record an accrual for legal contingencies when we determine that it is probable that we have incurred a liability and we can reasonably estimate the amount of the loss (See Note 12. "Commitments and Contingencies").

Fair Value Measurements

Our financial instruments include cash and cash equivalents, accounts receivable, accounts payable, accrued liabilities and long-term debt. The carrying value of these financial instruments (other than acquisition related contingent consideration liabilities, see above) is considered to be representative of their fair value due to the short maturity of these instruments. Our debt has a variable interest rate, so the carrying amount approximates fair value because interest rates on these instruments approximate the interest rate on debt with similar terms available to us. Fair value is the price we would receive to sell an asset or pay to transfer a liability (exit price) in an orderly transaction between market participants. For assets and liabilities recorded or disclosed at fair value on a recurring basis, we determine fair value based on the following:

Level 1: Quoted prices in active markets for identical assets or liabilities that the entity has the ability to access.

Level 2: Observable inputs other than prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated with observable market data.

Level 3: Unobservable inputs for the asset or liability. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

Acquisitions

For the years ended March 31, 2019, 2018, and 2017, our acquisitions of businesses (net of cash acquired) totaled $4,840, $15,518 and $8,622, respectively, of which none were individually material in nature. Subsequent to March 31, 2019, we acquired a business for $2,804.

Recently Issued Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-02, *Leases (Topic 842)*, as amended by multiple standard updates. The pronouncement requires lessees to recognize a liability for lease obligations, which represents the discounted obligation to make future minimum lease payments, and a corresponding right-of-use asset on the balance sheet for all leases with terms greater than 12 months. The guidance also requires qualitative and quantitative disclosures designed to present financial statement users with the ability to assess the amount, timing, and uncertainty of cash flows arising from leases. We have initiated our plan for the adoption and implementation of this new accounting standard, including assessing our lease arrangements, evaluating practical expedients, and making necessary changes to our accounting policies, processes, and internal controls over financial reporting. We expect to adopt the standard using the optional transition method, which will allow us to apply the standard as of the effective date, therefore we will not apply changes to comparative periods presented in our financial statements. We expect the right-of-use asset and lease liability to be approximately $1,400, and ASU 2016-02 will not significantly impact our consolidated statements of operations and cash flows.

Recently Adopted Accounting Pronouncements

In August 2018, the Securities and Exchange Commission ("SEC") issued Release No. 33-10532 that amends and clarifies certain financial reporting requirements. The principal change to our financial reporting is the inclusion of the annual disclosure requirement of changes in stockholders' equity in Rule 3-04 of Regulation S-X to interim periods. We adopted this new rule beginning the quarter ended December 31, 2018 and will continue including the Consolidated Statements of Stockholders' Equity with each quarterly filing on Form 10-Q.

During the year ended March 31, 2019, we elected to early-adopt ASU 2018-15 *Intangibles – Goodwill and Other Internal-Use Software: Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* ("ASU 2018-15") on a prospective basis. ASU 2018-15 aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs of other internal-use software arrangements. Accordingly, we capitalized $206 of costs incurred during the year ended March 31, 2019 primarily to implement a hosted enterprise resource planning system to our European subsidiaries. The related assets are held in prepaid expenses and other on our Consolidated Balance Sheets, and we began amortizing the expense of those assets that were placed in service to general and administrative costs on our Consolidated Statements of Operations on a straight-line basis over the contractual term of the arrangement. Total depreciation expense for hosted software arrangements was $41 for the year ended March 31, 2019 and the related assets are expected to be depreciated over approximately two years.

Effective April 1, 2018, we adopted ASU 2014-09 *Revenue from Contracts with Customers (Topic 606)* and all related amendments (referred to collectively hereinafter as "ASU 606") to all contracts on a modified retrospective basis. ASU 606 requires an entity to recognize revenue for the transfer of goods or services equal to the amount it expects to be entitled to receive for the goods and services. The adoption did not have a material impact on our Consolidated Balance Sheets, Statements of Operations, or Cash Flows. The primary impact of adoption was the enhancement of disclosures to provide additional clarity regarding how revenue is earned and recognized, and to show revenues at a more disaggregated level, included in Note 2. "Revenue Recognition."

In March 2018, the FASB issued ASU 2018-05, Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118. We adopted the ASU immediately upon release. The amendments in the update provide guidance on when to record and disclose provisional amounts for certain income tax effects of the Tax Cuts and Jobs Act ("TCJA"). The amendments also require any provisional amounts or subsequent adjustments to be included in net income from continuing operations. Additionally, this ASU discusses required disclosures that an entity must make with regard to the TCJA. As of the year ended March 31, 2019, we have completed our analysis of the TCJA's income tax effects. Refer to Note 11. "Income Taxes" for additional information on the TCJA.

The TCJA created a new requirement that global intangible low taxed income earned by controlled foreign corporations ("CFCs") must be included currently in the gross income of the CFC's U.S. shareholder. Under U.S. GAAP, we are allowed to make an accounting policy choice of how GILTI taxes are treated. We have elected to treat taxes due on future U.S. inclusions in taxable income related to GILTI as current period expenses when incurred ("the period cost method").

Note 2. Revenue Recognition

We design, manufacture, market, sell, and maintain quality control instruments and software, consumables, and services driven primarily by the regulatory requirements of niche markets. Our consumables, such as biological indicator test strips and packaging materials, are typically used on a standalone basis; however, some, such as calibration solutions, are also critical to the ongoing use of our instruments. Hardware and software sales, such as medical meters, wireless sensor systems, and data loggers are generally driven by our acquisition of new customers, growth of existing customers, or customer replacement of existing equipment. Hardware sales may be offered with perpetual or annual software licenses, which in some cases are required for the hardware to function. We evaluate our revenues internally both by product line as well as by timing of revenue generation and nature of goods and services provided. Typically, discrete revenue is recognized at the shipping point or upon completion of the service, while contracted revenue is recognized over a period of time reflective of the performance obligation period in the applicable contract.

Our performance obligations related to the sale of instruments and consumables generally consist of the promise to sell tangible goods to distributors or end users. Ownership of these goods is typically transferred at time of shipment, at which point we have satisfied our performance obligation and we recognize revenue.

Our performance obligations related to services may include testing, installation, and/or maintenance of our products, either on-site at our customers' facilities or in our own calibration laboratories. Performance obligations arise from service contracts when discrete services are contracted in advance and performed at a future time, often at the time of the customer's choosing. In this case, the performance obligation is satisfied, and revenue is recognized, upon the customer's acceptance of the completion of the specified work. Alternatively, service revenue may be recognized for contracted services or maintenance provided continually over a period of time, and our performance obligations are satisfied by completing any service that is contractually required, if applicable, or simply by the passage of time if no services are required or requested. For contracted services, revenue is recognized on a straight-line basis over the life of the service contract, which is a faithful depiction of these annual service contracts, which may or may not be invoked.

The following tables present disaggregated revenues for the years ended March 31, 2019, 2018, and 2017:

	Year Ended March 31, 2019				
	Sterilization and Disinfection Control	Instruments	Cold Chain Monitoring	Cold Chain Packaging	Total
Discrete Revenues					
Consumables	$ 39,670	$ 3,101	$ 388	$ 6,430	$ 49,589
Hardware and Software	580	24,500	6,987	142	32,209
Services	1,209	8,524	2,001	335	12,069
Contracted Revenues					
Services	4,838	--	4,430	--	9,268
Total Revenues	$ 46,297	$ 36,125	$ 13,806	$ 6,907	$ 103,135

	Year Ended March 31, 2018				
	Sterilization and Disinfection Control	Instruments	Cold Chain Monitoring	Cold Chain Packaging	Total
Discrete Revenues					
Consumables	$ 36,436	$ 3,080	$ 261	$ 5,197	$ 44,974
Hardware and Software	925	23,345	5,051	91	29,412
Services	1,110	7,679	2,017	549	11,355
Contracted Revenues					
Services	4,789	--	5,649	--	10,438
Total Revenues	$ 43,260	$ 34,104	$ 12,978	$ 5,837	$ 96,179

	Year Ended March 31, 2017				
	Sterilization and Disinfection Control	Instruments	Cold Chain Monitoring	Cold Chain Packaging	Total
Discrete Revenues					
Consumables	$ 31,851	$ 2,917	$ 175	$ 7,005	$ 41,948
Hardware and Software	693	24,098	6,748	23	31,562
Services	1,351	7,390	2,848	1,013	12,602
Contracted Revenues					
Services	4,740	--	2,813	--	7,553
Total Revenues	$ 38,635	$ 34,405	$ 12,584	$ 8,041	$ 93,665

Contract Balances

Our contracts have varying payment terms and conditions. Some customers prepay for services, resulting in unearned revenues or customer deposits, called contract liabilities, which are included within other accrued expenses and unearned revenues in the accompanying Consolidated Balance Sheets. Contract assets would exist when sales are recorded (i.e. the control of the goods or services has been transferred to the customer), but customer payment is contingent on a future event besides the passage of time (such as satisfaction of additional performance obligations). We do not have any contract assets. Unbilled receivables, which are not classified as contract assets, represent arrangements in which sales have been recorded prior to billing and right to payment is unconditional.

A summary of contract liabilities is as follows:

Contract liabilities balance as of March 31, 2018	$ 4,147
Prior year liabilities recognized in revenues during the year ended March 31, 2019	(4,629)
Contract liabilities added during the year ended March 31, 2019, net of revenues recognized	4,908
Contract liabilities balance as of March 31, 2019	$ 4,426

Note 3. Inventories

Inventories were as follows:

	March 31, 2019	March 31, 2018
Raw materials	$ 6,804	$ 9,059
Work-in-process	428	380
Finished goods	2,524	3,152
Less: reserve	(2,984)	(3,363)
Inventories, net	$ 6,772	$ 9,228

Note 4. Property, Plant and Equipment

Property, plant and equipment were as follows:

	March 31, 2019	March 31, 2018
Land	$ 889	$ 889
Buildings	18,648	18,543
Manufacturing equipment	8,732	9,156
Computer equipment	3,698	3,459
Construction in progress	107	60
Other	1,393	1,221
Gross total	33,467	33,328
Accumulated depreciation	(11,242)	(9,735)
Property, plant, and equipment, net	$ 22,225	$ 23,593

Depreciation expense for the years ended March 31, 2019, 2018 and 2017 was $2,338, $2,542, and $2,287 respectively.

Note 5. Goodwill and Long-Lived Assets

During the three months ended March 31, 2019, the largest customer of our Cold Chain Packaging reporting segment provided 90-day notice that they are terminating their purchase contract with us. As a result, we performed an impairment analysis on the segment, which accounts for the expected loss of the customer. We determined that the long-lived assets and goodwill associated with our Cold Chain Packaging reporting segment were impaired and we recognized a non-cash impairment charge of $47 on goodwill, $737 on long-lived intangible assets, and $229 on property plant and equipment, which is recorded in impairment loss on goodwill and long-lived assets on the accompanying Consolidated Statements of Operations.

During the three months ended December 31, 2018, we performed an impairment analysis on our Cold Chain Packaging reporting segment as the segment's financial results continued to fall short of expectations. Specifically, rising commodity costs used in the segment's principal product have increased over the past year, eroding the gross profit margin of the segment. We determined that the long-lived assets and goodwill associated with our Cold Chain Packaging reporting segment were impaired and we recognized non-cash impairment charge of $1,028 on goodwill and $2,641 on long-lived assets, in impairment loss on goodwill and long-lived assets on the accompanying Consolidated Statements of Operations.

During the year ended March 31, 2018, revenues in our Cold Chain Packaging reporting segment decreased significantly as compared to the prior year primarily due to a significant decrease in revenues from our largest customer. As a result of this and other related events, we reviewed the long-lived assets associated with this reporting segment and recorded a $13,819 impairment charge during the year ended March 31, 2018.

After the charges recorded, the remaining value of intangible assets and property, plant and equipment associated with the Cold Chain Packaging reporting segment are $54 and $17, respectively as of March 31, 2019. The fair value of the impaired assets was determined using Level 3 inputs (unobservable inputs) based on a discounted cash flow method.

Within the next 12 months, we intend to exit the Cold Chain Packaging business. We intend to cease accepting new customers, and to gradually curtail sales and expenses related to existing customers. The Cold Chain Packaging division had sales of $6,907 during the year ended March 31, 2019. We are targeting to exit by or before March 31, 2020.

The change in the carrying amount of goodwill was as follows:

	Sterilization and Disinfection Control	Instruments	Cold Chain Monitoring	Cold Chain Packaging	Total
March 31, 2017	$ 24,019	$ 18,235	$ 15,404	$ 14,498	$ 72,156
Effect of foreign currency translation	536	--	--	722	1,258
Acquisitions	5,948	--	--	--	5,948
Impairment	--	--	--	(13,819)	(13,819)
March 31, 2018	30,503	18,235	15,404	1,401	65,543
Effect of foreign currency translation	(723)	--	--	(67)	(790)
Acquisitions	--	--	2,699	--	2,699
Impairment	--	--	--	(1,075)	(1,075)
March 31, 2019	$ 29,780	$ 18,235	$ 18,103	$ 259	$ 66,377

Other intangible assets are as follows:

	March 31, 2019			
	Carrying Amount	Accumulated Amortization	Net	Useful Life (Years)
Intellectual property	$ 7,690	$ (5,301)	$ 2,389	10 - 16
Trade names	3,739	(2,542)	1,197	3 - 10
Customer relationships	61,198	(31,584)	29,614	7 - 10
Non-compete agreements	1,581	(1,562)	19	3 - 10
Total	$ 74,208	$ (40,989)	$ 33,219	

	March 31, 2018			
	Carrying Amount	Accumulated Amortization	Net	Useful Life (Years)
Intellectual property	$ 7,210	$ (4,554)	$ 2,656	10 - 16
Trade names	3,675	(2,154)	1,521	3 - 10
Customer relationships	64,363	(26,128)	38,235	7 - 10
Non-compete agreements	1,865	(1,427)	438	3 - 10
Total	$ 77,113	$ (34,263)	$ 42,850	

The following is estimated amortization expense for the years ending March 31:

2020	$ 6,500
2021	5,455
2022	5,090
2023	4,862
2024	4,346

Amortization expense for the years ended March 31, 2019, 2018 and 2017 was $7,090, $6,929, and $6,450, respectively.

Note 6. Restructuring and Relocation Costs

Cold Chain Packaging

In March 2019, we announced that we will consolidate certain corporate administrative functions being performed in our Markham, Canada offices into our existing Lakewood, Colorado offices, and will close our Markham, Canada offices during the year ending March 31, 2020. Certain affected employees were offered an opportunity to continue in the organization, while most were offered a severance package. Costs associated with the closure are associated to the Cold Chain Packaging Reporting unit, or to general corporate costs. We recorded severance as a contractual termination benefit and recognized the expense of the qualified restructuring cost during the year ended March 31, 2019. We will record a liability for lease termination costs consisting of the net present value of remaining lease obligations, net of estimated sublease rentals that could be reasonably obtained, at the date we cease using the property, and measure fair value using Level 3 inputs (unobservable inputs). All other costs, including relocation costs, other office closure costs, and third-party costs, are recognized in the period incurred.

During the year ended March 31, 2019, we recorded $150 related to employee severance and other transition costs into cost of sales, selling, or general and administrative costs on our Consolidated Statements of Operations, and we recorded a corresponding liability in accrued salaries and payroll taxes on our Consolidated Balance Sheets. During the year ending March 31, 2020, we expect to incur additional restructuring costs of $150 to $220, consisting of: between $65 to $100 of employee relocation costs, $10 to $20 of third-party costs, and $75-$100 of lease termination and other office closure costs.

Sterilization and Disinfection Control

In August 2016, we announced that we planned to shut down both our Omaha and Traverse City manufacturing facilities and relocate those operations to the new Bozeman building. The move of those two facilities, along with the current Bozeman operations, began in March 2017 and was completed as of June 30, 2018. The total cost of the relocation was $1,584 (which is comprised primarily of facility moving expenses, retention bonuses for existing personnel and payroll costs for duplicative personnel during the transition period) and these costs pertain to the Sterilization and Disinfection Control Division.

Facility relocation amounts accrued and paid for the year ended March 31, 2019 are as follows:

Balance at March 31, 2018	408
Facility Relocation Expense	17
Cash payments	(425)
Balance at March 31, 2019	-

We completed the sale of our old Bozeman facility during the year ended March 31, 2019, for $2,222 (net of commissions) resulting in a gain of $288, which is recorded in other (income) expense, net on our Consolidated Statements of Operations.

Note 7. Long-term Debt

Long-term debt consists of the following:

	March 31, 2019	March 31, 2018
Line of credit (4.000%, as of March 31, 2019)	$ 6,000	$ 28,000
Term loan (4.000% as of March 31, 2019)	17,000	18,625
Less: discount	(262)	(365)
Less: current portion	(2,125)	(1,625)
Long-term portion	$ 20,613	$ 44,635

On March 1, 2017, we entered into a five-year agreement (the "Credit Facility") for an $80,000 revolving line of credit ("Line of Credit"), a $20,000 term loan ("Term Loan") and up to $2,500 of letters of credit with a banking syndicate of four banks. In addition, the Credit Facility provides a post-closing accordion feature which allows for the Company to request to increase the Line of Credit or Term Loan up to an additional $100,000.

Line of Credit and Term Loan indebtedness bears interest at either: (1) LIBOR, as defined, plus an applicable margin ranging from 1.5% to 2.5%; or (2) the alternate base rate ("ABR"), which is the greater of JPMorgan's prime rate or the federal funds effective rate or the overnight bank funding rate plus 0.5%. We elect the interest rate with each borrowing under the line of credit. In addition, there is an unused line fee of 0.15% to 0.35%. Letter of credit fees are based on the applicable LIBOR rate.

The Term Loan requires 20 quarterly principal payments (the first due date was March 31, 2017) in the amount of $250 (increasing by $125 each year up to $750 in the fifth year). The remaining balance of principal and accrued interest are due on March 1, 2022.

The Credit Facility is secured by all of our assets and requires us to maintain a ratio of funded debt to our trailing four quarters of EBIDTA (the "Leverage Ratio"), as defined in the agreement, of less than 3.0 to 1.0, provided that, we may once during the term of the Credit Facility, in connection with a Permitted Acquisition for which the aggregate consideration paid or to be paid in respect thereof equals or exceeds $20,000, elect to increase the maximum Leverage Ratio permitted hereunder to (i) 3.5 to 1.0 for a period of four consecutive fiscal quarters commencing with the fiscal quarter in which such Permitted Acquisition occurs (the "Initial Holiday Period") and (ii) 3.25 to 1.0 for the period of four consecutive fiscal quarters immediately following the Initial Holiday Period. The Credit Facility also requires us to maintain a minimum fixed charge coverage ratio of less than 1.25 to 1.0. We were in compliance with the required covenants at March 31, 2019.

Future contractual maturities of debt as of March 31, 2019 are as follows:

For the year ending March 31,	
2020	$ 2,125
2021	2,625
2022	18,250
Total	$ 23,000

Subsequent to March 31, 2019, we made $2,500 in payments under the Line of Credit.

Note 8. Stock Transactions and Stock-Based Compensation

In November 2005, our Board of Directors approved a program to repurchase up to 300,000 shares of our outstanding common stock. Under the program, shares of common stock may be purchased from time to time in the open market at prevailing prices or in negotiated transactions off the market. Shares of common stock purchased will be cancelled and repurchases of shares of common stock will be funded through existing cash reserves. There were no repurchases of our shares of common stock under this plan during the years ended March 31, 2019, 2018, and 2017. As of March 31, 2019, we have purchased 162,486 shares under this plan.

Under applicable law, Colorado corporations are not permitted to retain treasury stock. The price paid for repurchased shares is allocated between common stock and retained earnings, based on management's estimate of the original sales price of the underlying shares.

Pursuant to the Mesa Laboratories, Inc. 2014 Equity Plan, we grant stock options, restricted stock units ("RSUs") and performance-based restricted stock units ("PSUs") to employees and non-employee directors. We issue shares of common stock upon the exercise of stock options and the vesting of RSUs and PSUs. Shares issued pursuant to awards granted prior to The 2014 Equity Plan were issued subject to previous stock plans, and some vested and unvested awards are still outstanding under previous plans. For the purposes of counting the shares remaining as available under The 2014 Equity Plan, each share issuable pursuant to outstanding full value awards, such as RSUs and PSUs, counts as five shares issued, whereas each share underlying a stock option counts as one share issued. Under the 2014 Plan, 1,100,000 shares of common stock have been authorized and reserved for eligible participants, of which 613,893 shares were available for future grants as of March 31, 2019.

Stock-based compensation expense recognized in the Consolidated Financial Statements was as follows:

	Year Ended March 31,		
	2019	2018	2017
Stock-based compensation expense (A)	$ 4,212	$ 1,672	$ 1,411
Amount of income tax (benefit) expense recognized in earnings	(2,370)	(1,194)	(1,737)
Stock-based compensation expense (benefit), net of tax	$ 1,842	$ 478	$ (326)

(A) During the year ended March 31, 2019, we implemented a new full-administration equity compensation platform, and as a result, changed the methodology used to account for estimated forfeitures from a static method to a dynamic method. This change resulted in a one-time cumulative increase in expense of $945, recognized during the year ended March 31, 2019.

Stock Options

Stock option activity under The 2006 Equity Compensation plan and The 2014 Equity Plan was as follows (shares and dollars in thousands, except per-share data):

	Shares Subject to Options	Weighted Average Exercise Price Per Share	Weighted-Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding, April 1, 2018	458	$ 86.38	4.5	$ 28,445
Awards granted	26	144.96		
Awards forfeited or expired	(38)	99.00		
Awards exercised	(92)	67.84		
Outstanding, March 31, 2019	354	94.04	3.8	48,301
Exercisable, March 31, 2019	121	78.30	3.5	18,374
Vested and expected to vest, March 31, 2019	331	93.29	3.8	45,463

The total intrinsic value of stock options exercised during the years ended March 31, 2019, 2018 and 2017 was $10,895, $6,309, and $7,574, respectively. Unrecognized stock-based compensation expense for stock options as of March 31, 2019 was $5,661 and is expected to be recognized over a weighted average period of 3.3 years. The total fair value of options vested was $2,400, $1,927 and $1,432 during the years ended March 31, 2019, 2018, and 2017, respectively.

The weighted average assumptions utilized in the Black-Scholes option-pricing model to estimate the fair value of stock option awards granted each year were as follows:

	2019	2018	2017
Risk-free interest rate	2.63%	1.88%	1.56%
Expected life (years)	5.00	5.52	5.47
Expected dividend yield	0.45%	0.54%	0.64%
Volatility	35.96%	32.92%	32.34%
Weighted-average Black-Scholes fair value per share at date of grant	$ 54.02	$ 39.06	$ 31.27

The expected life of options represents the estimated period of time until exercise and is based on historical experience of similar awards, giving consideration to the contractual terms, vesting schedules, and expectations of future employee behavior. Expected stock price volatility is based on historical volatility of our own stock price over the period of time commensurate with the expected life of the award. The risk-free rate is based on the United States Treasury yield curve in effect at the time of grant for the estimated life of the stock option. The dividend yield is calculated based upon the dividend payments made during the prior four quarters as a percent of the average stock price for that period. The amounts shown above for the estimated fair value per option granted are before the estimated effect of forfeitures, which reduces the amount of expense recorded in our Consolidated Statements of Operations. We base forfeiture rates on company-specific historical experience of similar awards for similar subsets of our employee population.

Restricted Stock Units (RSUs)

RSU activity under The 2014 Equity Plan was as follows (shares and dollars in thousands, except per-share data):

	Number of Shares	Weighted-Average Grant Date Fair Value per Share	Weighted-Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding at March 31, 2018	8	$ 126.03	4.5	982
Awards granted	29	171.13		
Awards forfeited or expired	(3)	168.24		
Awards vested	(3)	149.44		
Outstanding as of March 31, 2019	31	$ 162.23	2.1	7,155

There were 28 RSUs with a weighted average grant date fair value per share of $163.93 that were vested and expected to vest as of March 31, 2019. For the years ended March 31, 2018 and 2017, the weighted average fair value per RSU granted was $136.26 and $122.98. Unrecognized stock-based compensation expense for RSUs that we have determined are probable of vesting was $4,018 as of March 31, 2019 and is expected to be recognized over a weighted average period of 2.1 years. The total fair value of RSUs vested was $460, $123, and $0 during the years ended March 31, 2019, 2018, and 2017.

As of March 31, 2019, 10 of the outstanding RSUs were subject to performance and service conditions and are considered performance share units (PSUs). During the year ended March 31, 2019, we awarded PSUs with a grant date fair value of $192.99 per share. The awards vest both based on our achievement of specific performance criteria for the three-year period from April 1, 2018 through March 31, 2021, as well as continued service through June 15, 2021. The quantity of shares that will be issued upon vesting will range from 0% to 400% of the targeted number of shares; if the defined minimum targets are not met, then no shares will vest. During the year ended March 31, 2019, 1,050 PSUs were forfeited.

Note 9. Earnings (Loss) Per Share

Basic earnings (loss) per share is computed by dividing net income (loss) by the weighted-average number of common shares outstanding during the reporting period. Diluted earnings (loss) per share is computed similarly to basic earnings (loss) per share, except that it includes the potential dilution that could occur if dilutive securities were exercised.
The following table presents a reconciliation of the denominators used in the computation of earnings (loss) per share - basic and diluted (shares in thousands):

	Year Ended March 31,		
	2019	2018	2017
Net income (loss) available for shareholders	$ 7,484	$ (2,962)	$ 11,183
Weighted average outstanding shares of common stock	3,839	3,770	3,679
Dilutive effect of stock options	186	--	165
Dilutive effect of non-vested shares	8	--	--
Fully diluted shares	4,033	3,770	3,844
Basic	$ 1.95	$ (0.79)	$ 3.04
Diluted	1.86	(0.79)	2.91

The following stock awards were excluded from the calculation of diluted EPS:

	Year Ended March 31,		
	2019	2018	2017
Stock awards that were anti-dilutive	1	106	110
Stock awards subject to performance conditions	10	--	--
Total stock awards excluded from diluted EPS	11	106	110

Note 10. Employee Benefit Plans

We adopted the Mesa Laboratories, Inc. 401(K) Retirement Plan effective January 1, 2000. We match 100% of the first 4% of pay contributed by each eligible employee and contributions are vested immediately. Participation is voluntary, and employees are eligible the first day of the month following their start date. We contributed $663, $680, and $501, respectively, to the plan for the years ended March 31, 2019, 2018 and 2017.

Note 11. Income Taxes

Earnings before income taxes are as follows:

	Year Ended March 31,		
	2019	2018	2017
Domestic	$ 12,133	$ 12,708	$ 12,913
Foreign	(3,510)	(12,407)	1,383
Total earnings before income taxes	$ 8,623	$ 301	$ 14,296

The components of our provision for income taxes are as follows:

	Year Ended March 31,		
	2019	2018	2017
Current tax provision			
U.S. Federal	$ 1,831	$ 3,732	$ 2,282
U.S. State	449	715	510
Foreign	1,166	1,299	849
Total current tax expense	3,446	5,746	3,641
Deferred tax provision:			
U.S. Federal	(741)	(1,589)	(126)
U.S. State	(106)	(216)	(32)
Foreign	(1,460)	(678)	(370)
Total deferred tax expense	(2,307)	(2,483)	(528)
Total income tax expense	$ 1,139	$ 3,263	$ 3,113

The components of net deferred tax assets and liabilities are as follows:

	March 31, 2019	March 31, 2018
Current deferred tax assets:		
Accrued employee-related expenses	$ 163	$ 277
Allowances and reserves	100	101
Stock compensation deductible differences	1,061	779
Inventories	1,534	1,388
Currency translation adjustment	(33)	51
Net operating loss	47	90
Foreign tax credit	16	100
Other	807	--
Total current deferred tax assets	3,695	2,786
Long-term deferred tax liabilities:		
Property, plant and equipment	(1,118)	(1,236)
Goodwill and intangible assets	(2,249)	(3,940)
Other	(6)	(4)
Total long-term deferred tax liabilities	(3,373)	(5,180)
Valuation allowance	(76)	(100)
Net deferred tax liability	$ 246	$ (2,494)

A reconciliation of our income tax provision and the amounts computed by applying statutory rates to income before income taxes is as follows:

	Year Ended March 31,		
	2019	2018	2017
Federal income taxes at statutory rates	$ 1,811	$ 93	$ 4,861
State income taxes, net of federal benefit	208	328	302
Tax benefit of stock option exercises	(2,034)	(1,087)	(1,576)
Section 199 manufacturing deduction	--	(381)	(304)
Research and development credit	(158)	(162)	(385)
Tax Cuts and Jobs Act	--	(59)	--
Impairment of non-deductible goodwill	284	4,257	--
Limitation for 162 (m)	766	--	--
Other	262	274	215
Total income tax expense	$ 1,139	$ 3,263	$ 3,113

On December 22, 2017, the Tax Cuts and Jobs Act ("TCJA") was enacted in the U.S., making significant changes to U.S. tax law. The TCJA reduces the U.S. federal corporate income tax rate from 34 percent to 21 percent, requires companies to pay a one-time transition tax on certain un-remitted earnings of foreign subsidiaries that were previously tax deferred, generally eliminates U.S. federal income tax on dividends from foreign subsidiaries, creates new taxes on certain foreign-sourced earnings, repeals the Section 199 deduction, and imposes limitations on executive compensation under Section 162(m).

We have completed our analysis of the TCJA's income tax effects. In total, the TCJA resulted in a net tax expense of $43. The final effect of the TCJA's one-time transition tax was a tax liability of $322. During the year ended March 31, 2018, we re-measured the applicable deferred tax assets and liabilities based on the rates at which they are expected to reverse. The amount recorded related to the re-measurement of our deferred tax balance was a benefit of $279.

We or one of our subsidiaries files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. Our federal tax returns for all years after 2015, state tax returns after 2014 and foreign tax returns after 2014 are subject to future examination by tax authorities for all our tax jurisdictions. Although the outcome of tax audits, if any, is always uncertain, we believe that we have adequately accrued for all amounts of tax, including interest and penalties and any adjustments that may result.

As of March 31, 2019, the gross amount of unrecognized tax benefits was $1,361. There would have been no material impact on our effective tax rate for the year ended March 31, 2019 had these benefits been recognized. We recognize interest and penalties related to unrecognized tax benefits in other expense and general and administrative expense, respectively. Accrued interest and penalties related to unrecognized tax benefits were $40, $24 and $17 as of March 31, 2019, 2018 and 2017, respectively.

A reconciliation of the changes in the gross balance of unrecognized tax benefit amounts is as follows:

	Year Ended March 31,		
	2019	2018	2017
Beginning balance	$ 827	$ 331	$ 221
Increases related to current period tax positions	534	496	110
Ending balance	$ 1,361	$ 827	$ 331

We expect that the amount of unrecognized tax benefits will change in the next 12 months; however, we do not expect the change to have a significant impact on our consolidated statements of operations or consolidated balance sheets. At this time, we expect resolution of the uncertain tax position within 12 months.

As of March 31, 2019, undistributed earnings of our foreign subsidiaries amounted to $5,414. Those earnings are considered indefinitely reinvested and, accordingly, no U.S. federal and state income taxes have been provided thereon. Upon distribution of those earnings in the form of dividends or otherwise, we would be subject to both U.S. income taxes (subject to an adjustment for foreign tax credits) and withholding taxes payable to the various foreign countries. Determination of the amount of unrecognized deferred U.S. income tax liability is not practicable because of the complexities associated with its hypothetical calculation; however, unrecognized foreign tax credits would be available to reduce a portion of the U.S. tax liability.

As of March 31, 2019, we had $90 of net operating losses for foreign tax purposes. The foreign net operating losses do not expire. In addition, we had $16 of foreign tax credit carryovers which will expire in the tax year 2029.

Note 12. Commitments and Contingencies

In February 2018, Dr. James L. Orrington II filed a putative civil class action in the United States District Court for the Northern District of Illinois, Eastern Division, alleging that we sent unsolicited advertisements to telephone facsimile machines. The complaint includes counts alleging violations of the Telephone Consumer Protection Act ("TCPA"), the Illinois Consumer Fraud Act, Conversion, Nuisance, and Trespass to Chattels. The plaintiff seeks monetary damages, injunctive relief, and attorneys' fees. Additionally, in June 2018, Rowan Family Dentistry, Inc. filed a putative class action complaint in the United States District Court for the District of Colorado making substantially the same claims as Dr. James L. Orrington II and seeking substantially the same relief. In January 2019, we received preliminary court approval of a class action settlement with Dr. James L. Orrington II and the class in the amount of $3,300, and we received final approval on May 28, 2019. As a result of the settlement of the matter with Dr. James L. Orrington, Rowan Family Dentistry has dismissed their case against us. We have recorded the final settlement amount on our Consolidated Statements of Operations and a corresponding liability is included as legal liability on our Consolidated Balance Sheets.

Note 13. Leases

The company leases office, warehousing and manufacturing space. Total non-cancellable operating leases in effect at March 31, 2019, require rental payments of $653, $443, $230, and $48 for the years ending March 31, 2020 through 2023, respectively. Lease expense for all operating leases was $763, $735, and $655 during the years ended March 31, 2019, 2018 and 2017, respectively.

Note 14. Segment Data

Segment information is prepared on the same basis that our management reviews financial information for operational decision-making purposes. We have four operating segments: Sterilization and Disinfection Control, Instruments, Cold Chain Monitoring and Cold Chain Packaging. When determining the reportable segments, we aggregated operating segments based on their similar economic and operating characteristics. The following tables set forth our segment information:

	Year Ended March 31, 2019				
	Sterilization and Disinfection Control	Instruments	Cold Chain Monitoring	Cold Chain Packaging	Total
Revenues (1)	$ 46,297	$ 36,125	$ 13,806	$ 6,907	$ 103,135
Gross profit	$ 31,861	$ 22,866	$ 5,582	$ 607	$ 60,916
Reconciling items (2)					(52,293)
Earnings before income taxes					$ 8,623

	Year Ended March 31, 2018				
	Sterilization and Disinfection Control	Instruments	Cold Chain Monitoring	Cold Chain Packaging	Total
Revenues (1)	$ 43,260	$ 34,104	$ 12,978	$ 5,837	$ 96,179
Gross profit	$ 29,333	$ 20,395	$ 3,854	$ 1,037	$ 54,619
Reconciling items (2)					(54,318)
Earnings before income taxes					$ 301

	Year Ended March 31, 2017				
	Sterilization and Disinfection Control	Instruments	Cold Chain Monitoring	Cold Chain Packaging	Total
Revenues (1)	$ 38,635	$ 34,405	$ 12,584	$ 8,041	$ 93,665
Gross profit	$ 25,674	$ 21,037	$ 4,557	$ 1,971	$ 53,239
Reconciling items (2)					(38,943)
Earnings before income taxes					$ 14,296

(1) Intersegment revenues are not significant and are eliminated to arrive at consolidated totals.
(2) Reconciling items include selling, general and administrative, research and development, impairment loss on goodwill and long-lived assets, legal settlement, and other expenses.

The following table sets forth total assets by operating segment:

	March 31, 2019	March 31, 2018
Sterilization and Disinfection Control	$ 74,230	$ 83,452
Instruments	30,911	33,479
Cold Chain Monitoring	32,179	30,796
Cold Chain Packaging	1,590	7,091
Corporate and administrative	17,857	9,283
Total	$ 156,767	$ 164,101

All long-lived assets are located in the United States except for $5,649, $1,427, and $15,762 which are associated with our French, Canadian and German subsidiaries, respectively.

Revenues from external customers are attributed to individual countries based upon locations to which the product is shipped or exported, as follows:

	Year Ended March 31,		
	2019	2018	2017
United States	$ 64,828	$ 56,998	$ 52,989
Foreign	38,307	39,181	40,676
Total	$ 103,135	$ 96,179	$ 93,665

No foreign country exceeds 10% of total revenues.

Note 15. Quarterly Results (unaudited)

Quarterly financial information for the years ended March 31, 2019 and 2018 is summarized as follows (earnings per share per quarter will not add up to reported annual earnings per share due to differences in average outstanding shares as reported on a quarterly basis) (in thousands, except per share data):

2019	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenues	$ 25,142	$ 24,865	$ 26,682	$ 26,446
Gross profit	15,091	14,577	15,634	15,614
Net income	4,230	994	858	1,402
Basic earnings per share	$ 1.11	$ 0.26	$ 0.22	$ 0.36
Diluted earnings per share	1.06	0.25	0.21	0.34

2018	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenues	$ 22,673	$ 22,954	$ 23,671	$ 26,881
Gross profit	12,671	13,233	12,681	16,034
Net income (loss)	1,517	2,353	(11,086)	4,254
Basic earnings (loss) per share	$ 0.41	$ 0.63	$ (2.93)	$ 1.12
Diluted earnings (loss) per share	0.39	0.60	(2.93)	1.08

Note 16. Subsequent Events

In April 2019, our Board of Directors declared a quarterly cash dividend of $0.16 per share of common stock, payable on June 14, 2019, to shareholders of record at the close of business on May 31, 2019.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) that are designed to reasonably ensure that information required to be disclosed by us in the reports we file or submit under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that such information is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Our management evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures as of March 31, 2019. Based on that evaluation, our management concluded that our disclosure controls and procedures were effective at March 31, 2019.

Our management, including our Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles in the United States. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance of achieving their control objectives. Management evaluated the effectiveness of our internal control over financial reporting based on the framework in "Internal Control – Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in 2013.

Our management evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our internal control over financial reporting as of March 31, 2019. Based on that evaluation, our management concluded that our internal control over financial reporting was effective at March 31, 2019. As allowed, this evaluation excludes the operations of acquired entities during the year ended March 31, 2019 due to the timing of the acquisitions. Revenues related to these acquisitions were less than 1% of total revenues for the year ended March 31, 2019.

Our independent auditors, Plante & Moran, PLLC, a registered public accounting firm, is appointed by the Audit Committee of our Board of Directors, subject to ratification by our shareholders. Plante Moran, PLLC has audited and reported on the Consolidated Financial Statements of Mesa Laboratories, Inc. and our internal control over financial reporting as of March 31, 2019. The attestation report of our registered public accounting firm is contained in this annual report.

Changes in internal control over financial reporting

During the year ended March 31, 2019, we implemented a new full-administration equity compensation platform. We were continuing to integrate the software with our processes, systems, and controls during the year ended March 31, 2019. There were no other significant changes in our internal control over financial reporting that occurred during the quarter ended March 31, 2019, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

Operational Data

Year Ended March 31	2019	2018	2017	2016	2015
Revenues	$103,135	$96,179	$93,665	$84,659	$71,330
Gross Profit	$60,916	$54,619	$53,239	$51,413	$43,392
Gross Profit Margin	59%	57%	57%	61%	61%
Net income (loss)	$7,484	$(2,962)	$11,183	$11,169	$9,583
Net income (loss) per diluted share	$1.86	$(0.79)	$2.91	$2.97	$2.63
Adjusted operating income*	$25,857	$24,603	$24,174	$23,437	$21,532
Adjusted operating income per diluted share*	$6.41	$6.53	$6.29	$6.24	$5.90
Average diluted shares outstanding	4,033	3,770	3,844	3,757	3,650

Financial Position

Year Ended March 31	2019	2018	2017	2016	2015
Working Capital	$9,962	$14,698	$19,218	$13,215	$14,965
Total Assets	$156,767	$164,101	$171,733	$160,748	$117,320
Long-term Debt, Net of Issuance Costs	$20,613	$44,635	$53,675	$42,250	$23,250
Stockholders' Equity	$111,311	$99,361	$97,821	$84,678	$73,479

Average Return

Year Ended March 31	2019	2018	2017	2016	2015
Average return on:					
Stockholders' Investment	7%	(3%)	12%	14%	14%
Assets	5%	(2%)	7%	8%	9%
Invested Capital	6%	(2%)	8%	10%	11%
Adjusted Invested Capital^	21%	17%	17%	20%	24%
Dividends Paid Per Share	$0.64	$0.64	$0.64	$0.64	$0.62

In thousands, except per share data

* The non-GAAP measure of adjusted operating income is defined to exclude the non-cash impact of amortization of intangible assets, stock-based compensation and impairment of goodwill and long-lived assets.

^Adjusted invested capital is a non-GAAP measure which substitutes adjusted operating income for net income in the average return on invested capital calculation.

Our purpose is to protect the vulnerable. We fulfill that purpose by ensuring the safety and efficacy of the products people use every day, by helping to maintain critical environments for healthcare services, biopharmaceuticals, medical devices, environmental and food and beverage.

Directors
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Evan C. Guillemin
Chairman, Audit Committee

David M. Kelly
Chairman, Compensation Committee

John B. Schmieder
Chairman, Nominating and Governance Committee

Robert V. Dwyer
Director

Gary M. Owens
Director

Jennifer S. Alltoft
Director

David B. Perez
Director

Gary M. Owens
Chief Executive Officer and President

John V. Sakys
Chief Financial Officer

Gregory T. DiNoia
Senior Vice President of Commercial Operations

Brian D. Archbold
Senior Vice President of Continuous Improvement

Transfer Agent
Computershare Investor Services
Denver, Colorado

Independent Auditors
Plante & Moran, PLLC
Denver, Colorado

SEC Counsel
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