

NEOGEN CORP  
Form 10-K  
July 27, 2018  
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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
**WASHINGTON, D.C. 20549**

**FORM 10-K**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT  
OF 1934**  
**For the Fiscal Year Ended May 31, 2018**

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE  
ACT OF 1934**  
**For The Transition Period From \_\_\_\_\_ To \_\_\_\_\_.**

**COMMISSION FILE NUMBER 0-17988**

**NEOGEN CORPORATION**

*(Exact name of registrant as specified in its charter)*

**MICHIGAN**  
*(State or other jurisdiction of  
incorporation or organization)*

**38-2367843**  
*(I.R.S. Employer  
Identification No.)*

**620 Leshar Place**

**Lansing, Michigan 48912**

*(Address of principal executive offices, including zip code)*

**517-372-9200**

*(Registrant's telephone number, including area code)*

**SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT: NONE**

**SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:**

**COMMON STOCK, \$0.16 par value per share**

*(Title of Class)*

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 a check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 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 and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post 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 this Form 10-K or any amendment to this Form 10-K.

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Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" 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 Act).    Yes    No

Based on the closing sale price on November 30, 2017 the aggregate market value of the voting stock held by non-affiliates of the registrant was \$3,242,762,000. For these purposes, the registrant considers its Directors and executive officers to be its only affiliates.

The number of outstanding shares of the registrant's Common Stock was 51,756,964 on June 30, 2018.

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**DOCUMENTS INCORPORATED BY REFERENCE**

Certain portions of the registrant's definitive proxy statement to be prepared pursuant to Regulation 14a and filed in connection with solicitation of proxies for its October 4, 2018 annual meeting of shareholders is incorporated by reference into part III of this Form 10-K.

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Subsidiaries

Consent of independent registered public accounting firm BDO USA, LLP

Section 302 Certification of Principal Executive Officer

Section 302 Certification of Principal Financial Officer

Section 1350 Certification pursuant to Section 906

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**CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION**

Forward-looking statements, within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, are made throughout this Annual Report on Form 10-K, including statements relating to management's expectations regarding new product introductions; the adequacy of our sources for certain components, raw materials and finished products; and our ability to utilize certain inventory. For this purpose, any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words believes, anticipates, plans, expects, seeks, estimates, and similar expressions are intended to identify forward-looking statements. There are a number of important factors that could cause Neogen Corporation's results to differ materially from those indicated by such forward-looking statements, including those detailed in ITEM 1A. RISK FACTORS and under the captions Management's Discussion and Analysis of Financial Condition and Results of Operations, Critical Accounting Policies and Estimates, and Future Operating Results.

In addition, any forward-looking statements represent management's views only as of the day this Annual Report on Form 10-K was first filed with the Securities and Exchange Commission and should not be relied upon as representing management's views as of any subsequent date. While management may elect to update forward-looking statements at some point in the future, it specifically disclaims any obligation to do so, even if its views change.

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**PART I**

**ITEM 1. BUSINESS**

Neogen Corporation and subsidiaries (collectively referred to as we, Neogen or the Company) develop, manufacture and market a diverse line of products dedicated to food and animal safety. Our Food Safety segment consists primarily of diagnostic test kits and complementary products (e.g., culture media) sold to food producers and processors to detect dangerous and/or unintended substances in human food and animal feed, such as foodborne pathogens, spoilage organisms, natural toxins, food allergens, genetic modifications, ruminant by-products, meat speciation, drug residues, pesticide residues and general sanitation concerns. Our diagnostic test kits are generally less expensive, easier to use and provide greater accuracy and speed than conventional diagnostic methods. The majority of the test kits are disposable, single-use, immunoassay and DNA detection products that rely on our proprietary antibodies and RNA and DNA testing methodologies to produce rapid and accurate test results. Our expanding line of food safety products also includes bioluminescence-based diagnostic technology.

Neogen's Animal Safety segment is engaged in the development, manufacture, marketing and distribution of veterinary instruments, pharmaceuticals, vaccines, topicals, diagnostic products, rodenticides, cleaners, disinfectants, insecticides and genomics testing services for the worldwide animal safety market. The majority of these consumable products are marketed through a network of national and international distributors, as well as a number of large farm supply retail chains in the United States and Canada. Our USDA-licensed facility in Lansing, Michigan, produces immunostimulant products for horses and dogs, and a unique equine botulism vaccine. Our line of drug detection products is sold worldwide for the detection of abused and therapeutic drugs in animals and animal products, and has expanded into the human forensic market.

Neogen's products are marketed by our sales personnel in the U.S., Canada, Mexico, Central America, the United Kingdom and other parts of Europe, Brazil, China, India and Australia, and by distributors throughout the rest of the world.

Our mission is to be the leading company in the development and marketing of solutions for food and animal safety. To meet this vision, a growth strategy consisting of the following elements has been developed: (i) increasing sales of existing products; (ii) introducing new products and product lines; (iii) expanding international sales; and (iv) acquiring businesses and forming strategic alliances. We have historically been successful at increasing product sales organically and maintain an active acquisition program to identify and capitalize on opportunities to acquire new products and/or businesses.

Neogen Corporation was formed as a Michigan corporation in June 1981 and actual operations began in 1982. Our principal executive offices are located at 620 Leshar Place, Lansing, Michigan 48912-1595 and our telephone number is (517) 372-9200.

Neogen's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports are available free of charge via our website ([www.neogen.com](http://www.neogen.com)) as soon as reasonably practicable after such information is filed with, or furnished to, the United States Securities and Exchange Commission. The content of our website or the websites of any third parties that may be noted herein are not incorporated by reference in this Form 10-K.

**PRODUCTS**



Product trademarks and registered trademarks owned by Neogen include: **CORPORATE:** Neogen®, Neogen flask logo®; **FOOD SAFETY:** AccuClean®, AccuPoint®, AccuScan®, Acumedia®, Agri-Screen®, Alert®, ANSR®, BetaStar®, BioLumix®, F.A.S.T.®, GeneQuence®, GENE-TRAK®, Harlequin®, ISO-GRID®, Lab M®, *Listeria* Right Now , NeoCare , NeoColumn , NeoFit®, NeoNet®, NeoSeek , NEO-GRID®, Penzyme®, Raptor®, Reveal®, Soleris®, µPREP®, Veratox®, Simple. Accurate. Supported. Food Safety Solutions<sup>SM</sup>; **LIFE SCIENCES:** Alert®, K-Blue®, K-Blue Substrate®, K-Gold®, NeoSal®; **ANIMAL SAFETY:** Acid-A-Foam , Aero-ssault , Ag-TekAluShield , AquaPrime®, Assault®, Barnstorm®, BioCres 50, BioPhene , BioQuat , BotVax®, Breeder-Sleeve®, Bromethalin One Meal Is All It Takes(design)®, Calf Eze , Chem-Tech, Ltd. , Chem-Tech s CT logo (with circle) , Chlor-A-Foam , COMPANION , Cowboy Syringe®, CT-511®, Cykill , D3 Needles, DC&RDeciMax®, Di-Kill®, Dr. Frank ®, Dy-Fly®, Dyne-O-Might®, Earth City Resources (design)®, ElectroJac®, ELISA Technologies (design)®, EqStim®, EquiSleeve®, E-Z Bond , E-Z Catch®, Farmphene®, Final-Fly-T®, Fly-Die Defense , Fly-Die Ultra , Fura-Zone GenQuat , Horse Sense®, Ideal®, ImmunoRegulin®, Insectrin®, Insight , Iod®, Jolt®, LD-44®, LD-44T , Maxi Sleeve®, MaxKlor®, MegaShot , MycAseptic , NeedleGard , NFZ , NuDynaKare , Pantek , ParlorMint , ParvoShield Place Pack®, PolyPetite , PolyShield , PolySleeve®, Preserve®, Preserve International®, Preserve International(design)®, Prima®, Prima Marc , Prima-Shot , Prima TechPrima Tech logo®, Pro-Fix®, Pro-Flex®, Promar , Pro-Shot , PRO-TECT 6 MIL®, PRO-TECT 6 MIL logo®, Prozap®, Prozap (stylized mark w/fancy Z) , PY-75 , Quat-Chem Ramik®, Rat & Mouse-A-Rest II®, RenaKare , Rodent Elimination Station , Rodex , Rot-Not , Safe-T-Flex , Siloxycide Spectrasol , Spec-Tuss , SquirtStarlicide®, Stress-Dex®, SureBond®, SureKill®, Swine-O-Dyne®, Synergize®, SyrVet®, Tetrabase®, Tetracid®, Tetradyne®, ThyroKare , TopHoof , Tri-HisTri-Seal , Trya®, Turbocide®, Turbocide Gold®, Uniprim®, UriKare , VAP-5 , VAP-20 , Vet-Tie , Viroxide Super-15 , War Paint®, We keep em movin®, X-185 , Zipcide®; **GENOMICS:** Deoxi , GeneSeek®, Genomic Profiler , Genomic Solutions for Food Security®, Igenity®, SeekGain , SeekSire , SeekTrace , Tru-Polled;**LOGOTYPES:** BioSentry barn logo®, BioSentry chicken logo®, BioSentry pig logo®, Circular design®, TurboCide® (stylized).

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Neogen operates in two business areas: the Food Safety and the Animal Safety segments. See Notes to Consolidated Financial Statements elsewhere in this Form 10-K for financial information about our business segments and international operations.

### **FOOD SAFETY SEGMENT**

Neogen's Food Safety segment is primarily engaged in the production and marketing of diagnostic test kits and complementary products marketed to food and feed producers and processors to detect dangerous and/or unintended substances in food and animal feed, such as foodborne pathogens, spoilage organisms, natural toxins, food allergens, genetic modifications, ruminant by-products, meat speciation, drug residues, pesticide residues and general sanitation concerns.

Our test kits are used to detect potential hazards in food and animal feed by testers ranging from small local grain elevators to the largest, best-known food and feed processors in the world, and numerous regulatory agencies. Neogen's products include tests for:

**Mycotoxins.** Grain producers and processors of all types and sizes use our Veratox, Agri-Screen, Reveal, Reveal Q+ and Reveal Q+ MAX tests to detect the presence of mycotoxins, including aflatoxin, deoxynivalenol, fumonisin, ochratoxin, zearalenone and T-2/HT-2 toxin, to help ensure product safety and quality in food and animal feed.

**Food allergens.** The world's largest producers of cookies, crackers, candy, ice cream and many other processed foods use our Veratox, Alert, Reveal, Reveal 3-D and BioKits testing products for food allergens to help protect their food-allergic customers from the inadvertent contamination of products with food allergens, such as peanut, milk, egg, almond, gliadin (gluten), soy and hazelnut residues.

**Dairy antibiotics.** Dairy processors are the primary users of Neogen's BetaStar S, BetaStar Advanced and BetaStar 4D diagnostic tests to detect the presence of veterinary antibiotics in milk. The presence of these drugs in milk is a public health hazard and an economic risk to processors as it limits the milk's further processing.

**Foodborne pathogens.** Meat and poultry processors, seafood processors, fruit and vegetable producers and many other market segments are the primary users of Neogen's ANSR and Reveal tests for foodborne bacteria, including *E. coli* O157:H7, *Salmonella*, *Listeria* and *Campylobacter*. Neogen's ANSR pathogen detection system is an isothermal amplification reaction test method which exponentially amplifies the DNA of any bacteria present in food and environmental samples to detectable levels in 10 minutes. Combined with ANSR's single enrichment step, Neogen's pathogen detection method provides DNA-definitive results in a fraction of the time of other molecular detection methods. Our new *Listeria* Right Now test detects the pathogen in less than 60 minutes without sample enrichment. Reveal's lateral flow device combines an immunoassay with chromatography for a rapid and accurate one-step result.

**Spoilage microorganisms.** Neogen's Soleris and BioLumix products are used by food processors to identify the presence of spoilage organisms (e.g., yeast and mold) and other microbiological contamination in food. The systems measure microbial growth by monitoring biochemical reactions that generate a color change in the media as microorganisms grow. The sensitivity of the system allows detection in a fraction of the time needed for traditional methods, with less labor and handling time. Our NeoSeek genomics services utilize a novel application of 16s metagenomics to determine all bacteria in a sample, without introducing biases from culture media, and without the need to generate a bacterial isolate for each possible microbe in a sample.

**Sanitation monitoring.** Neogen manufactures and markets our AccuPoint Advanced rapid sanitation test to detect the presence of adenosine triphosphate (ATP), a chemical found in all living cells. This easy-to-use and inexpensive test

uses bioluminescence to quickly determine if a contact surface has been completely sanitized. When ATP comes into contact with the reagents contained in the test device, a reaction takes place that produces light. More light is indicative of higher levels of ATP and a need for more thorough sanitation. Our worldwide customer base for ATP sanitation testing products includes food and beverage processors, the food service and healthcare industries, as well as many other users.

**Culture media.** Neogen Culture Media, formerly Neogen's Acumedia and Lab M products, offers culture media for varied purposes, including traditional bacterial testing and the growth of beneficial bacteria, such as cultures for sausages and beer. Our customers for culture media also include commercial and research laboratories and producers of pharmaceuticals, cosmetics and veterinary vaccines.

**Seafood contaminants.** Neogen's specialty products for the seafood market include tests for histamine, a highly allergenic substance that occurs when certain species of fish begin to decay; chloramphenicol, a banned antibiotic in most of the world, but still used by some shrimp farmers to improve the yield of their products; sulfite, an effective but potentially allergenic shrimp preservative; and shellfish toxins.

The majority of Neogen's food safety test kits use immunoassay technology to rapidly detect target substances. Our ability to produce high quality antibodies sets our products apart from immunoassay test kits produced and sold by other companies. Our kits are available in microwell formats, which allow for automated and rapid processing of a large number of samples, and lateral flow and other similar devices that provide distinct visual results. Typically, test kits use antibody-coated test devices and chemical reagents to indicate a positive or negative result for the presence of a target substance in a test sample; the simplicity of the tests makes them accessible to all levels of food producers, processors and handlers. Neogen also offers other test methods and products to complement its immunoassay tests.

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Our test kits are generally based on internally developed technology, licensed technology, or technology that is acquired in connection with acquisitions. In fiscal 2018, the Food Safety segment incurred expense totaling \$2,038,000 for licenses and royalties for technology used in our products, including expense of \$829,000 for allergen products, \$241,000 for the pathogen product line and \$409,000 for licenses related to the dairy antibiotics product line. Generally, royalty rates are in the range of 2% to 10% of revenues on products containing the licensed technology. Some licenses involve technology that is exclusive to Neogen's use while others are non-exclusive and involve technology licensed to multiple licensees.

Neogen's international operations in the United Kingdom, Mexico, Brazil, China and India originally focused on food safety products, and each of these units reports through the Food Safety segment. In recent years, these operations have expanded to offer our complete line of products and services, including those usually associated with the Animal Safety segment such as cleaners, disinfectants, rodenticides, insecticides, veterinary instruments and genomics services. These additional products and services are managed and directed by existing management at our international operations, and report through the Food Safety segment.

Revenues from Neogen's Food Safety segment accounted for 48.7%, 47.4% and 45.6% of our total revenues for fiscal years ended May 31, 2018, 2017 and 2016, respectively.

**ANIMAL SAFETY SEGMENT**

Neogen's Animal Safety segment is primarily engaged in the development, manufacture, marketing and distribution of veterinary instruments, pharmaceuticals, vaccines, topicals, diagnostic products, a full suite of agricultural biosecurity products such as rodenticides, cleaners, disinfectants and insecticides, and genomics services.

**Veterinary instruments.** Neogen markets a broad line of veterinary instruments and animal health delivery systems under the Ideal brand name. Approximately 250 different products are offered, many of which are used to deliver animal health products, such as antibiotics and vaccines. Ideal's D3 Needles are stronger than conventional veterinary needles and are uniquely detectable by metal detectors at meat processing facilities—a potential market advantage in the safety-conscious beef and swine industries. Neogen's Prima Tech product line consists of highly accurate devices used by farmers, ranchers and veterinarians to inject animals, provide topical applications and to use for oral administration. Prima Tech is also a supplier of products used in artificial insemination in the swine industry. Other products include animal identification and handling equipment.

**Veterinary pharmaceuticals.** Animal Safety's NeogenVet product line provides innovative, value-added, high quality products to the veterinary market. Top NeogenVet products include PanaKare, a digestive aid that serves as a replacement therapy where digestion of protein, carbohydrate and fat is inadequate due to exocrine pancreatic insufficiency; Natural Vitamin E-AD, which aids in the prevention and treatment of vitamin deficiencies in swine, cattle and sheep; and RenaKare, a supplement for potassium deficiency in cats and dogs. Other products sold under the NeogenVet brand include Vita-15 and Liver 7, which are used in the treatment and prevention of nutritional deficiencies. We also manufacture and market Uniprim, a leading veterinary antibiotic.

**Veterinary biologics.** Neogen's BotVax B vaccine has successfully protected thousands of high-value horses and foals against Type B botulism, commonly known as Shaker Foal Syndrome. Our product is the only USDA-approved vaccine for the prevention of Type B botulism in horses. Years of research and many thousands of doses have proven Neogen's EqStim immunostimulant to be safe and effective as a veterinarian-administered adjunct to conventional treatment of equine bacterial and viral respiratory infections. Our ImmunoRegulin product uses similar immunostimulant technology to aid in the treatment of pyoderma (a bacterial skin inflammation) in dogs.

**Veterinary OTC products.** Animal Safety products offered by Neogen to the retail over-the-counter (OTC) market include Ideal brand veterinary instruments packaged for the retail market. OTC products also include Stress-Dex, an oral electrolyte replacer for performance horses, and Fura-Zone, for the prevention and treatment of surface bacterial infections in wounds, burns and cutaneous ulcers. Ag-Tek and other hoof care, disposables and artificial insemination supplies are marketed to the dairy and veterinary industries.

**Rodenticides.** Neogen's comprehensive line of proven rodenticides, sold under brand names such as Ramik and Havoc, effectively address rodent problems of any size and serve as a critical component of an overall biosecurity plan for animal protein production operations. Neogen offers several rodenticide active ingredients including diphacinone, bromethalin, brodifacoum, and zinc phosphide formulated with food grade ingredients to generate the highest acceptance and most palatable bait possible.

**Cleaners and disinfectants.** Used in animal and food production facilities, Neogen's cleaners and disinfectants, including DC&R, 904 Disinfectant, Acid-A-Foam, Synergize, BioPhene and FarmFluid S, can stop a disease outbreak before it starts. The products are also used in the veterinary clinic market to maintain sanitary conditions and limit the potential hazards of bacteria, fungi and viruses.

**Insecticides.** Neogen's highly effective insecticides utilize environmentally friendly technical formulas, and several are approved for use in food establishments. The Company's Prozap insecticide brand is well known in the large animal production industry, particularly with dairy and equine producers.

**Animal genomics services.** Neogen Genomics, formerly known as GeneSeek and Igenity, provides value-added services to leading agricultural genetics providers, large national cattle associations, companion animal breed registries, university researchers, and numerous commercial beef and dairy cattle, swine and poultry producers. With state-of-the-art genomics laboratories and the comprehensive bioinformatics to interpret genomics test results, Neogen offers identity and trait determination and analysis. Our technology employs high-resolution DNA genotyping for identity and trait analysis in a variety of important animal and agricultural plant species. Our extensive bioinformatics database identifies and predicts an animal's positive or negative traits based on DNA test results. This information has helped livestock producers make significant improvements in the genomic makeup and overall quality of their animals.

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**Life sciences.** Neogen's line of approximately 100 drug detection immunoassay test kits is sold worldwide for the detection of approximately 300 abused and therapeutic drugs in farm animals and racing animals, and for detection of drug residues in meat and meat products. The test kits are also used for human forensic toxicology drug screening applications. This line includes tests for narcotics, analgesics, stimulants, depressants, tranquilizers, anesthetics, steroids and diuretics. Neogen also has several products used by researchers for the detection of biologically active substances.

Many of the products and services in the Animal Safety segment use licensed technology. In fiscal year 2018, Animal Safety incurred expense totaling \$838,000 for licenses and royalties for technology used in our products and services, including expense of \$410,000 for licenses related to the genomics services line.

Revenues from Neogen's Animal Safety segment accounted for 51.3%, 52.6% and 54.4% of our total revenues for fiscal years ended May 31, 2018, 2017 and 2016, respectively.

## **GENERAL SALES AND MARKETING**

Neogen is organized under two segments – Food Safety and Animal Safety. Within these segments, our sales efforts are generally organized by specific markets, rather than by products or geography. During the fiscal year that ended May 31, 2018, we had approximately 27,000 customers for our products. Since many customers for animal safety products are distributors, and certain animal safety products are offered to the general retail market, the total number of end users of our products is considerably greater than 27,000. As of May 31, 2018, a total of 401 employees were assigned to sales and marketing functions, compared to 375 at the end of May 2017. During the fiscal years ended May 31, 2018, 2017 and 2016, no single customer or distributor accounted for 10% or more of our revenues.

## **DOMESTIC SALES AND MARKETING**

### **FOOD SAFETY**

To reach each customer and prospect with expertise and experience, Neogen has a staff of specialized food safety sales and technical service representatives assigned to specific markets. This staff sells our products directly to end users, and also handles technical support issues that arise with customers in the United States and Canada.

Neogen's food safety markets are primarily comprised of:

**Milling and grain**, including grain elevators, feed mills, pet food manufacturers, and grain inspection companies;

**Meat and poultry**, including meat and poultry processors, producers of ready-to-eat meat and poultry products, and the USDA's Food Safety Inspection Service (FSIS);

**Grocery products**, including flour millers, malters, bakeries, candy and confection manufacturers, manufacturers of prepared meals, nuts, spices, cookies, crackers and other snack foods;

**Fruits and vegetables**, including growers and processors of juice and packaged fresh cut grocery items;

**Seafood**, including harvesters and processors of a wide variety of seafood products;

**Dairy**, including milk and yogurt processors;

**Beverage**, including soft drink bottlers and beer and wine producers;

**Healthcare**, including hospitals and distributors to the healthcare industry;

**Traditional culture media markets**, including commercial and research laboratories and producers of pharmaceuticals, cosmetics and veterinary vaccines;

**Food service**, including fast food service establishments and retail grocery market chains; and

**Nutraceuticals**, including producers and marketers of a wide variety of nutritional and holistic consumer products.

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### ANIMAL SAFETY

Neogen markets a broad range of pharmaceuticals, vitamin injectables, wound care products, topicals, instruments, genomics services and biologicals to the veterinary market. The product range is focused on the food (e.g., cattle, swine and poultry) and companion (e.g., horses, dogs and cats) animal markets. Neogen's sales group works directly with veterinarians, clinics and universities, and markets through established ethical distributors by supporting the efforts of over 1,000 domestic distributor sales representatives calling on 35,000 plus veterinarians. Neogen further supports its veterinary distribution channel through product training, field support, promotions and technical service.

We believe the animal health market offers growth opportunities for Neogen and its products. Neogen offers a broad range of products including well-recognized brands of rodenticides, cleaners and disinfectants, insecticides, instruments and horse care products. To reach the OTC market, Neogen's sales team works with a large network of animal health distributors including marketing groups, traditional two-step distributors, catalogers and large retail chains. Support includes product training, field support, planogram solutions, promotions and advertising.

As a commercial laboratory, Neogen provides genomics services direct to large-herd beef and dairy cattle, swine, poultry and sheep producers, universities and other research organizations, and various livestock and canine breed associations.

### INTERNATIONAL SALES AND MARKETING

Neogen maintains 12 Company-owned locations outside of the United States to provide a direct presence in regions of particular importance to us, and maintains an extensive network of distributors to reach countries where we do not have a direct presence.

**Neogen Europe.** Neogen Europe, Ltd., located in Ayr, Scotland, sells products and services to our network of customers and distributors throughout the European Union (E.U.). Customers in the United Kingdom (U.K.), France, Germany and the Netherlands are served by our employees. In other European regions, customers are generally serviced by distributors managed by Neogen Europe personnel. Neogen Europe's research and development team continues to be a strong asset in the development of products tailored to meet the unique requirements of the European market. Neogen Europe management is also responsible for sales and marketing for our England-based Lab M and Quat-Chem businesses. In August 2015, Neogen acquired the stock of Lab M Holdings (Lab M), a developer, manufacturer and supplier of microbiological culture media and diagnostic systems located in Heywood, England. Lab M's extensive range of microbiological culture media, supplements, immunomagnetic separation techniques and proficiency testing systems are used in laboratories around the world. In December 2016, Neogen acquired Quat-Chem Ltd., a Rochdale, England-based chemical company specializing in the development, manufacture and sale of agricultural, industrial, and food processing biocidal hygiene products, including cleaners and disinfectants. Quat-Chem sells its products on a global basis, with a focus on the U.K., E.U., Middle East and Asia.

**Neogen Latinoamérica.** Our subsidiary in Mexico, Neogen Latinoamérica, is headquartered near Mexico City and distributes Neogen's products throughout Mexico and Central America. Neogen Latinoamérica manages our business activities throughout the region by marketing to animal and crop producers and food processors, utilizing our direct sales representatives to sell Food Safety products and genomics services, while marketing cleaners, disinfectants and other Animal Safety products primarily through distributors.

**Neogen do Brasil.** Neogen do Brasil, headquartered near São Paulo, distributes Neogen's products throughout Brazil. Brazil is one of the world leaders in the export of numerous food commodities, including beef, poultry, soybeans, coffee, sugar and orange juice, and this operation gives us direct sales representation to these important markets.



Neogen do Brasil management is also responsible for sales and marketing for our Brazil-based Deoxi and Rogama businesses. Neogen owns Deoxi Biotecnologia Ltda, a genomics testing laboratory located in Aracatuba, Brazil, which we purchased in April 2016. In December 2016, we acquired Brazil-based Rogama Indústria e Comércio Ltda., a company which develops, manufactures and markets rodenticides and insecticides. Rogama was founded in 1979 and offers more than 70 registered pest control products to Brazil's agronomic, professional, and retail markets.

**Neogen China.** Our Chinese subsidiary, with offices in Shanghai and Beijing, employs sales representatives who sell directly to Chinese customers. China's burgeoning middle class, with its rapidly growing demand for higher quality meat and dairy products, makes the country a substantial growth opportunity for Neogen products both for animal production on the country's farms, and in processing plants throughout China's food production and distribution channels. We utilize both direct sales representatives and distributors to sell our complete portfolio in this growing market.

**Neogen India.** In June 2015, Neogen acquired the assets of Sterling Test House, a leading commercial food testing laboratory based in southwest India, to serve as a base for our operations in India. This business, which was renamed Neogen India, includes food safety and water quality testing for major hotels and restaurants in its home region, as well as safety and quality analysis for the country's expanding nutraceutical market, and growing food export businesses. The laboratory is located in Kochi, in the state of Kerala, which is India's leading region for the export of spices, tea, and fresh fruits and vegetables. In late fiscal 2016, Neogen transferred sales responsibility for our Food Safety products directly to sales representatives at Neogen India.

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**Neogen Canada.** In September 2015, Neogen opened a Canadian location in Guelph, Ontario. Currently, this office is used for genomics sales and sample reception, and reports through the Animal Safety segment.

**Neogen Australasia.** In September 2017, Neogen acquired the assets of The University of Queensland Animal Genetics Laboratory (AGL) – the leading animal genomics laboratory in Australia, a country with large cattle and sheep markets. The acquisition of AGL was intended to help accelerate the growth of our animal genomics business in Australia and New Zealand. With the acquisition, AGL was renamed Neogen Australasia, and became Neogen’s fourth animal genomics laboratory – joining existing locations in the U.S., Scotland and Brazil.

**Dairy antibiotics distributor.** Neogen’s dairy antibiotics diagnostic products are marketed directly to customers in North America, Brazil and China, and distributed elsewhere internationally by Denmark based Chr. Hansen, an international supplier of natural ingredient solutions for the food, health and nutritional industries.

**Other distributor partners.** Outside of our physical locations and dairy antibiotics distributor mentioned above, Neogen uses our own sales managers in both the Food Safety and Animal Safety segments to work closely with and coordinate the efforts of a network of approximately 150 distributors in more than 100 countries. The distributors provide local training and technical support, perform market research and promote Company products within designated countries around the world.

Sales to customers outside the United States accounted for 37.6%, 35.8% and 33.5% of our total revenues for fiscal years ended May 31, 2018, 2017 and 2016, respectively. No individual foreign country contributed 10% or more of our revenues for those same periods.

## **RESEARCH AND DEVELOPMENT**

Management maintains a strong commitment to Neogen’s research and development activities. Our product development efforts are focused on the enhancement of existing products and in the development of new products that fit our business strategy. As of May 31, 2018, we employed 100 individuals in our worldwide research and development group, including immunologists, chemists and microbiologists. Research and development costs were approximately \$10.9 million, \$10.4 million and \$9.9 million representing 2.7%, 2.9% and 3.1% of total revenues in fiscal years 2018, 2017 and 2016, respectively. Management currently expects our future research and development expenditures to approximate 3% of total revenues annually.

Neogen has ongoing development projects for several new and improved diagnostic tests and other complementary products for both the Food Safety and Animal Safety markets. Management expects that a number of these products will be commercially available at various times during fiscal years 2019 and 2020.

Portions of certain technologies utilized in some products manufactured and marketed by Neogen were acquired from or developed in collaboration with affiliated partnerships, independent scientists, governmental units, universities and other third parties. We have entered into agreements with these parties that provide for the payment of license fees and royalties based upon sales of products that utilize the pertinent technology. License fees and royalties, expensed to sales and marketing, under these agreements amounted to \$2,876,000, \$2,659,000 and \$1,969,000 in fiscal years 2018, 2017 and 2016, respectively.

## **PROPRIETARY PROTECTION AND APPROVALS**

Neogen uses trade secrets as proprietary protection in many of its food and animal safety products. In many cases, we have developed unique antibodies capable of detecting microorganisms and residues at minute levels. The supply of

these antibodies, and the proprietary techniques utilized for their development, may offer better protection than the filing of patents. Such proprietary reagents are maintained in secure facilities and stored in more than one location to reduce exposure to complete destruction by natural disaster or other means.

Patent and trademark applications are submitted whenever appropriate. Since its inception, Neogen has acquired and received numerous patents and trademarks, and has several pending patents and trademarks. The patents expire at various times over the next 24 years.

A summary of patents by product categories follows:

	<b>USA</b>	<b>International</b>	<b>Expiration</b>
Natural Toxins, Allergens, & Drug Residues	24	48	2018-2042
Bacterial & General Sanitation	1	9	2018-2021
Life Sciences	0	4	2024
Vaccine	2	0	2018-2028
Veterinary Instruments & Other	13	33	2019-2039
Genomics Services	18	4	2021-2029

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We do not expect the near-term expiration of any single patent to have a significant effect on future results of operations.

Management believes that Neogen has adequate protection regarding proprietary rights for our products. However, we are aware that substantial research has taken place at universities, governmental agencies and other companies throughout the world and that numerous patents have been applied for and issued for technologies which may be used in our products. To the extent some of our products may now, or in the future, embody technologies protected by patents, copyrights or trade secrets of others, licenses to use such technologies may need to be obtained to continue to sell the products. These licenses may not be available on commercially reasonable terms. Failure to obtain any such licenses may delay or prevent the sale of certain new or existing products. In addition, patent litigation is not uncommon. Accordingly, there can be no assurance that our existing patents will be sufficient to completely protect our proprietary rights.

One of the major areas affecting the success of biotechnology development involves the time, cost and uncertainty surrounding regulatory approvals. Neogen products requiring regulatory approval, which we currently have in place, include BotVax B, EqStim, ImmunoRegulin, Uniprim and BetaStar. Our general strategy is to select technical and proprietary products that do not require mandatory approval by regulatory bodies to be marketed. Neogen's rodenticide, disinfectant and insecticide products are subject to registration in the United States and internationally.

Neogen utilizes third-party validations on many of our disposable test kits as a marketing tool to provide our customers with assurances that our products perform to specified levels. These include validation by the AOAC International, independently administered third-party, multi-laboratory collaborative studies and approvals by the U.S. Federal Grain Inspection Service and the USDA Food Safety Inspection Service for the use of our products in their operations.

## **PRODUCTION AND SUPPLY**

Neogen manufactures our products in Michigan, Kentucky, Wisconsin, North Carolina, Iowa, Tennessee, California, the United Kingdom and Brazil and provides genomics services in Nebraska, Scotland, Brazil and Australia. As of May 31, 2018, there were approximately 764 full-time employees assigned to manufacturing and providing of services in these locations, operating on one or two shifts; with occasional 24/7 production during high demand periods. Future demand increases could be accommodated by adding shifts. Management believes we could increase the current output of our primary product lines by more than 50% using the current space available; however, to do so would require investment in additional equipment.

**Food safety diagnostics.** Manufacturing of diagnostic tests for the detection of natural toxins, pathogens, food allergens, dairy antibiotics, spoilage organisms and pesticides, final kit assembly, quality assurance and shipping takes place at our facilities in Lansing, Michigan. Proprietary monoclonal and polyclonal antibodies for Neogen's diagnostic kits are produced on a regular schedule in our immunology laboratories in Lansing. Generally, final assembly and shipment of diagnostic test kits to customers in Europe is performed in our Ayr, Scotland facility. Assembly and shipment of electronic readers and disposable single-use samplers takes place in our facilities in Lansing. Soleris and BioLumix instrument readers are produced by third-party vendors to our specifications, quality tested in Lansing, and then shipped to customers. Culture media products are manufactured in a FDA-registered facility in Lansing and in Heywood, England. Products are blended following strict formulations or custom blended to customer specification and shipped directly to customers from Lansing and Heywood.

**Animal health products.** Manufacturing of animal health products, pharmacological diagnostic test kits and test kits for drug residues takes place in our FDA-registered facilities in Lexington, Kentucky. In general, manufacturing

operations including reagent manufacturing, quality assurance, final kit assembly and packaging are performed by Neogen personnel. Certain animal health products and veterinary instruments that are purchased finished or that are toll manufactured by third party vendors are warehoused and shipped from our Lexington facilities. Other veterinary instruments are produced in our facilities in Lansing, and are generally then shipped to Lexington, for distribution to customers. Manufacturing and shipment of devices used for animal injections, topical applications and oral administration occurs in Kenansville, North Carolina.

**Veterinary biologics.** Neogen maintains a Lansing-based USDA-approved manufacturing facility devoted to the production of the biologic products EqStim and ImmunoRegulin. *P.acnes* seed cultures are added to media and then subjected to several stages of further processing resulting in a finished product that is filled and packaged within the facility. Our BotVax B vaccine is also produced in the Lansing facility utilizing Type B botulism seed cultures and a traditional fermentation process. All completed biologic products are then shipped to Neogen's Lexington facilities where they are inventoried prior to distribution to customers.

**Agricultural genomics services.** Neogen offers agricultural genomics laboratory services and bioinformatics at our locations in Nebraska, Scotland, Brazil and Australia. Through our laboratory services and bioinformatics (primarily in beef and dairy cattle, pigs, sheep, poultry, horses and dogs), Neogen Genomics allows our customers to speed genetic improvement efforts, as well as identify economically important diseases.

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**Cleaners, disinfectants and rodenticides.** Manufacturing of rodenticides and/or cleaners and disinfectants takes place in the following locations: Randolph, Wisconsin; Memphis, Tennessee; Turlock, California; Rochdale, England; and Pindamonhangaba, Brazil. Manufacturing of rodenticides consists of blending technical material (active ingredient) with bait consisting principally of various grains. Certain cleaners and disinfectants are manufactured in Neogen facilities, while others are purchased from other manufacturers for resale, or toll manufactured by third parties.

**Pesticides.** Neogen manufactures insecticides and other pesticides at its facilities in Pleasantville, Iowa and Pindamonhangaba, Brazil.

Neogen purchases component parts and raw materials from more than 1,000 suppliers. Though many of these items are purchased from a single source to achieve the greatest volume discounts, we believe we have identified acceptable alternative suppliers for most of our key components and raw materials where it is economically feasible to do so. There can be no assurance that we would avoid a disruption of supply in the event a supplier discontinues shipment of product. Shipments of products are generally accomplished within a 48-hour turnaround time. Because of this quick response time, our backlog of unshipped orders at any given time has historically not been significant.

## **COMPETITION**

Although competitors vary in individual markets, management knows of no competitor that is pursuing Neogen's fundamental strategy of developing and marketing a broad line of products, ranging from disposable tests and culture media to veterinary pharmaceuticals and instruments for a large number of food safety and animal safety concerns. For each of our individual products or product lines, we face intense competition from companies ranging from small businesses to divisions of large multinational companies. Some of these organizations have substantially greater financial resources than Neogen. We compete primarily on the basis of ease of use, speed, accuracy and other similar performance characteristics of our products. The breadth of our product line, the effectiveness of our sales and customer service organizations, and pricing are also components in management's competitive strategy.

Future competition may become even more intense, and could result from the development of new technologies, which could affect the marketability and profitability of Neogen's products. Our competitive position will also depend on management's ability to continue to develop proprietary products, attract and retain qualified scientific and other personnel, develop and implement production and marketing plans and obtain patent protection for new products. Additionally, we must have adequate capital resources to execute our strategy.

## **FOOD SAFETY:**

With a large professional sales organization offering a comprehensive catalog of food safety solutions, management believes we maintain a general advantage over competitors offering only limited product lines. In most cases, Neogen sales and technical service personnel can offer unique insight into a customer's numerous safety and quality challenges, and offer testing and other solutions to help the customer overcome those challenges.

Competition for pathogen detection products includes traditional methods and antibody and genetic-based platforms; competition for natural toxins and allergen detection products include instrumentation and antibody-based tests. While our offerings will not always compete on all platforms in all markets, the products we offer provide tests that can be utilized by most customers to meet their testing needs.

In addition to our extensive product offerings and robust distribution network, we focus our competitive advantage in the areas of customer service, product performance, speed and ease of use of our products. Additionally, by

aggressively maintaining Neogen as a low-cost producer, we believe that we can be competitive with new market entrants that may choose a low pricing strategy in an attempt to gain market share.

**ANIMAL SAFETY:**

Neogen's Animal Safety segment faces no one competitor across the products and markets we serve. In the racing industry market, we believe we hold a leading market share position. In the life sciences and forensics markets, we compete against several other diagnostic and reagent companies with similar product offerings.

In the veterinary market, Neogen markets BotVax B, the only USDA-approved vaccine for the prevention of botulism Type B in horses. We compete on other key products through differentiated product performance and superior customer and technical support. With some of our products, we provide solutions as a lower cost alternative and offer a private label option for our distributors.

Competition in the rodenticide market includes several companies of comparable size that offer products into similar market segments. The retail rodenticide market is not dominated by a single brand. While the technical materials used by competing companies are similar, Neogen uses manufacturing and bait formula techniques which we believe may better attract rodents to the product and thereby improves overall product performance.

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Within the insecticide market, Chem-Tech products specifically focus on the area of insect control for food and animal safety applications. There are several competitors offering similar products, however, we have a proprietary formulation chemistry that optimizes the delivery and safe application of insecticides at the customer's location. These products are currently only sold in the U.S. through a combination of direct sales and distributors.

Numerous companies, including a number of large multinationals, compete for sales in the cleaner and disinfectant product segment. Neogen's broad line of products are sold through our distributor network around the world, primarily to assist in the cleaning and disinfecting of animal production facilities.

In addition to our extensive portfolio of Animal Safety products, Neogen also competes in the retail market by providing solutions to common retail problems, such as stock outs, wasted floor space and inconsistent brand identity. We differentiate ourselves by offering planograms and convenient reordering systems to maximize turns and profitability for our retail customers.

Neogen Genomics, which includes the leading commercial agricultural genomics laboratory in the U.S., employs cutting-edge technology in the area of genomics. The result of this technology allows the acceleration of natural selection through selective breeding of traits such as disease resistance, yield improvement and meat quality. Competition comes mainly from a number of service providers, some significantly larger than us, whose primary focus are the human and pharmaceutical industries, as well as several smaller companies offering genomics services. Neogen Genomics is not involved in cloning or the development of transgenic animals.

## **GOVERNMENT REGULATION**

A significant portion of Neogen's products and revenues are affected by the regulations of various domestic and foreign government agencies, including the U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA), and the U.S. Food and Drug Administration (FDA). Changes in these regulations could affect revenues and/or costs of production and distribution.

Neogen's development and manufacturing processes involve the use of certain hazardous materials, chemicals and compounds. Management believes that our safety procedures for handling and disposing of such commodities comply with the standards prescribed by federal, state and local regulations; however, changes in such regulations or rules could involve significant costs to us and could be materially adverse to our business.

The rodenticides, insecticides, cleaners, disinfectants and sanitizers manufactured and distributed by Neogen are subject to EPA and various state regulations. In general, any international sale of our products must also comply with similar regulatory requirements in the country of destination. Each country has its own individual regulatory construct with specific requirements (e.g., label in the language of the importing country). To the best of our knowledge, Neogen products are in compliance with applicable regulations in the countries where such products are sold.

Dairy diagnostic products used in National Conference on Interstate Milk Shipments (NCIMS), a cooperative program involving FDA, state governments, and the industry must first be approved. Before products requiring NCIMS approval can be sold in the U.S., extensive product performance data must be submitted in accordance with the FDA-approved protocol administered by the AOAC Research Institute (AOAC RI). Following approval of a product by NCIMS, the product must be reviewed by the FDA. Our BetaStar Advanced U.S. dairy antibiotic residue testing product has been reviewed and/or approved by the appropriate regulatory bodies.

Many of the food safety diagnostic products do not require direct government approval. However, we have pursued AOAC approval for a number of these products to enhance their marketability.



Neogen's veterinary vaccine products and some pharmaceutical products require government approval to allow for lawful sales. The vaccine products are approved by the U.S. Department of Agriculture, Center for Veterinary Biologics (USDA-CVB) and the pharmaceutical products are approved by the FDA. The products, and the facilities in which they are manufactured, are in a position of good standing with both agencies. We have no warning letters based on any review of these products or facility inspection, no recalls on any of these products, and are not aware of any reason why we could not manufacture and market such products in the future.

Other animal safety and food safety products generally do not require additional registrations or approvals. However, Neogen's regulatory staff routinely monitors amendments to current regulatory requirements to ensure compliance.

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**EMPLOYEES**

As of May 31, 2018, we employed 1,546 full-time persons worldwide. None of the employees are covered by collective bargaining agreements. There have been no work stoppages or slowdowns due to labor-related problems, and management believes that our relationship with our employees is generally good. Employees with access to proprietary information have executed confidentiality agreements with Neogen.

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### **ITEM 1A. RISK FACTORS**

An investment in Neogen Corporation's common shares involves a high degree of risk. The risks described below are not the only ones that an investor faces. Additional risks that are not yet known to us or that we currently think are immaterial could also impair our business, financial condition or results of operations. If any of the following risks actually occurs, our business, financial condition or results of operations could be adversely affected.

#### **Risks Relating to Our Business**

##### **Our business strategy is dependent on successfully promoting internal growth and identifying and integrating acquisitions.**

Our business has grown significantly over the past several years as a result of both internal growth and acquisitions of existing businesses and their products. Management initiatives may be attempted to augment internal growth, such as strengthening our presence in select markets, reallocating research and development funds to higher growth potential products, development of new applications for our technologies, enhancing our service offerings, continuing key customer efforts, and finding new markets for our products. Failure of these management initiatives may have a material adverse effect on our operating results and financial condition.

Identifying and pursuing acquisition opportunities, integrating these acquisitions into our business and managing their growth requires a significant amount of management's time and skill. We cannot assure that we will be effective in identifying, integrating or managing future acquisition targets. Our failure to successfully integrate and manage a future acquisition may have a material adverse effect on our operating results and financial condition.

In addition, if we continue to experience growth in our business, such growth could place a significant strain on our management, customer service, operations, sales and administrative personnel, and other resources. To serve the needs of our existing and future customers we will be required to recruit, train, motivate and manage qualified employees. We have incurred and will continue to incur significant costs to retain qualified management, sales and marketing, engineering, production, manufacturing and administrative personnel, as well as expenses for marketing and promotional activities. Our ability to manage our planned growth depends upon our success in expanding our operating, management, information and financial systems, which might significantly increase our operating expenses.

We may not be able to effectively manage our future growth, and if we fail to do so, our business, financial condition and results of operations could be adversely affected.

##### **We rely significantly on our information systems infrastructure to support our operations and a failure of these systems and infrastructure and/or a security breach of our information systems could damage our reputation and have an adverse effect on operations and results.**

We rely on our information systems infrastructure to integrate departments and functions, to enhance our ability to service customers, to improve our control environment and to manage our cost reduction initiatives. If a security breach or cyberattack of our IT networks and systems occurs, our operations could be interrupted. Any issues involving our critical business applications and infrastructure may adversely impact our ability to manage our operations and the customers we serve. Although we have controls and security measures in place to prevent such attacks, experienced computer hackers are increasingly organized and sophisticated. Malicious attack efforts operate on a large-scale and sometimes offer targeted attacks as a paid-for service. In addition, the techniques used to access or sabotage networks change frequently and generally are not recognized until launched against a target.

We rely on several information systems throughout our company, as well as our third-party business partners, to provide access to our web-based products and services, keep financial records, analyze results of operations, process customer orders, manage inventory, process shipments to customers, store confidential or proprietary information and operate other critical functions. Although Neogen employs system backup measures and engages in information system redundancy planning and processes, such measures, planning and processes, as well as our current disaster recovery plan, may be ineffective or inadequate to address all vulnerabilities. Further, our information systems and our business partners' and suppliers' information systems may be vulnerable to attacks by hackers and other security breaches, including computer viruses and malware, through the Internet (including via devices and applications connected to the Internet), email attachments and persons with access to these information systems, such as our employees or third parties with whom we do business. As information systems and the use of software and related applications by us, our business partners, suppliers, and customers become more cloud-based, there has been an increase in global cybersecurity vulnerabilities and threats, including more sophisticated and targeted cyber-related attacks that pose a risk to the security of our information systems and networks and the confidentiality, availability and integrity of data and information.

While we have implemented network security and internal control measures, especially for the purpose of protecting our connected products and services from cyberattacks, and invested in our data and information technology infrastructure, there can be no assurance that these efforts will prevent a system disruption, attack, or security breach and, as such, the risk of system disruptions and security breaches from a cyberattack remains.

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In addition, if our security and information systems are compromised, or employees fail to comply with the applicable laws and regulations, or this information is obtained by unauthorized persons or used inappropriately, it could adversely affect our reputation, as well as results of operations, and could result in litigation, the imposition of penalties, or significant expenditures to remediate any damage to persons whose personal information has been compromised.

### **Disruption of our manufacturing and service operations could have an adverse effect on our financial condition and results of operations.**

We manufacture our products at several manufacturing facilities located in the following locations: Lansing, Michigan; Lexington, Kentucky; Randolph, Wisconsin; Kenansville, North Carolina; Pleasantville, Iowa; Memphis, Tennessee; Turlock, California; Heywood, England; Ayr, Scotland; Rochdale, England; and Pindamonhangaba, Brazil. We offer genomics services from facilities located in: Lincoln, Nebraska; Ayr, Scotland; Aracatuba, Brazil and Gatton, Australia. These facilities and our distribution systems are subject to catastrophic loss due to fire, flood, terrorism or other natural or man-made disasters. If any of these facilities were to experience a catastrophic loss, it could disrupt our operations, delay production, shipments and revenue and result in significant expenses to repair or replace the facility and/or distribution system. If such a disruption were to occur, we could breach agreements, our reputation could be harmed, and our business and operating results could be adversely affected. Although we carry insurance for property damage and business interruption, we do not carry insurance or financial reserves for interruptions or potential losses arising from terrorism. Economic conditions and uncertainties in global markets may adversely affect the cost and other terms upon which we are able to obtain third party insurance. If we are unable to obtain sufficient and cost-effective third-party insurance coverage, or to the extent we have elected to self-insure, we may be at greater risk that our operations will be harmed by a catastrophic loss.

### **Our dependence on suppliers could limit our ability to sell certain products or negatively affect our operating results.**

We rely on third-party suppliers to provide components in our products, manufacture products that we do not manufacture ourselves and perform services that we do not provide ourselves, including package delivery services. Because these suppliers are independent third parties with their own financial objectives, actions taken by them could have a negative effect on our results of operations. The risks of relying on suppliers include our inability to enter into contracts with third party suppliers on reasonable terms, inconsistent or inadequate quality control, relocation of supplier facilities, supplier work stoppages and suppliers' failure to comply with their contractual obligations. In addition, we currently purchase some raw materials and products from sole or single sources. Some of the products that we purchase from these sources are proprietary and, therefore, cannot be readily or easily replaced by alternative sources. Problems with suppliers could negatively impact our ability to supply the market, substantially decrease sales, lead to higher costs or damage our reputation with our customers.

### **We rely heavily on third-party package delivery services, and a significant disruption in these services or significant increases in prices may disrupt our ability to ship products, increase our costs and lower our profitability.**

We ship a significant portion of our products to customers through independent package delivery companies, such as UPS, Federal Express and DHL. We also ship our products through other carriers, including national and regional trucking firms, overnight carrier services and the U.S. Postal Service. If one or more of these third-party package delivery providers were to experience a major work stoppage, preventing our products from being delivered in a timely fashion or causing us to incur additional shipping costs we could not pass on to our customers, our costs could increase and our relationships with some of our customers could be adversely affected. In addition, if one or more of

our third-party package delivery providers were to increase prices, and we were not able to find comparable alternatives or make adjustments within our delivery network, our profitability could be adversely affected.

**Our business sells many products through distributors, which present risks that could negatively affect our operating results.**

We sell many of our products, both within and outside of the U.S., through distributors. As a result, we are dependent on these distributors to sell our products and assist us in promoting and creating a demand for our products. Our distributors sometimes offer products from several different companies, and those distributors may carry our competitors' products and promote our competitors' products over our own. We have limited ability, if any, to cause our distributors to devote adequate resources to promoting, marketing, selling and supporting our products. We cannot assure that we will be successful in maintaining and strengthening our relationships with our distributors or establishing relationships with new distributors who have the ability to market, sell and support our products effectively. We may rely on one or more key distributors for a product or region, and the loss of one or more of these distributors could reduce our revenue. Distributors may face financial difficulties, including bankruptcy, which could impact our ability to collect our accounts receivable and negatively impact our financial results. In addition, violations of anti-corruption laws or similar laws by our distributors could have a material impact on our business, and any termination of a distributor relationship may result in increased competition in the applicable jurisdiction. Failing to manage the risks associated with our use of distributors may reduce sales, increase expenses and weaken our competitive position, which could have a negative impact on our operating results.

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### **The development of new products entails substantial risk of failure due to the production of non-viable products, lack of properly identifying market potential, and competitors better serving the marketplace.**

Our growth strategy includes significant investment in and expenditures for product development. To execute this strategy, we are continually developing new products for which we believe there should be significant market demand. We cannot assure that we will successfully develop commercially viable products, that the products will be developed on a timely basis to meet market demand or that the relevant market will be properly identified. Our competitors may also adapt more quickly, and deliver superior technologies, price and/or service to better fit our customers' requirements. If we expend substantial resources in developing an unsuccessful product, whether that lack of success is the result of our production of a non-viable product, a misidentified market, or a competitor's superior ability to meet our customers' requirements, operating results could be adversely affected.

### **Our international operations are subject to different product standards as well as other operational risks.**

In fiscal 2018, sales to customers outside of the U.S. accounted for 37.6% of our total revenue. We expect that our international business will continue to account for a significant portion of our total sales. Foreign regulatory bodies may establish product standards different from those in the U.S. and with which our current products do not comply. Our potential inability to design products that comply with foreign standards could have a material adverse effect on our future growth. Other risks related to sales to customers outside of the U.S. include possible disruptions in transportation, difficulties in building and managing foreign distribution, fluctuation in the value of foreign currencies, changes in import duties and quotas and unexpected economic and political changes in foreign markets. These factors could adversely affect international sales and our overall financial performance.

### **The markets for our products are extremely competitive, and our competitors may be able to utilize existing resource advantages to our detriment.**

The markets in which we compete are subject to rapid and substantial changes in technology and are characterized by extensive research and development and intense competition. Many of our competitors and potential competitors have greater financial, technical, manufacturing, marketing, research and development and management resources than we do. These competitors might be able to use their resources, reputations and ability to leverage existing customer relationships to give them a competitive advantage over us. They might also succeed in developing products that are more reliable and effective than our products, make additional measurements, are less costly than our products or provide alternatives to our products.

### **We are dependent on the agricultural marketplace, which is affected by factors beyond our control.**

Our primary customers are in the agricultural and food production industries. Economic conditions affecting agricultural industries are cyclical and are dependent upon many factors outside of our control, including weather conditions, changes in consumption patterns or commodity prices. Any of these factors in the agricultural marketplace could affect our sales and overall financial performance.

### **Our quarterly operating results are subject to significant fluctuations.**

We have experienced, and may experience in the future, significant fluctuations in our quarterly operating results. The mix of products sold and the acceptance of new products, in addition to other factors, could contribute to this quarterly variability. We operate with relatively little backlog and have few long-term customer contracts. Substantially all our product revenue in each quarter results from orders received in that quarter. In addition, our expense levels are based, in part, on our expectation of future revenue levels. A shortfall in expected revenue could, therefore, result in a

disproportionate decrease in our net income.

**Our success is highly dependent on our ability to obtain protection for the intellectual property utilized in our products.**

Our success and ability to compete depends in part upon our ability to obtain protection in the U.S. and other countries for our products by establishing and maintaining intellectual property rights relating to or incorporated into our technology and products. Patent applications filed by us may not result in the issuance of patents or, if issued, may not be issued in a form that will be commercially advantageous to us. Even if issued, patents may be challenged, narrowed, invalidated or circumvented, which could limit our ability to stop competitors from marketing similar products or limit the length of time we may have patent protection for our products. We also cannot assure that our nondisclosure agreements, together with trade secrets and other common law rights, will provide meaningful protection for our trade secrets and other proprietary information. Moreover, the laws of some foreign jurisdictions may not protect intellectual property rights to the same extent as in the U.S., and many companies have encountered significant difficulties in protecting and defending such rights in foreign jurisdictions. If we encounter such difficulties or we are otherwise precluded from effectively protecting our intellectual property rights domestically or in foreign jurisdictions, we may incur substantial costs and our business, including our business prospects, could be substantially harmed.

From time to time, we have received notices alleging that our products infringe third-party proprietary rights. Whether the manufacture, sale or use of current products, or whether any products under development would, upon commercialization, infringe any patent claim will not be known with certainty unless and until a court interprets the patent claim in the context of litigation. When an infringement allegation is made against us, we may seek to invalidate the asserted patent claim and/or to allege non-infringement of the asserted patent claim. For us to invalidate a U.S. patent claim, we would need to rebut the presumption of validity afforded to issued patents in the U.S. with clear and convincing evidence of invalidity, which is a high burden of proof. The outcome of infringement litigation is subject to substantial uncertainties, and also the testimony of experts as to technical facts upon which experts may reasonably disagree. Our defense of an infringement litigation lawsuit could result in significant expense. Regardless of the outcome, infringement litigation could significantly disrupt our marketing, development and commercialization efforts, divert management's attention and consume our financial resources. In the event that we are found to infringe any valid claim in a patent held by a third party, we may, among other things, be required to:



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Pay damages, including up to treble damages and the other party's attorneys' fees, which may be substantial;

Cease the development, manufacture, importation, use and sale of products that infringe the patent rights of others, through a court-imposed injunction;

Expend significant resources to redesign our technology so that it does not infringe others' patent rights, or develop or acquire non-infringing intellectual property, which may not be possible;

Discontinue manufacturing or other processes incorporating infringing technology; and/or

Obtain licenses to the infringed intellectual property, which may not be available to us on acceptable terms, or at all.

Any development or acquisition of non-infringing products, technology or licenses could require the expenditure of substantial time and other resources and could have a material adverse effect on our business and financial results. If we are required to, but cannot, obtain a license to valid patent rights held by a third party, we would likely be prevented from commercializing the relevant product, or from further manufacture, sale or use of the relevant product.

**We are subject to substantial governmental regulation.**

A portion of our products and facilities are regulated by various domestic and foreign government agencies, including the U.S. Department of Agriculture, the U.S. Food and Drug Administration and the Environmental Protection Agency. A significant portion of our revenue is derived from products used to monitor and detect the presence of residues that are regulated by various government agencies. Furthermore, our growth may be adversely affected by the implementation of new regulations. We are not aware of any failures to comply with applicable laws and regulations; the costs of compliance or failure to comply with any obligations could adversely impact our business.

**We are dependent on key employees.**

Our success depends, in large part, on members of our management team. Our loss of any of these, or other, key employees could have a material adverse effect on us. We maintain certain incentive plans for key employees, and many of these employees have been with us in excess of five years. However, we have not executed long-term employment agreements with any of these employees and do not expect to do so in the foreseeable future. Our success depends, significantly, on our ability to continue to attract such personnel. We cannot assure that we will be able to retain our existing personnel or attract additional qualified persons when required and on acceptable terms.

**Our business may be subject to product liability claims.**

The manufacturing and distribution of our products involve an inherent risk of product liability claims being asserted against us. Regardless of whether we are ultimately determined to be liable or our products are determined to be defective, we might incur significant legal expenses not covered by insurance. In addition, product liability litigation could damage our reputation and impair our ability to market our products, regardless of the outcome. Litigation could also impair our ability to retain product liability insurance or make our insurance more expensive. Although we currently maintain liability insurance, we cannot assure that we will be able to continue to obtain such insurance on acceptable terms, or that such insurance will provide adequate coverage against all potential claims. If we are subject

to an uninsured or inadequately insured product liability claim, our business, financial condition and results of operations could be adversely affected.

**Market prices for securities of technology companies are highly volatile.**

The market prices for securities of technology companies have been volatile in the past and could continue to be volatile in the future. Fluctuations in our financial performance from period to period could have a significant impact on the market price of our common shares.

**Operating results could be negatively impacted by economic, political or other developments in countries in which we do business.**

Future operating results could be negatively impacted by unstable economic, political and social conditions, including but not limited to fluctuations in foreign currency exchange rates, political instability, or changes in the creation or interpretation of laws and regulations or administrative actions in each of the countries where we conduct business, including the U.S.

These potential negative impacts include, but are not limited to, the following: reduction of demand for some of our products, increase in the rate of order cancellations or delays, increased risk of excess and obsolete inventories, increased pressure on prices for our products and services, and longer sales cycles and greater difficulty in collecting accounts receivable.

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**Tax legislation could materially adversely affect our financial results and tax liabilities.**

We are subject to the tax laws and regulations of the U.S., including state and local governments, as well as foreign jurisdictions. From time to time, legislation may be proposed that could materially adversely affect our financial results. There can be no assurance that our effective tax rate will not be adversely affected by legislation. On December 22, 2017, the President signed into law the Tax Cut and Jobs Act, which contains a broad range of tax reform provisions that impact corporate tax rates, international tax provisions, income tax add-back provisions and deductions. We are still evaluating this complex new law to determine its long-term impact.

In addition, tax laws and regulations are extremely complex and subject to varying interpretations. Although we believe that our historical tax positions are sound and consistent with applicable laws, regulations and existing precedent, there can be no assurance that our tax positions will not be challenged by relevant tax authorities or that we would be successful in any such challenge. Additionally, we operate in multiple income tax jurisdictions and must determine the appropriate allocation of income to each of these jurisdictions based on current interpretations of complex income tax regulations. Income tax audits associated with the allocation of income and other complex issues may result in significant income tax adjustments that could negatively impact our future operating results.

**ITEM 1B. UNRESOLVED STAFF COMMENTS NONE**

**Table of Contents****ITEM 2. PROPERTIES****Principal Manufacturing, Distribution and Administrative locations**

<b>Location</b>	<b>Approximate Square Feet</b>	<b>Operations</b>	<b>Ownership</b>
Lansing, Michigan	300,000	Corporate, Food Safety, Animal Safety	Owned
Lexington, Kentucky	210,000	Animal Safety	Owned
Kenansville, North Carolina	33,500	Animal Safety	Leased, expires 3/2019
St Joseph, Michigan	7,000	Animal Safety	Leased, expires 5/2019
Randolph, Wisconsin	137,000	Animal Safety	Owned
Pleasantville, Iowa	59,000	Animal Safety	Leased, expires 12/2018
Lincoln, Nebraska	41,000	Animal Safety	Owned
Memphis, Tennessee	66,100	Animal Safety	Owned
Turlock, California	29,500	Animal Safety	Leased, expires 9/2022
Guelph, Ontario, Canada	700	Animal Safety	Leased, expires 7/2019
Ayr, Scotland, United Kingdom	74,000	Food Safety	Owned
Heywood, England, United Kingdom	24,800	Food Safety	Owned
Rochdale, England, United Kingdom	60,000	Food Safety	Owned
Indaiatuba, Brazil	6,800	Food Safety	Leased, expires 5/2021
Aracatuba, Brazil	2,000	Food Safety	Leased, month to month
Pindamonhangaba, Brazil	55,300	Food Safety	Owned

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Naucalpan, Mexico	27,000	Food Safety	Leased, expires 10/2018
Shanghai, China	4,900	Food Safety	Leased, expires 4/2019
Beijing, China	1,100	Food Safety	Leased, expires 12/2018
Kochi, India	5,500	Food Safety	Leased, expires 4/2019
Gatton, Australia	4,600	Animal Safety	Leased, expires 1/2023

Our corporate headquarters are located in Lansing, Michigan, with administrative, sales, manufacturing and warehousing in other locations domestically and globally. These properties are in good condition, well-maintained, and generally suitable and adequate to support our business.

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**ITEM 3. LEGAL PROCEEDINGS**

Neogen is subject to certain legal proceedings in the normal course of business that, in the opinion of management, should not have a material effect on our future results of operations or financial position.

**ITEM 4. MINE SAFETY DISCLOSURES NOT APPLICABLE**

**Table of Contents****PART II****ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS  
AND ISSUER PURCHASES OF EQUITY SECURITIES****MARKET INFORMATION:**

Neogen Common Stock is traded on the NASDAQ Global Select Market under the symbol **NEOG**. The following table sets forth, for the fiscal periods indicated, the high and low sales prices for the Common Stock as reported on the NASDAQ Stock Market.

	<b>High</b>	<b>Low</b>
<b>Year ended May 31, 2018</b>		
First Quarter	\$ 52.28	\$ 48.30
Second Quarter	\$ 63.25	\$ 51.85
Third Quarter	\$ 62.86	\$ 54.64
Fourth Quarter	\$ 76.13	\$ 58.78
<b>Year ended May 31, 2017</b>		
First Quarter	\$ 44.76	\$ 38.00
Second Quarter	\$ 47.47	\$ 38.40
Third Quarter	\$ 50.92	\$ 46.20
Fourth Quarter	\$ 51.43	\$ 44.76

Neogen declared a 4-for-3 stock split effective on December 29, 2017. All share prices above have been adjusted as if the split had been in effect at the beginning of the periods presented.

**HOLDERS:**

As of June 30, 2018, there were approximately 266 stockholders of record of Common Stock and management believes there are a total of approximately 12,000 beneficial holders.

**DIVIDENDS:**

Neogen has never paid cash dividends on its Common Stock and does not anticipate paying cash dividends in the foreseeable future.

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The graph below matches Neogen Corporation's cumulative 5-Year total shareholder return on common stock with the cumulative total returns of the NASDAQ Composite index and the NASDAQ Medical Equipment index. The graph tracks the performance of a \$100 investment in our common stock and in each index (with the reinvestment of all dividends) from 5/31/2013 to 5/31/2018.

	<b>5/13</b>	<b>5/14</b>	<b>5/15</b>	<b>5/16</b>	<b>5/17</b>	<b>5/18</b>
<b>Neogen Corporation</b>	<b>100.00</b>	<b>104.07</b>	<b>128.71</b>	<b>135.96</b>	<b>174.29</b>	<b>277.99</b>
<b>NASDAQ Composite</b>	<b>100.00</b>	<b>125.98</b>	<b>151.80</b>	<b>150.04</b>	<b>189.31</b>	<b>228.19</b>
<b>NASDAQ Medical Equipment</b>	<b>100.00</b>	<b>105.43</b>	<b>134.12</b>	<b>140.40</b>	<b>184.56</b>	<b>258.15</b>

*The stock price performance included in this graph is not necessarily indicative of future stock price performance.*



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**Issuer Purchases of Equity Securities**

In December 2008, our Board of Directors authorized a program to purchase, subject to market conditions, up to 1,500,000 shares of our common stock. As of May 31, 2018, 149,368 cumulative shares have been purchased in negotiated and open market transactions for a total price, including commissions, of approximately \$923,000. There were no purchases in fiscal years 2018, 2017 or 2016. Shares purchased under the program were retired.

**Table of Contents****ITEM 6. SELECTED FINANCIAL DATA**

The following tables set forth selected consolidated financial data of Neogen for the year ended May 31, 2018, and each of the four preceding fiscal years. The selected consolidated financial data presented below have been derived from our consolidated financial statements. This financial data should be read in conjunction with the consolidated financial statements, related notes and other financial information appearing elsewhere in this Form 10-K.

<i>(in thousands, except per share data)</i>	<b>Years Ended May 31</b>				
	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
<b>Income Statement Data:</b>					
Food Safety Revenues	\$ 196,047	\$ 171,325	\$ 146,421	\$ 131,479	\$ 116,290
Animal Safety Revenues	206,205	190,269	174,854	151,595	131,115
Total Revenues	402,252	361,594	321,275	283,074	247,405
Total Cost of Revenues	212,000	189,626	168,211	143,389	124,807
Sales and Marketing	70,909	62,424	57,599	51,757	46,432
General and Administrative	38,294	34,214	29,189	25,233	24,449
Research and Development	10,855	10,385	9,890	9,577	8,326
Operating Income	70,194	64,945	56,386	53,118	43,391
Other Income (Expense)	3,271	1,728	(873)	(1,042)	(360)
Income Before Income Taxes	73,465	66,673	55,513	52,076	43,031
Provision for Income Taxes	10,250	22,700	18,975	18,500	15,000
Net Income	63,215	43,973	36,538	33,576	28,031
Net (Income) Loss Attributable to Non-Controlling Interest	(70)	(180)	26	(50)	127
Net Income Attributable to Neogen	\$ 63,145	\$ 43,793	\$ 36,564	\$ 33,526	\$ 28,158
Net Income per Share (basic) (1)	\$ 1.23	\$ 0.87	\$ 0.73	\$ 0.68	\$ 0.58
Net Income per Share (diluted) (1)	\$ 1.21	\$ 0.86	\$ 0.72	\$ 0.67	\$ 0.57
Weighted Average Shares Outstanding (diluted) (1)	52,149	51,165	50,500	49,926	49,689
	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
<b>Balance Sheet Data:</b>					
Cash and Cash Equivalents and Marketable Securities	\$ 210,810	\$ 143,635	\$ 107,796	\$ 114,164	\$ 76,496
Working Capital (2)	337,101	256,959	219,628	205,739	163,779
Total Assets	618,009	528,409	449,940	392,181	345,301
Long-Term Debt					
Total Equity	560,175	471,757	404,161	350,963	306,300

- (1) On December 29, 2017, the Company effected a 4-for-3 stock split whereby stockholders of record on December 18, 2017 received a dividend of one additional share of stock for each three shares held. All share and per share amounts in this Form 10-K have been adjusted to reflect the stock split as if it had taken place at the

beginning of the period presented.

- (2) Defined as current assets less current liabilities.

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**ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

The information in this Management's Discussion and Analysis of Financial Condition and Results of Operations contains both historical financial information and forward-looking statements. Neogen's management does not provide forecasts of future financial performance. While we are optimistic about our long-term prospects, historical financial information may not be indicative of our future financial results.

Any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words believes, anticipates, plans, expects, seeks, estimates, and similar expressions are intended to identify forward-looking statements. There are a number of important factors, including competition, recruitment and dependence on key employees, impact of weather on agriculture and food production, identification and integration of acquisitions, research and development risks, patent and trade secret protection, government regulation and other risks detailed in Item 1A. RISK FACTORS in this Form 10-K and from time to time in the Company's reports on file at the Securities and Exchange Commission, that could cause Neogen Corporation's results to differ materially from those indicated by such forward-looking statements, including those detailed in this Management's Discussion and Analysis of Financial Condition and Results of Operations.

In addition, any forward-looking statements represent management's views only as of the day this Form 10-K was first filed with the Securities and Exchange Commission and should not be relied upon as representing management's views as of any subsequent date. While we may elect to update forward-looking statements at some point in the future, we specifically disclaim any obligation to do so, even if our views change.

**CRITICAL ACCOUNTING POLICIES AND ESTIMATES**

The discussion and analysis of our financial condition and results of operations are based on the consolidated financial statements that have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires that management make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, management evaluates the estimates, including but not limited to, those related to receivable allowances, inventories and intangible assets. These estimates are based on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

The following critical accounting policies reflect management's more significant judgments and estimates used in the preparation of the consolidated financial statements.

**Revenue Recognition**

Revenue from products and services is recognized when the product has been shipped or the service performed, the sales price is fixed and determinable, and collection of any receivable is probable. To the extent that customer payment has been received before all recognition criteria are met, these revenues are initially deferred and later recognized in the period that all recognition criteria have been met. Customer credits for sales returns, pricing and other disputes, and other related matters (including volume rebates offered to certain distributors as marketing support) represent approximately 3% of reported net revenue for each period presented.

**Accounts Receivable Allowance**

Management attempts to minimize credit risk by reviewing customers' credit history before extending credit and by monitoring credit exposure on a regular basis. An allowance for doubtful accounts receivable is established based upon factors surrounding the credit risk of specific customers, historical trends and other information. Collateral or other security is generally not required for accounts receivable. Once a receivable balance has been determined to be uncollectible, that amount is charged against the allowance for doubtful accounts.

**Inventory**

A reserve for obsolete and slow-moving inventory has been established and is reviewed at least quarterly based on an analysis of the inventory, considering the current condition of the asset as well as other known facts and future plans. The reserve required to record inventory at lower of cost or net realizable value may be adjusted as conditions change. Product obsolescence may be caused by shelf-life expiration, discontinuance of a product line, replacement products in the marketplace or other competitive situations.

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### **Goodwill and Other Intangible Assets**

Goodwill represents the excess of purchase price over fair value of tangible net assets of acquired businesses after amounts are allocated to other identifiable intangible assets. Other intangible assets include customer relationships, trademarks, licenses, trade names, covenants not-to-compete and patents. Customer-based intangibles are amortized on either an accelerated or straight-line basis, reflecting the pattern in which the economic benefits are consumed, while all other amortizable intangibles are amortized on a straight-line basis; intangibles are generally amortized over 5 to 25 years. We review the carrying amounts of goodwill and other non-amortizable intangible assets annually, or when indications of impairment exist, to determine if such assets may be impaired by performing a quantitative assessment. If the carrying amounts of these assets are deemed to be less than fair value based upon a discounted cash flow analysis and comparison to comparable EBITDA multiples of peer companies, such assets are reduced to their estimated fair value and a charge is made to operations.

### **Long-lived Assets**

Management reviews the carrying values of its long-lived assets to be held and used, including definite-lived intangible assets, for possible impairment whenever events or changes in business conditions warrant such a review. The carrying value of a long-lived asset is considered impaired when the anticipated separately identifiable undiscounted cash flows over the remaining useful life of the asset indicate that the carrying amount of the asset may not be recoverable. In such an event, fair value is determined using discounted cash flows and, if lower than the carrying value, impairment is recognized through a charge to operations.

### **Equity Compensation Plans**

Share options awarded to employees and shares of stock awarded to employees under certain stock purchase plans are recognized as compensation expense based on their fair value at grant date. The fair market value of options granted under our stock option plans was estimated on the date of grant using the Black-Scholes option-pricing model with assumptions for inputs such as interest rates, expected dividends, volatility measures and specific employee exercise behavior patterns based on statistical data. Some of the inputs used are not market-observable and have to be estimated or derived from available data. Use of different estimates would produce different option values, which in turn would result in higher or lower compensation expense recognized.

To value options, several recognized valuation models exist. None of these models can be singled out as being the best or most correct one. The model applied by us can handle most of the specific features included in the options granted, which is the reason for its use. If a different model were used, the option values could differ despite using the same inputs. Accordingly, using different assumptions coupled with using a different valuation model could have a significant impact on the fair value of employee stock options. Fair value could be either higher or lower than the number provided by the model applied and the inputs used. Further information on our equity compensation plans, including inputs used to determine the fair value of options, is disclosed in Notes 1 and 5 to the consolidated financial statements.

### **Income Taxes**

We account for income taxes using the asset and liability method. Under this method, deferred income tax assets and liabilities are determined based on differences between the financial reporting and tax bases of assets and liabilities and for tax credit carryforwards and are measured using the enacted tax rates in effect for the years in which the differences are expected to reverse. Deferred income tax expense represents the change in net deferred income tax assets and liabilities during the year.

Our wholly-owned foreign subsidiaries are comprised of Neogen Europe, Lab M Holdings, Quat-Chem, Neogen do Brasil, Deoxi Biotecnologia Ltda, Rogama Industria e Comercio Ltda, Acumedia do Brasil, Neogen Latinoamérica, Neogen Bio-Scientific Technology Co (Shanghai), Neogen Food and Animal Security (India), Neogen Canada, and Neogen Australasia Pty Limited. Based on historical experience, as well as our future plans, earnings from these subsidiaries are expected to be re-invested indefinitely for future expansion and working capital needs. Furthermore, our domestic operations have historically produced sufficient operating cash flow to mitigate the need to remit foreign earnings. On an annual basis, we evaluate the current business environment and whether any new events or other external changes might require a re-evaluation of the decision to indefinitely re-invest foreign earnings. At May 31, 2018, unremitted earnings of our foreign subsidiaries were \$43,784,000.

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On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the Tax Act) was signed into law making significant changes to the Internal Revenue Code. Changes include a federal corporate tax rate from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings. On December 22, 2017, Staff Accounting Bulletin No. 118 (SAB 118) was issued to address the application of U.S. GAAP to situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Act. In accordance with SAB 118, we have determined that the \$6.0 million of deferred tax benefit recorded in connection with the remeasurement of certain deferred tax assets and liabilities and the \$1.2 million of current tax expense recorded in connection with the transition tax on the mandatory deemed repatriation of foreign earnings was a provisional amount at May 31, 2018. Any subsequent adjustment to these amounts will be recorded to current tax expense in the quarter of 2019 when any further analysis of our deferred tax assets and liabilities and our historical foreign earnings is completed. We expect to complete our detailed analysis during fiscal 2019.



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**RESULTS OF OPERATIONS**

**Executive Overview**

Consolidated revenues were \$402.3 million in fiscal 2018, an increase of 11% compared to \$361.6 million in fiscal 2017. Organic sales increased 8%.

Food Safety segment sales were \$196.0 million in fiscal 2018, an increase of 14% compared to \$171.3 million in fiscal 2017. Organic sales increased 9%, with the acquisitions of Quat-Chem and Rogama, both in December 2016, contributing the remainder of the growth.

Animal Safety segment sales were \$206.2 million in fiscal 2018, an increase of 8% compared to \$190.3 million in fiscal 2017. Organic sales increased 7%, with the September 2017 acquisition of Neogen Australasia contributing the remainder of the growth.

International sales were 37.6% of total sales in fiscal 2018 compared to 35.8% of total sales in fiscal 2017.

On December 22, 2017, the U.S. government enacted the Tax Cuts and Jobs Act (the Tax Act), which included a reduction in the U.S. federal statutory tax rate from 35% to 21% and a transition to a modified territorial system. As a result of the enactment of the Tax Act, we recorded a gain of \$6.0 million related to the revaluation of deferred tax assets and liabilities and a charge of \$1.2 million related to a transition tax on unrepatriated earnings at our international operations in fiscal 2018. The net gain of \$4.8 million resulted in a \$0.09 increase to diluted earnings per share.

Results for fiscal 2018 also reflect a benefit of \$4.8 million to our provision for income taxes for share-based payment awards resulting from the current year adoption of ASU No. 2016-09, Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. This benefit contributed \$0.09 to diluted earnings per share in fiscal 2018.

Net income was \$63.1 million, or \$1.21 per diluted share, an increase of 44% compared to \$43.8 million, or \$0.86 per share, in the prior year.

Cash generated from operating activities in fiscal 2018 was \$69.1 million, compared to \$60.3 million in fiscal 2017.

Neogen's results reflect a 17% increase in international sales in fiscal 2018 compared to the prior year. We continue to focus on increasing our presence and market share throughout the world, while also integrating our recent international acquisitions into our product portfolio. Sales increases for fiscal 2018 compared to the prior year are as follows for each of our international locations:

	<b>Revenue % Increase USD</b>	<b>Revenue % Increase Local Currency</b>
<i>Neogen Europe (including Lab M &amp; Quat-Chem)</i>	23%	16%
<i>Neogen do Brasil (including Deoxi &amp; Rogama)</i>	54%	56%
<i>Neogen Latinoamerica</i>	13%	9%
<i>Neogen China</i>	18%	14%
<i>Neogen India</i>	18%	14%

Currency translation had a positive impact of approximately \$3.7 million on revenues recorded in foreign currencies during fiscal 2018. At Neogen Europe, a 31% increase in genomics revenues and a 29% increase in sales of culture media manufactured at Lab M offset an 8% decrease in natural toxin test kit sales, as last year's deoxynivalenol (DON) outbreak in corn crops in western Europe did not repeat in the current year. The organic revenue increase in Brazil was primarily due to a large Rogama sale to a government health organization that will not recur in fiscal 2019. Sales of test kits to detect aflatoxin also increased over 200% in Brazil as we gained new business testing for aflatoxin in corn. These increases were partially offset by a 39% decrease in sales of forensic test kits resulting from increased competition and customer losses caused by conversion to different testing methods.

Service revenue was \$66.7 million in fiscal 2018, an increase of 21% over prior fiscal year sales of \$55.1 million, aided by the September 2017 acquisition of Neogen Australasia. The growth was led by increases in sales to the global beef and dairy cattle and companion animal markets, and increased testing volumes with a large poultry customer.

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<i>(dollars in thousands)</i>			<b>Year Ended</b>		<b>May 31, 2016</b>
	<b>May 31, 2018</b>	<b>Increase/ (Decrease)</b>	<b>May 31, 2017</b>	<b>Increase/ (Decrease)</b>	
<b>Food Safety:</b>					
Natural Toxins, Allergens & Drug Residues	\$ 72,962	3%	\$ 70,926	12%	\$ 63,269
Bacterial & General Sanitation	38,155	10%	34,706	2%	33,899
Culture Media & Other	45,842	13%	40,658	9%	37,285
Rodenticides, Insecticides & Disinfectants	23,821	75%	13,620	223%	4,213
Genomics Services	15,267	34%	11,415	47%	7,755
	196,047	14%	171,325	17%	146,421
<b>Animal Safety:</b>					
Life Sciences	10,411	7%	9,704	24%	7,815
Veterinary Instruments & Disposables	47,748	15%	41,693	(1)%	42,028
Animal Care & Other	32,719	11%	29,495	(19)%	36,494
Rodenticides, Insecticides & Disinfectants	68,553	(2)%	69,825	31%	53,490
Genomics Services	46,774	18%	39,552	13%	35,027
	206,205	8%	190,269	9%	174,854
<b>Total Revenue</b>	<b>\$ 402,252</b>	<b>11%</b>	<b>\$ 361,594</b>	<b>13%</b>	<b>\$ 321,275</b>

**Year Ended May 31, 2018 Compared to Year Ended May 31, 2017***Food Safety:*

**Natural Toxins, Allergens & Drug Residues** Sales in this category increased 3% in fiscal 2018 compared to the prior year. For the allergens and dairy drug residues product lines, test kit sales increased 12% and 13%, respectively, for the year. These increases were partially offset by a 26% decrease in sales of deoxynivalenol (DON) test kits, as prior year outbreaks of DON in corn crops in the U.S., Canada and Europe did not recur in fiscal 2018.

**Bacterial & General Sanitation** Sales in this category increased 10% in fiscal 2018, led by strong sales of our AccuPoint sanitation monitoring product line which increased 18% on strength in both reader equipment and consumable supplies. Sales of test kits to detect pathogens increased 16%, led by growth in *Listeria* products, including our new *Listeria* Right Now test kit that launched earlier in the fiscal year. Additionally, sales of our product line to detect spoilage organisms in processed foods increased 2%.

**Culture Media & Other** Sales in this category increased 13% in fiscal 2018 compared to fiscal 2017. Sales of Neogen Culture Media, formerly marketed as the Acumedia and Lab M brands, increased 19%, due to continued strength in products manufactured at Lab M in the U.K. and a large non-recurring order from a U.S. customer. This category also includes sales of forensic test kits sold through our Brazilian subsidiary, which decreased by 39% in fiscal 2018. Demand in the prior year was extremely high, due to a new requirement for drug testing of commercial truck drivers, however, sales of these kits in Brazil have decreased in the current year due to increased competition

and customer losses caused by conversion to different testing methods.

**Rodenticides, Insecticides & Disinfectants** Sales of products in this category sold through our Food Safety operations increased 75% in fiscal 2018; excluding the December 2016 acquisitions of Quat-Chem and Rogama, organic growth was 2%. The increase was primarily due to a large sale at Rogama to a government health organization that will not recur in fiscal 2019. Cleaner and disinfectants sold through Food Safety operations were negatively impacted by termination of a distribution agreement in January 2017, which resulted in a decline in sales for those distributed products of \$859,000 in fiscal 2018.

**Genomics Services** Sales of genomics services sold through our Food Safety operations increased 34% in fiscal 2018 compared to the same period in the prior year, primarily due to market share increases, particularly in the beef and dairy cattle markets, and incremental business with a large poultry producer, in Europe.

**Table of Contents***Animal Safety:*

**Life Sciences** Sales in this category increased 7% in fiscal 2018 compared to fiscal 2017, due to increased volumes of forensic test kits sold to commercial labs in the U.S.

**Veterinary Instruments & Disposables** Revenues in this category increased 15% in fiscal 2018, led by a 20% increase in sales of syringes, as we gained new customers in the retail and custom solutions markets. Sales of our patented detectable needles increased 23%, aided by strong sales to customers in Europe, including Russia.

**Animal Care & Other** Sales of these products increased 11% in fiscal 2018, due to higher sales of PanaKare, our pancreatic replacement therapy, which benefitted from competitor backorders in fiscal 2018. Additionally, results from fiscal 2017 included sales credits totaling \$1.1 million in the first quarter as we removed our canine thyroid product from the market, after the FDA approved a new drug application for a competitive product.

**Rodenticides, Insecticides & Disinfectants** Sales in this category decreased 2% in fiscal 2018, compared to the same period in the prior year. The January 2017 termination of a distribution agreement with a manufacturer of cleaners and disinfectants resulted in lost sales of those distributed products totaling \$4.7 million within this category. Partially offsetting this loss, sales of rodenticides increased 11% due to market share gains in the U.S.

**Genomics Services** Sales in this category increased 18% in fiscal 2018; excluding the September 2017 acquisition of Neogen Australasia, organic growth was 11%. The growth was led by increases in sales to the global beef and dairy cattle and companion animal markets and higher volumes from a large poultry customer.

**Year Ended May 31, 2017 Compared to Year Ended May 31, 2016***Food Safety:*

Overall Food Safety segment revenues in fiscal 2017 were \$171.3 million compared to \$146.4 million in fiscal 2016, an increase of 17%. Organic growth for the segment was 9%, with the acquisitions of Lab M (August 2015), Deoxi (April 2016), Quat-Chem (December 2016) and Rogama (December 2016) contributing the remainder of the growth. Adverse currency conditions, resulting from strength of the U.S. dollar, reduced overall growth and organic growth within the segment for the comparative period. In a neutral currency environment, overall Food Safety growth for the year was 22% and organic growth was 14%.

**Natural Toxins, Allergens & Drug Residues** Sales in this category increased 12% to \$70.9 million in fiscal 2017. Within this category, sales of natural toxin test kits increased 19%, led by sales of test kits and related equipment to detect deoxynivalenol (DON), due to outbreaks of DON in corn crops in the Midwest U.S., Canada and western Europe. Allergen test kit revenues rose 16% for the year, as increases in product recalls relating to allergenic contamination of food continued to expand the market. The largest increases in this product line were test kits to detect milk, gliadin, tree nuts, hazelnut and peanut contamination. Partially offsetting these increases, sales of test kits to detect drug residues were down 4%, due primarily to market losses in Europe caused by delays in the launch of new products, and, to a lesser extent, currency translations, as this product is sold in euros, which declined 2% against the dollar in fiscal 2017.

**Bacterial & General Sanitation** Revenues of these products rose 2%, compared to the prior fiscal year, led by a 4% increase in sales of our line of automated equipment and consumable vials to detect spoilage microorganisms (e.g. yeast and mold), and an 11% increase in sales of *Salmonella* test kits for the year as we gained market share with our ANSR product line. These increases were partially offset by lower sales of a distributed product that was discontinued

in fiscal 2017. Our line of AccuPoint readers and samplers to monitor environmental sanitation rose 4% for the year, with samplers increasing 7%, while equipment was flat compared to fiscal 2016.

**Culture Media & Other** Sales in this category increased 9% in fiscal 2017, aided in part by the acquisition of Lab M; organic sales in this category increased 6%. Within this category, there was a significant increase in sales of forensic test kits through our Brazilian subsidiary. Demand for these kits from commercial labs located in Brazil increased dramatically due to a new requirement for drug testing of commercial truck drivers. Partially offsetting this increase was an 11% decrease in sales of our Acumedia line of dehydrated culture media sold into traditional domestic markets; the first half of fiscal 2016 had strong sales resulting from a research project, which did not recur.

**Rodenticides, Insecticides & Disinfectants** Sales of rodenticides, insecticides and disinfectants into our Food Safety segment increased 223%, almost entirely due to the acquisitions of Rogama (Brazil), which reports through Neogen do Brasil, and Quat-Chem (U.K.), which reports through Neogen Europe; each was purchased in December 2016. Excluding these acquisitions, growth in this category was 3%, primarily from rodenticide and disinfectant sales into Mexico and Central America by our Mexican subsidiary.

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**Genomics Services** Genomics revenues sold through the Food Safety segment increased 47%, primarily due to strong demand of genomics testing in Europe and expanded capabilities at our operation in Ayr, Scotland to better serve the growing European market; the Deoxi acquisition in April 2016 also contributed to the growth.

*Animal Safety:*

Revenues for the Company's Animal Safety segment were \$190.3 million in fiscal 2017, an increase of 9% compared to prior year revenues of \$174.9 million. The revenue growth resulted from the acquisitions of Virbac (December 2015) and Preserve (May 2016). In the first quarter of fiscal 2017, we lost the ability to sell our popular canine thyroid replacement product after the FDA approved a new drug application for a competitor, which gave the competitor exclusive marketing rights to the product. We will be unable to sell this product, which had sales of \$6.2 million in fiscal 2016, in the U.S. until similar regulatory approval is granted. Additionally, in January 2017, our agreement with a manufacturer to distribute certain cleaners and disinfectants was canceled, resulting in the loss of \$1.3 million of sales in the 4<sup>th</sup> quarter of fiscal 2017. Excluding these products, this segment had overall organic growth of 5% for the year. Currency translations had minimal effect on revenues in this segment.

**Life Sciences** Sales in this category increased 24% in fiscal 2017, compared to the prior year. This growth was primarily due to increased volume to U.S. commercial labs to meet new requirements for drug testing of commercial truck drivers in Brazil.

**Veterinary Instruments & Disposables** Revenues in this category decreased 1%, the result of lower sales of disposable syringes, which had increased sales in the prior year due to a competitor's backorder situation, and marking products. Partially offsetting this were gains in the sales of our proprietary detectable needles and durable speed syringes, with both gains due to strong demand from customers.

**Animal Care & Other** Sales in this category decreased 19% due to the loss of our ability to sell our popular thyroid replacement product, mentioned above. Partially offsetting this was an increase in revenues for vitamin injectable products due to increased market share and price increases.

**Rodenticides, Insecticides & Disinfectants** Sales in this category increased 31% in fiscal 2017, due to the acquisitions of Virbac (December 2015) and Preserve (May 2016); organic sales in this category were flat. The Preserve acquisition added \$15.5 million of revenue in fiscal 2017, primarily to the domestic swine, poultry, dairy and food processing markets. Rodenticide sales increased 1% with strong sales in the custom solutions, retail and distribution markets offset by lower sales in the northwest U.S. after the prior year rodent outbreak subsided. Cleaners and disinfectant sales were 8% lower on an organic basis, due to the early termination of a distribution agreement for certain cleaners and disinfectants in the second half of the fiscal year.

**Genomics Services** Genomics Services revenues reported within the Animal Safety segment increased 13% in fiscal 2017, compared to fiscal 2016. The increase was primarily due to increased market share in the beef and dairy markets from new product offerings and focused sales efforts in these markets; also contributing to the increase was expanded business with a large customer in the poultry market.

**COST OF REVENUES**

<i>(dollars in thousands)</i>	<b>2018</b>	<b>Increase</b>	<b>2017</b>	<b>Increase</b>	<b>2016</b>
Cost of Revenues	\$ 212,000	12%	\$ 189,626	13%	\$ 168,211

Cost of revenues increased 12% in fiscal 2018 and 13% in fiscal 2017 in comparison with the prior years. This compares with revenue

increases of 11% in fiscal 2018 and 13% in fiscal 2017. Expressed as a percentage of sales, cost of revenues was 52.7%, 52.4% and 52.4% in fiscal years 2018, 2017 and 2016, respectively.

**Fiscal 2018** Improvements in Animal Safety gross margins, resulting from raw material cost reductions and favorable mix were offset by higher product costs in the Food Safety segment resulting from lower sales of our mycotoxin test kits, which have higher gross margins, and a change in mix caused by the Quat-Chem and Rogama acquisitions. These businesses have product lines with gross margins lower than the average gross margins in this segment. Depreciation expense, resulting from the investment of machinery and equipment at several manufacturing locations, increased \$872,000 in fiscal 2018.



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**Fiscal 2017** Improvements in Animal Safety gross margins, resulting from lower raw material costs in the genomics business and increased higher margin forensics test kit sales into the commercial laboratory market, and strong growth in sales of higher margin mycotoxin and allergen test kits in the Food Safety segment, overcame the lower gross margins resulting from the Quat-Chem and Rogama acquisitions.

*Food Safety Gross Margins:*

Food Safety gross margins were 52.8%, 55.3% and 56.7% in fiscal years 2018, 2017 and 2016, respectively.

**Fiscal 2018** Our fiscal 2018 results reflect the full year impact of lower gross margins from revenues contributed by the recent acquisitions of Quat-Chem and Rogama. Excluding these businesses, Food Safety gross margins would have been 330 basis points higher in fiscal 2018. Additionally, the decrease in sales of higher margin forensic test kits through our Brazilian subsidiary, due to increased competition, and lower sales of mycotoxin test kits, due to a DON outbreak in the prior year which did not recur in fiscal 2018, adversely impacted gross margins in this segment.

**Fiscal 2017** During fiscal 2017, we purchased the Quat-Chem and Rogama businesses, which generated gross margins lower than historical averages for this segment. These acquisitions, and the full year impact of the prior year acquisitions of Lab M and Deoxi resulted in a 140 basis point decline in Food Safety gross margins. In addition, gross margins were also negatively impacted by the strength of the U.S. dollar relative to the international currencies in which we operate, primarily in Europe and Mexico, where the pound and peso declined in value against the U.S. dollar by 14% and 12%, respectively. These international operations report through the Food Safety segment. Partially offsetting these negative impacts to gross margins were favorable shifts in product mix towards higher margin diagnostic test kits for mycotoxins and allergens.

*Animal Safety Gross Margins:*

Animal Safety gross margins were 42.0%, 40.6% and 40.1% in fiscal years 2018, 2017 and 2016, respectively.

**Fiscal 2018** The improvement in gross margin percentage from fiscal 2017 to fiscal 2018 was primarily due to raw material cost reductions in our genomics business. We also benefitted from increased sales of forensic test kits and other higher margin products and decreased sales of lower margin distributed cleaners and disinfectants resulting from the termination of a distribution agreement in January 2017.

**Fiscal 2017** Improvements in raw material costs, favorable product mix in the genomics business and strong sales of forensic kits to commercial labs in the U.S. more than offset the loss of high margin revenues from the thyroid replacement product for companion animals, which we were required to stop selling at the end of fiscal 2016.

**OPERATING EXPENSES**

<i>(dollars in thousands)</i>	<b>2018</b>	<b>Increase</b>	<b>2017</b>	<b>Increase</b>	<b>2016</b>
Sales and Marketing	\$ 70,909	14%	\$ 62,424	8%	\$ 57,599
General and Administrative	38,294	12%	34,214	17%	29,189
Research and Development	10,855	5%	10,385	5%	9,890
Total Operating Expense	\$ 120,058	12%	\$ 107,023	11%	\$ 96,678

Overall operating expenses increased by 12% in fiscal 2018 and 11% in fiscal 2017, each compared to the prior year. These increases

compare to revenue increases of 11% and 13%, respectively, in each comparative period.

*Sales and Marketing:*

Sales and marketing expenses increased by 14% in fiscal 2018 and 8% in fiscal 2017, each compared to the prior year. As a

percentage of sales, sales and marketing expense was 17.6%, 17.3% and 17.9% in fiscal years 2018, 2017 and 2016, respectively.

**Fiscal 2018** Salaries and commissions expense rose 9% in fiscal 2018, while travel expense increased 12%. Other significant increases include shipping expense, distributor support and promotion programs, federal and state product registrations and royalty expense.

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Approximately \$1.2 million of the increase in sales and marketing expense resulted from the Quat-Chem, Rogama and Neogen Australasia acquisitions.

**Fiscal 2017** Salaries and commissions within the sales and marketing function, which is also comprised of technical service, customer service, and product management personnel, rose 10%, due to increased staffing and the increase in revenue, while travel

expenses rose 7%. Other significant expense increases were domestic shipping expense, up 11% and in line with the revenue increase,

and royalty expense, which rose 35% due to increased sales in fiscal 2017 and a one-time credit in the prior year resulting from a

retroactive rate reduction on a royalty agreement. Of the \$4.8 million increase in expenses, approximately \$2.2 million resulted from our recent acquisitions.

*General and Administrative:*

General and administrative expenses rose 12% in fiscal 2018 compared to fiscal 2017 and by 17% in fiscal 2017 compared to fiscal

2016. As a percentage of sales, general and administrative expense was 9.5%, 9.5% and 9.1% in fiscal years 2018, 2017 and 2016, respectively.

In both fiscal years, the increase is primarily the result of higher salaries, due to additional headcount as well as compensation increases. Higher legal and professional fees and additional amortization of intangible assets, due to our recent acquisitions, also contributed to the increase in each comparative period.

*Research and Development:*

Research and development expenses increased 5% in fiscal 2018 and 5% in fiscal 2017, each compared to the prior year.

Higher salaries expense in each fiscal year, resulting from increased headcount and compensation increases, was partially offset by lower levels of consulting and other outside services. As a percentage of revenue, these expenses were 2.7% in fiscal year 2018, 2.9% in fiscal year 2017 and 3.1% in fiscal year 2016; we expect to spend approximately 3% of total revenue on research and development annually.

**OPERATING INCOME**

<i>(dollars in thousands)</i>	<b>2018</b>	<b>Increase</b>	<b>2017</b>	<b>Increase</b>	<b>2016</b>
Operating Income	\$ 70,194	8%	\$ 64,945	15%	\$ 56,386

Our operating income increased by 8% in fiscal 2018 compared to fiscal 2017, and by 15% in fiscal 2017 compared to fiscal 2016. Expressed as a percentage of revenues, operating income was 17.5%, 18.0% and 17.6% in fiscal years 2018, 2017 and 2016, respectively.

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The 8% increase in operating income for fiscal 2018 was due to the 11% increase in sales, offset by slightly lower gross margins due to product mix shifts, and operating expenses which rose by 12% over fiscal 2017.

The 15% increase in operating income for fiscal 2017 was due to the 13% increase in revenues and operating expense increases which were less than the revenue growth rate, combined with gross margins which, at 47.6% of sales, were the same as the prior year.

**Table of Contents****OTHER INCOME (EXPENSE)**

Other Income (Expense) for the previous three fiscal years consisted of the following:

<i>(dollars in thousands)</i>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Interest income (net of expense)	\$ 2,043	\$ 838	\$ 322
Foreign currency transactions	274	(40)	(1,338)
Royalty income	147	171	217
Settlement of licensing agreement		660	
Quat-Chem contingent consideration	255		
Deoxi contingent consideration	(42)	(14)	
Neogen India contingent consideration		32	
Other	594	81	(74)
<b>Total Other Income (Expense)</b>	<b>\$ 3,271</b>	<b>\$ 1,728</b>	<b>\$ (873)</b>

The increases in interest income in both fiscal years 2018 and 2017 compared to the prior years is the result of higher cash balances and rising interest rates during the two-year period. Other income resulting from foreign currency translations is primarily the result of changes in the value of foreign currencies relative to the dollar in countries in which we operate. Other Income in fiscal 2018 also included the adjustment of Quat-Chem and Deoxi contingent consideration based on the level of achievement of revenue targets for the acquired businesses. In fiscal 2017, we terminated a licensing agreement and recognized a gain of \$660,000.

**PROVISION FOR INCOME TAXES**

<i>(dollars in thousands)</i>	<b>2018</b>	<b>Increase</b>	<b>2017</b>	<b>Increase</b>	<b>2016</b>
Provision for Income Taxes	\$ 10,250	(55)%	\$ 22,700	20%	\$ 18,975

Income tax expense for fiscal 2018 was \$10.3 million, an effective tax rate of 14%, compared to prior year income tax expense of \$22.7 million, an effective tax rate of 34%. We recorded favorable tax adjustments totaling \$4.8 million during the year as the result of U.S. tax reform passed in December 2017. The tax reform reduced the U.S. statutory income tax rate from 35% to 21%, and also resulted in other adjustments to income tax expense. We computed our income tax for the fiscal year ending May 31, 2018 using a blended Federal Tax Rate of 29.2%. As required by generally accepted accounting principles, we revalued our net deferred tax liabilities during the year to reflect the lower rate, resulting in a credit to income tax expense of \$6.0 million. In addition, we have calculated our cumulative unrepatriated foreign earnings and profits and calculated tax owed on those earnings and profits. This tax was estimated at \$1.2 million and was recorded as federal income tax expense; payment of this tax is permitted over an eight-year period.

Additionally, during the year we recorded incremental credits of \$4.8 million to federal income tax expense for excess tax benefits from the exercise of stock options, due to the adoption of ASU 2016-09; refer to Note 6 of our Consolidated Financial Statements for further information. In the second quarter of fiscal 2018, an IRS examination of our federal income tax returns for fiscal years 2014, 2015 and 2016 was concluded. As a result of the favorable outcome of the audit, we reversed a total of \$1.0 million from our reserve for uncertain tax positions, which had been accrued in prior fiscal years, with a corresponding credit to federal income tax expense.

**NET INCOME AND INCOME PER SHARE**

<i>(dollars in thousands-except per share data)</i>	<b>2018</b>	<b>Increase</b>	<b>2017</b>	<b>Increase</b>	<b>2016</b>
Net Income Attributable to Neogen	\$ 63,145	44%	\$ 43,793	20%	\$ 36,564
Net Income Per Share-Basic	\$ 1.23		\$ 0.87		\$ 0.73
Net Income Per Share-Diluted	\$ 1.21		\$ 0.86		\$ 0.72

Net income increased by 44% in fiscal 2018, significantly aided by U.S. tax reform enacted in December 2017 and a change in accounting for stock-based compensation, and increased by 20% in fiscal 2017, each compared to the prior year. As a percentage of revenue, net income was 15.7% in fiscal 2018, 12.1% in fiscal 2017 and 11.4% in fiscal 2016.

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**FUTURE OPERATING RESULTS**

Neogen Corporation's future operating results involve a number of risks and uncertainties. Actual events or results may differ materially from those discussed in this report. Factors that could cause or contribute to such differences include, but are not limited to, the factors discussed below as well as those discussed elsewhere in this report. Management's ability to grow the business in the future depends upon our ability to successfully implement various strategies, including:

developing, manufacturing and marketing new products with new features and capabilities, and having those new products successfully accepted in the marketplace;

expanding our markets by fostering increased use of our products by customers;

maintaining or increasing gross and net operating margins in changing cost environments;

strengthening operations and sales and marketing activities in geographies outside of the U.S.;

developing and implementing new technology development strategies; and

identifying and completing acquisitions that enhance existing product categories or create new products or services.

**FINANCIAL CONDITION AND LIQUIDITY**

On May 31, 2018, we had \$83.1 million in cash and cash equivalents, \$127.7 million in marketable securities and working capital of \$337.1 million. For the year ended May 31, 2018, cash generated from operating activities was \$69.1 million, compared to \$60.3 million generated in fiscal 2017; proceeds from stock option exercises provided an additional \$22.8 million of cash. For the same period, additions to property and equipment and business acquisitions used cash of \$20.9 million and \$468,000, respectively. We have a financing agreement with a bank providing for an unsecured revolving line of credit of \$15.0 million, which expires on September 30, 2019. There were no advances against this line of credit during fiscal years 2018, 2017 and 2016, and no balance outstanding at May 31, 2018 and 2017.

Accounts receivable at May 31, 2018 were \$79.1 million, compared to \$68.6 million at May 31, 2017, primarily due to the increase in revenues. Days sales outstanding, a measurement of the time it takes to collect receivables, was 60 days at both May 31, 2018 and May 31, 2017. All customer accounts are actively managed and no losses in excess of amounts reserved are currently expected.

Inventory balances were \$76.0 million at May 31, 2018, an increase of \$2.9 million, or 4.0%, compared to \$73.1 million at May 31, 2017. This past year, we were successful in controlling inventory while ensuring adequate safety stocks to minimize backorders. We continue to identify and rationalize redundant product offerings resulting from recent acquisitions.

Neogen has been consistently profitable and has generated strong cash flow from operations during each of the past three fiscal years. However, our cash on hand and current borrowing capacity may not be sufficient to meet our cash requirements to commercialize products currently under development or our potential plans to acquire additional businesses, technology and products that fit within our strategic plan. Accordingly, we may be required, or may choose, to issue equity securities or enter into other financing arrangements for a portion of our future capital needs.

We are subject to certain legal and other proceedings in the normal course of business that have not had, and, in the opinion of management, are not expected to have, a material effect on our results of operations or financial position.



**Table of Contents****CONTRACTUAL OBLIGATIONS**

As of May 31, 2018, we have the following contractual obligations due by period:

<i>(dollars in thousands)</i>	<b>Total</b>	<b>Less than 1 year</b>	<b>1-3 years</b>	<b>3-5 years</b>	<b>More than 5 years</b>
Long-Term Debt	\$	\$	\$	\$	\$
Operating Leases	906	498	194	214	
Unconditional Purchase Obligations (1)	54,339	54,061	278		
	\$ 55,245	\$ 54,559	\$ 472	\$ 214	\$

(1) Unconditional purchase obligations are primarily purchase orders for future inventory and capital equipment purchases.

**NEW ACCOUNTING PRONOUNCEMENTS**

See discussion of any New Accounting Pronouncements in Note 1 to Consolidated Financial Statements.

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**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISKS**

We have interest rate and foreign exchange rate risk exposure but no long-term fixed rate investments or borrowings. Our primary interest rate risk is due to potential fluctuations of interest rates for variable rate borrowings and short-term investments.

Foreign exchange risk exposure arises because we market and sell our products throughout the world. Revenues in certain foreign countries as well as certain expenses related to those revenues are transacted in currencies other than the U.S. dollar. Our operating results are exposed to changes in exchange rates between the U.S. dollar and the British pound sterling, the euro, the Mexican peso, the Brazilian real, the Chinese yuan, and to a lesser extent, the Indian rupee, the Canadian dollar and Australian dollar; there is also exposure to a change in exchange rate between the British pound sterling and the euro. When the U.S. dollar weakens against foreign currencies, the dollar value of revenues denominated in foreign currencies increases. When the U.S. dollar strengthens, the opposite situation occurs. Additionally, previously recognized revenues can be positively or negatively affected by changes in exchange rates in the course of collection. We use derivative financial instruments to help manage the economic impact of fluctuations in certain currency exchange rates. These contracts are adjusted to fair value through earnings.

Neogen has assets, liabilities and operations outside of the U.S., located in the United Kingdom, Brazil, Mexico, China, India, Canada and Australia where the functional currency is the British pound sterling, Brazilian real, Mexican peso, Chinese yuan, Indian rupee, Canadian dollar and Australian dollar, respectively, and also transacts business throughout Europe in the euro. Our investments in foreign subsidiaries are considered to be long-term.

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTAL DATA**

The response to this item is submitted in a separate section of this report starting on page F-1.

**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**

An evaluation was performed under the supervision and with the participation of our management, including the Executive Chairman of the Board and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15 (e) under the Securities Exchange Act of 1934) as of May 31, 2018. Based on and as of the time of such evaluation, our management, including the Executive Chairman of the Board and Chief Financial Officer, concluded that our disclosure controls and procedures were effective as of the end of the period covered by this report to ensure that information required to be disclosed in the reports that are filed or submitted under the Securities and Exchange Act of 1934 is appropriately recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure the information required to be disclosed in the reports that are filed or submitted under the Securities Exchange Act of 1934 is accumulated and communicated to management, including the Executive Chairman of the Board and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

## **Management's Report on Internal Control over Financial Reporting**

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13-a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including the Executive Chairman of the Board and Chief Financial Officer, an evaluation was conducted as to the effectiveness of internal control over financial reporting as of May 31, 2018, based on the framework in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on that evaluation, management concluded that internal control over financial reporting was effective as of May 31, 2018. The effectiveness of internal control over financial reporting as of May 31, 2018, has been audited by BDO USA, LLP, an independent registered public accounting firm, as stated in its attestation report, which is included on the following page and is incorporated into this Item 9A by reference.

## **Changes in Internal Control over Financial Reporting**

No changes in our internal control over financial reporting were identified as having occurred during the year ended May 31, 2018 that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

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### **Report of Independent Registered Public Accounting Firm**

Board of Directors and Stockholders

Neogen Corporation

Lansing, Michigan

### **Opinion on Internal Control over Financial Reporting**

We have audited Neogen Corporation's (the Company's) internal control over financial reporting as of May 31, 2018, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of May 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company and subsidiaries as of May 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the three years in the period ended May 31, 2018, and the related notes and our report dated July 27, 2018 expressed an unqualified opinion thereon.

### **Basis for Opinion**

The Company's management is responsible 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 Item 9A, Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of internal control over financial reporting in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

### **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/ BDO USA, LLP

Grand Rapids, Michigan

July 27, 2018

**Table of Contents****ITEM 9B. OTHER INFORMATION NONE****PART III****ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

Information regarding the Company and certain corporate governance matters appearing under the captions Election of Directors, Audit Committee, and Miscellaneous-Section 16(a) Beneficial Ownership Reporting Compliance is incorporated by reference to Neogen's 2018 proxy statement to be filed within 120 days of May 31, 2018.

We have adopted a Code of Conduct that applies to our directors, officers and employees. This Code of Conduct is available on our website at <http://www.neogen.com/pdf/CodeOfConduct.pdf>.

**OFFICERS OF THE REGISTRANT**

The officers of Neogen are elected by and serve at the discretion of the Board of Directors. The names and titles of our officers as of May 31, 2018 are set forth below.

<b>Name</b>	<b>Position with the Company</b>	<b>Year Joined the Company</b>
John E. Adent	President & Chief Executive Officer	2017
Stewart W. Bauck, D.V.M., Ph.D.	Vice President, Agrigenomics	2012
Joseph A. Corbett	Vice President, Animal Safety Sales & Operations	1993
Robert S. Donofrio, Ph.D.	Vice President, Food Safety Research & Development	2016
Shane M. Fitzwater	Vice President, Animal Safety Operations	2018
Jerome L. Hagedorn	Vice President, Food Safety Operations	2018
James L. Herbert	Executive Chairman of the Board	1982
Melissa K. Herbert	Vice President, Support Services	2005
Jason W. Lilly, Ph.D., MBA	Vice President, Corporate Development	2005
Terri A. Morrical	Vice President, Animal Safety	1992
Steven J. Quinlan	Vice President & Chief Financial Officer	2011
Dwight E. Schroedter	Vice President, Animal Safety Manufacturing	1995
<i>Melissa K. Herbert, Vice President, Support Services, is the daughter of James L. Herbert, Executive Chairman of the Board.</i>		

Information concerning the officers of Neogen follows:

John E. Adent, age 50, joined Neogen as Chief Executive Officer on July 17, 2017. Prior to joining Neogen, Mr. Adent served as the Chief Executive Officer of Animal Health International, Inc., formerly known as Lextron, Inc., from 2004 to 2015, also serving as its President during that time. Animal Health International was sold to Patterson Companies, Inc. in 2015, and Mr. Adent served as the Chief Executive Officer of the \$3.3 billion Animal Health Division of Patterson Animal Health from that period until his resignation on July 1, 2017. Mr. Adent began his career with management responsibilities for Ralston Purina Company, developing animal feed manufacturing and sales operations in China and the Philippines. When Ralston Purina spun off that business to Agribands, he continued his management role in the European division in Spain and Hungary, serving as managing director of the Hungarian operations. He left Ralston Purina in 2004.

Dr. Stewart W. Bauck, age 60, joined Neogen in 2012 as our Director of Beef Cattle Genomics, and became General Manager of Neogen's GeneSeek subsidiary in 2013. In December 2016, Dr. Bauck was named Neogen's Vice President of Agrigenomics, responsible for GeneSeek's operation and execution of our genomics strategy. Prior to joining Neogen, Bauck spent 15 years with Merial Inc., where he created and launched the Igenity livestock production business. Igenity was acquired by Neogen from Merial in May 2012. Dr. Bauck's experience also includes various responsibilities in technical services and management for Merck AgVet, and earlier in his career, he owned and operated his own private veterinary practice with a major emphasis on food-producing animals.

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Joseph A. Corbett, age 49, joined Neogen in December 1993 as a sales representative in the Animal Safety operation based in Lexington, Kentucky. Prior to Neogen, he worked for the Marriott Corporation in sales and operations. He has served in various sales, marketing and operational roles in the Neogen Animal Safety segment. He was named Vice President, Animal Safety Sales and Operations in October 2014, responsible for all Animal Safety revenues, excluding Genomics and Life Sciences, and operations at the Lexington distribution centers.

Dr. Robert S. Donofrio, age 45, joined Neogen in February 2016 as Director of Microbiology Research and Development, and was promoted to Director of Food Safety Research and Development in December 2016. In April 2018, Dr. Donofrio was named Vice President of Food Safety Research and Development. Prior to joining Neogen, he worked for 15 years at NSF International in various positions including Director of Microbiology and Molecular Biology and Director of Applied Research. At Neogen, Dr. Donofrio is responsible for our food safety research activities in the U.S., Scotland and England.

Shane M. Fitzwater, age 44, joined Neogen in April 2018 as Vice President of Animal Safety Operations. In his role, Mr. Fitzwater is responsible for the manufacturing, quality systems, supply chain, shipping and warehousing for our domestic biosecurity operations. Prior to joining Neogen, he spent 18 years in positions of increasing responsibility at Ecolab, Inc., including five years as Ecolab's vice president of supply chain, global specialty sector. Mr. Fitzwater managed Ecolab's global supply chain for a \$750 million business unit with worldwide manufacturing and logistics operations. Before being named a vice president, he spent four years as a director of operations at Ecolab, managing a group of 450 employees and an annual operating budget of \$40 million.

Jerome L. Hagedorn, age 52, joined Neogen in April 2018 as Vice President of Food Safety Operations. In the role, Mr. Hagedorn is responsible for the manufacturing, supply chain, shipping and warehousing, production engineering and quality systems for Neogen's food safety operations. Prior to joining Neogen, Mr. Hagedorn spent the past eight years as Vice President of Operations at Siemens Healthcare Diagnostics. At Siemens, he was responsible for multiple plant operations, including diagnostic instrument manufacturing and new product introduction. Prior to joining Siemens, Mr. Hagedorn held a variety of senior-level positions over a 20-year career, including director of manufacturing at Bayer Healthcare in Indiana, director of lean manufacturing at Invensys in Ohio, and manager of automated manufacturing at Siemens Electronic Components in Mexico.

James L. Herbert, age 78, is Executive Chairman of the Board of Directors. He had been Chief Executive Officer and Chairman of the Board since 2006; he resigned as Chief Executive Officer on July 17, 2017, when John Adent was named to that role. Prior to 2006, he had been President and a Director since he founded the Company in June 1982. Mr. Herbert previously held the position of Corporate Vice President of DeKalb Ag Research, a major agricultural genetics and energy company. He has management experience in animal biologics, specialized chemical research, medical instruments, aquaculture, animal nutrition, and poultry and livestock breeding and production.

Melissa K. Herbert, age 54, joined Neogen in August 2005 as a sales representative in our Food Safety Division in Lansing, Michigan. In 2011, Ms. Herbert was named Manager of Industry Affairs, with oversight of regulatory issues for both the Food and Animal Safety segments, and in June 2013, Director of Industry Affairs. She was named Vice President, Support Services in October 2015. Support Services is comprised of Technical Service, Regulatory Affairs and Industry Affairs departments.

Dr. Jason W. Lilly, age 44, joined Neogen in June 2005 as Market Development Manager for Food Safety. In June 2009, he moved to the Corporate Development group. He was named Vice President of Corporate Development in December 2011, responsible for the identification and acquisition of new business opportunities for the Company. Prior to joining Neogen, he served in various technical sales and marketing roles at Invitrogen Corporation.



Terri A. Morrival, age 53, joined Neogen in September 1992 as part of our acquisition of WTT, Incorporated. She has directed most aspects of our Animal Safety operations since she joined Neogen and currently serves as Vice President responsible for the Animal Safety segment, excluding Genomics. From 1986 to 1991, Ms. Morrival was Controller for Freeze Point Cold Storage Systems and concurrently served in the same capacity for Powercore, Inc. In 1990, she joined WTT, Incorporated as VP/CFO and then became President, the position she held at the time Neogen acquired the business.

Steven J. Quinlan, age 55, joined Neogen in January 2011 as Vice President and Chief Financial Officer. He was named Secretary in October 2011. He is responsible for all internal and external financial reporting for Neogen, and manages the accounting, human resources, information technology, communications and facilities departments. Mr. Quinlan came to Neogen following 19 years at Detrex Corporation (1992-2010), the last eight years serving as Vice President-Finance, CFO and Treasurer. He was on the audit staff at the public accounting firm Price Waterhouse (now PWC) from 1985-1989.

Dwight E. Schroedter, age 61, joined Neogen in January 1995 as Research and Development Manager of the Animal Safety Division based in Lexington, Kentucky. He has served in a variety of technical, operational and sales roles as part of the Animal Safety Division and was named Vice President, Animal Safety Manufacturing in October 2014, overseeing manufacturing operations at our domestic Animal Safety manufacturing locations, excluding Lansing. Prior to joining Neogen, Mr. Schroedter managed the antibody development laboratory for the Ames Division of Miles, Incorporated.

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**ITEM 11. EXECUTIVE COMPENSATION**

The information required by this Item is incorporated by reference to Neogen's Proxy Statement to be filed within 120 days of May 31, 2018.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS, MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The information required by this Item is incorporated by reference to Neogen's Proxy Statement to be filed within 120 days of May 31, 2018.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The information required by this Item is incorporated by reference to Neogen's Proxy Statement to be filed within 120 days of May 31, 2018.

**ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The information required by this Item is incorporated by reference to Neogen's Proxy Statement to be filed within 120 days of May 31, 2018.

**PART IV**

**ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES**

(a) (1) and (2) and (c). The response to this portion of ITEM 15 is submitted as a separate section of this report starting on page F-1.

(a) (3). The Exhibits, listed on the accompanying Exhibit Index on page 42, are incorporated herein by reference.

**ITEM 16. FORM 10-K SUMMARY NONE**

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Neogen Corporation  
Annual Report on Form 10-K  
Year Ended May 31, 2018

**EXHIBIT INDEX**

<b>EXHIBIT NO.</b>	<b>DESCRIPTION</b>
3.1	<u>Articles of Incorporation, as restated (incorporated by reference to Exhibit 3(i) to the Registrant's Quarterly Report on Form 10-Q dated November 30, 2011).</u>
3.2	<u>By-Laws, as amended (incorporated by reference to Exhibit 3.2 to the Registrant's Quarterly Report on Form 10-Q dated February 29, 2000).</u>
10.1	<u>Neogen Corporation 2007 Stock Option Plan as amended and restated (incorporated by reference to Exhibit A to the Registrant's 2011 Proxy Statement August 31, 2011 filed September 1, 2011).</u>
10.2	<u>Neogen Corporation 2015 Omnibus Incentive Plan (incorporated by reference to Appendix A to the Registrant's 2015 Proxy Statement dated and filed August 29, 2015).</u>
10.3	<u>Amended and Restated Credit Agreement dated as of November 30, 2016 between Registrant and JPMorgan Chase N.A. (incorporated by reference to Exhibit 10.A to the registrant's Form 8-K filed on December 6, 2016).</u>
21	<u>Listing of Subsidiaries</u>
23	<u>Consent of Independent Registered Public Accounting Firm BDO USA, LLP</u>
24	<u>Power of Attorney</u>
31.1	<u>Section 302 Certification of Principal Executive Officer</u>
31.2	<u>Section 302 Certification of Principal Financial Officer</u>
32	<u>Certification Pursuant to 18 U.S.C Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

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## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

## NEOGEN CORPORATION

By: <u>/s/ James L. Herbert</u>	By: <u>/s/ Steven J. Quinlan</u>
James L. Herbert, Executive Chairman of the Board of Directors (Principal Executive Officer)	Steven J. Quinlan, Vice President & Chief Financial Officer (Principal Financial Officer)

Dated: July 27, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
/s/ James L. Herbert James L. Herbert	Executive Chairman of the Board of Directors (Principal Executive Officer)	July 27, 2018
/s/ John E. Adent John E. Adent	President & Chief Executive Officer	July 27, 2018
/s/ Steven J. Quinlan Steven J. Quinlan	Vice President & Chief Financial Officer (Principal Financial Officer)	July 27, 2018
* William T. Boehm, Ph.D.	Director	
* James C. Borel	Director	
* Ronald D. Green, Ph.D.	Director	
* G. Bruce Papesh	Director	
* Jack C. Parnell	Director	
* Thomas H. Reed	Director	



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ANNUAL REPORT ON FORM 10-K

ITEM 15 (a)(1)(2) (3), (b) and (c)

LIST OF FINANCIAL STATEMENTS, EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

YEAR ENDED MAY 31, 2018

NEOGEN CORPORATION

LANSING, MICHIGAN

FORM 10-K ITEM 15(a)(1) AND (2) AND 15(c)

LIST OF FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULES

The following consolidated financial statements of Neogen Corporation and subsidiaries are included below and incorporated in ITEM 8:

Report of Independent Registered Public Accounting Firm

Consolidated Balance Sheets May 31, 2018 and 2017

Consolidated Statements of Income Years ended May 31, 2018, 2017 and 2016

Consolidated Statements of Comprehensive Income Years ended May 31, 2018, 2017 and 2016

Consolidated Statements of Equity Years ended May 31, 2018, 2017 and 2016

Consolidated Statements of Cash Flows Years ended May 31, 2018, 2017 and 2016

Notes to Consolidated Financial Statements

Schedules for which provision is made in the applicable accounting regulation of the United States Securities and Exchange Commission are not required under the related instructions or are inapplicable and, therefore, have been omitted.

FORM 10-K ITEM 15 (a) (3) AND (b)

A list of Exhibits required to be filed as a part of this report is set forth in the Exhibit Index, which immediately precedes the signature page, and is incorporated herein by reference.

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## **Table of Contents**

### **Report of Independent Registered Public Accounting Firm**

Board of Directors and Stockholders

Neogen Corporation

Lansing, Michigan

### **Opinion on the Consolidated Financial Statements**

We have audited the accompanying consolidated balance sheets of Neogen Corporation (the Company) and subsidiaries as of May 31, 2018 and 2017, and the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the three years in the period ended May 31, 2018, and the related notes (collectively referred to as the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company and subsidiaries at May 31, 2018 and 2017, and the results of their operations and their cash flows for each of the three years in the period ended May 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of May 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated July 27, 2018 expressed an unqualified opinion thereon.

### **Basis for Opinion**

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the 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 audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

We have served as the Company's auditor since 2014.

/s/ BDO USA, LLP

Grand Rapids, Michigan

July 27, 2018

**Table of Contents****Neogen Corporation and Subsidiaries****Consolidated Balance Sheets Assets***(in thousands)*

	May 31	
	2018	2017
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 83,074	\$ 77,567
Marketable securities	127,736	66,068
Accounts receivable, less allowance of \$1,550 and \$2,000 at May 31, 2018 and 2017, respectively	79,086	68,576
Inventories	76,005	73,144
Prepaid expenses and other current assets	9,888	7,606
<b>Total Current Assets</b>	<b>375,789</b>	<b>292,961</b>
<b>Property and Equipment</b>		
Land and improvements	4,730	3,094
Building and improvements	44,008	37,917
Machinery and equipment	74,911	64,867
Furniture and fixtures	3,568	3,333
Construction in progress	2,654	2,290
	129,871	111,501
Less accumulated depreciation	56,802	49,753
<b>Net Property and Equipment</b>	<b>73,069</b>	<b>61,748</b>
<b>Other Assets</b>		
Goodwill	99,558	104,759
Other non-amortizable intangible assets	14,938	14,323
Amortizable customer-based intangible assets, net of accumulated amortization of \$24,579 and \$20,846 at May 31, 2018 and 2017, respectively	31,841	35,983
Other non-current assets, net of accumulated amortization of \$12,470 and \$9,931 at May 31, 2018 and 2017, respectively	22,814	18,635
<b>Total Other Assets</b>	<b>169,151</b>	<b>173,700</b>
<b>Total Assets</b>	<b>\$ 618,009</b>	<b>\$ 528,409</b>

See accompanying notes to consolidated financial statements.



**Table of Contents****Neogen Corporation and Subsidiaries****Consolidated Balance Sheets Liabilities and Equity***(in thousands, except share and per share)*

	2018	May 31 2017
<b>Liabilities and Equity</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 20,750	\$ 16,244
Accruals		
Accrued compensation	6,065	5,002
Income taxes	165	936
Other accruals	11,708	13,820
<b>Total Current Liabilities</b>	<b>38,688</b>	<b>36,002</b>
Deferred Income Taxes	14,103	17,048
Other Non-Current Liabilities	5,043	3,602
<b>Total Liabilities</b>	<b>57,834</b>	<b>56,652</b>
<b>Commitments and Contingencies (note 7)</b>		
<b>Equity</b>		
Preferred stock, \$1.00 par value shares authorized 100,000; none issued and outstanding		
Common stock, \$0.16 par value shares authorized 60,000,000; 51,735,732 and 50,932,489 shares issued and outstanding at May 31, 2018 and 2017, respectively	8,278	8,149
Additional paid-in capital	202,572	174,742
Accumulated other comprehensive loss	(9,746)	(7,203)
Retained earnings	359,071	295,926
<b>Total Neogen Corporation and Subsidiaries Stockholders Equity</b>	<b>560,175</b>	<b>471,614</b>
Non-controlling interest		143
<b>Total Equity</b>	<b>560,175</b>	<b>471,757</b>
	<b>\$ 618,009</b>	<b>528,409</b>

See accompanying notes to consolidated financial statements.

**Table of Contents****Neogen Corporation and Subsidiaries****Consolidated Statements of Income***(in thousands, except per share)*

	Year Ended May 31		
	2018	2017	2016
<b>Revenues</b>			
Product revenues	\$ 335,554	\$ 306,512	\$ 273,570
Service revenues	66,698	55,082	47,705
<b>Total Revenues</b>	<b>402,252</b>	<b>361,594</b>	<b>321,275</b>
<b>Cost of Revenues</b>			
Cost of product revenues	174,067	156,568	137,766
Cost of service revenues	37,933	33,058	30,445
<b>Total Cost of Revenues</b>	<b>212,000</b>	<b>189,626</b>	<b>168,211</b>
<b>Gross Margin</b>	<b>190,252</b>	<b>171,968</b>	<b>153,064</b>
<b>Operating Expenses</b>			
Sales and marketing	70,909	62,424	57,599
General and administrative	38,294	34,214	29,189
Research and development	10,855	10,385	9,890
	120,058	107,023	96,678
<b>Operating Income</b>	<b>70,194</b>	<b>64,945</b>	<b>56,386</b>
<b>Other Income (Expense)</b>			
Interest income, net	2,043	838	322
Royalty income	147	171	217
Other, net	1,081	719	(1,412)
	3,271	1,728	(873)
<b>Income Before Income Taxes</b>	<b>73,465</b>	<b>66,673</b>	<b>55,513</b>
Provision for Income Taxes	10,250	22,700	18,975
<b>Net Income</b>	<b>63,215</b>	<b>43,973</b>	<b>36,538</b>
Net (Income) Loss Attributable to Non-controlling Interest	(70)	(180)	26
<b>Net Income Attributable to Neogen</b>	<b>\$ 63,145</b>	<b>\$ 43,793</b>	<b>\$ 36,564</b>
<b>Net Income Attributable to Neogen per Share</b>			
Basic	\$ 1.23	\$ 0.87	\$ 0.73
Diluted	\$ 1.21	\$ 0.86	\$ 0.72

See accompanying notes to consolidated financial statements.



**Table of Contents****Neogen Corporation and Subsidiaries****Consolidated Statements of Comprehensive Income***(in thousands, except per share)*

	Year Ended May 31		
	2018	2017	2016
Net Income	\$ 63,215	\$ 43,973	\$ 36,538
Other comprehensive (loss), net of tax: currency translations	(2,543)	(3,257)	(1,504)
Comprehensive income	60,672	40,716	35,034
Comprehensive (income) loss attributable to non-controlling interest	(70)	(180)	26
Comprehensive income attributable to Neogen	\$ 60,602	\$ 40,536	\$ 35,060

See accompanying notes to consolidated financial statements.

**Table of Contents****Neogen Corporation and Subsidiaries****Consolidated Statements of Equity***(in thousands, except shares)*

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Non- Controlling Interest	Total Equity
Balance, May 31, 2015	49,504,359	\$ 7,921	\$ 129,926	\$ (2,442)	\$ 215,569	\$ (11)	\$ 350,963
Exercise of options, share-based compensation and \$2,945 income tax benefit	561,524	89	17,288				17,377
Issuance of shares under employee stock purchase plan	24,369	4	782				786
Net income (loss) for 2016					36,564	(26)	36,538
Other comprehensive income (loss)				(1,504)			(1,504)
Balance, May 31, 2016	50,090,252	8,014	147,996	(3,946)	252,133	(37)	404,160
Exercise of options, share-based compensation and \$3,922 income tax benefit	817,284	131	26,589				26,720
Issuance of shares under employee stock purchase plan	24,953	4	921				925
Purchase of minority interest			(764)				(764)
Net income (loss) for 2017					43,793	180	43,973
Other comprehensive income (loss)				(3,257)			(3,257)
Balance, May 31, 2017	50,932,489	8,149	174,742	(7,203)	295,926	143	471,757
Exercise of options, share-based compensation	781,116	125	26,992				27,117
Issuance of shares under employee stock purchase plan	22,127	4	1,048				1,052
Purchase of minority interest			(210)			(213)	(423)
Net income (loss) for 2018					63,145	70	63,215
Other comprehensive income (loss)				(2,543)			(2,543)
Balance, May 31, 2018	51,735,732	\$ 8,278	\$ 202,572	\$ (9,746)	\$ 359,071	\$	\$ 560,175

See accompanying notes to consolidated financial statements.

**Table of Contents****Neogen Corporation and Subsidiaries****Consolidated Statements of Cash Flows***(in thousands)*

	2018	Year Ended May 31 2017	2016
<b>Cash Flows From Operating Activities</b>			
Net income	\$ 63,215	\$ 43,973	\$ 36,538
Adjustments to reconcile net income to net cash provided from operating activities:			
Depreciation and amortization	17,058	14,691	12,181
Deferred income taxes	(2,996)	(292)	1,906
Share-based compensation	4,909	5,261	5,468
Excess income tax benefit from exercise of stock options		(3,922)	(2,945)
Changes in operating assets and liabilities, net of business acquisitions:			
Accounts receivable	(10,233)	5,035	(6,002)
Inventories	(2,647)	(6,970)	(9,427)
Prepaid expenses and other assets	(2,275)	812	(3,836)
Accounts payable	4,381	(1,691)	704
Accruals and other changes	(2,281)	3,377	744
<b>Net Cash From Operating Activities</b>	<b>69,131</b>	<b>60,274</b>	<b>35,331</b>
<b>Cash Flows Used in Investing Activities</b>			
Purchase of property, equipment and other non-current intangible assets	(20,946)	(14,578)	(14,222)
Proceeds from the sales of marketable securities	299,751	149,226	147,189
Purchase of marketable securities	(361,419)	(162,755)	(151,625)
Business acquisitions, net of cash acquired	(468)	(34,029)	(42,491)
<b>Net Cash Used in Investing Activities</b>	<b>(83,082)</b>	<b>(62,136)</b>	<b>(61,149)</b>
<b>Cash Flows From Financing Activities</b>			
Exercise of stock options and other	23,261	21,148	12,363
Excess income tax benefit from the exercise of stock options		3,922	2,945
Purchase of minority interest	(423)		
<b>Net Cash From Financing Activities</b>	<b>22,838</b>	<b>25,070</b>	<b>15,308</b>
Effect of Exchange Rate on Cash	(3,380)	(898)	(294)
<b>Net Increase (Decrease) in Cash and Cash Equivalents</b>	<b>5,507</b>	<b>22,310</b>	<b>(10,804)</b>
Cash and Cash Equivalents, Beginning of Year	77,567	55,257	66,061
<b>Cash and Cash Equivalents, End of Year</b>	<b>\$ 83,074</b>	<b>\$ 77,567</b>	<b>\$ 55,257</b>
<b>Supplementary Cash Flow Information</b>			
Income taxes paid, net of refunds	\$ 11,800	\$ 13,865	\$ 13,413

See accompanying notes to consolidated financial statements.

**Table of Contents****Neogen Corporation and Subsidiaries****Notes to Consolidated Financial Statements****1. Summary of Significant Accounting Policies**  
Nature of Operations

Neogen Corporation develops, manufactures and markets a diverse line of products and services dedicated to food and animal safety.

## Basis of Consolidation

The consolidated financial statements include the accounts of Neogen Corporation and its subsidiaries, all of which are wholly-owned as of May 31, 2018. Neogen Latinoamérica was 100% and 90% owned as of May 31, 2018 and 2017. We purchased all shares owned by the minority interest owner on December 31, 2017, which increased our ownership in Neogen Latinoamérica to 100%. For Neogen do Brasil, we purchased the 10% owned by the two minority interest owners on February 28, 2017, which increased our ownership interest to 100%. Non-controlling interest represents the non-controlling owners' proportionate share in the equity of these subsidiaries; the non-controlling owners' proportionate share in the income or losses of the subsidiaries is subtracted from, or added to, our net income to calculate the net income attributable to Neogen Corporation.

All intercompany accounts and transactions have been eliminated in consolidation.

Share and per share amounts reflect the December 29, 2017 4-for-3 stock split as if it took place at the beginning of the period presented.

## Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ from these estimates. Significant estimates impacting the accompanying consolidated financial statements include the allowance for uncollectible accounts receivable, inventory valuation and intangible assets.

## Comprehensive Income

Comprehensive income represents net income and any revenues, expenses, gains and losses that, under U.S. generally accepted accounting principles, are excluded from net income and recognized directly as a component of equity. Accumulated other comprehensive income (loss) consists solely of foreign currency translation adjustments.

## Accounts Receivable and Concentrations of Credit Risk

Financial instruments which potentially subject us to concentrations of credit risk consist principally of accounts receivable. Management attempts to minimize credit risk by reviewing customers' credit history before extending credit and by monitoring credit exposure on a regular basis. An allowance for doubtful accounts on accounts receivable is established based upon factors surrounding the credit risk of specific customers, historical trends and other information. Collateral or other security is generally not required for accounts receivable. Once a receivable balance has been determined to be uncollectible, that amount is charged against the allowance for doubtful accounts. No customer accounted for more than 10% of accounts receivable at May 31, 2018 or 2017, respectively. The activity in the allowance for doubtful accounts was as follows:

<i>(in thousands)</i>	Year ended May 31		
	2018	2017	2016
Beginning Balance	\$ 2,000	\$ 1,500	\$ 1,300
Provision	152	645	305

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Recoveries	40	25	90
Write-offs	(642)	(170)	(195)
Ending Balance	\$ 1,550	\$ 2,000	\$ 1,500

### Fair Value of Financial Instruments

The carrying amounts of our financial instruments other than cash equivalents and marketable securities, which include accounts receivable and accounts payable, approximate fair value based on either their short maturity or current terms for similar instruments.

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Fair value measurements are determined based upon the exit price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants exclusive of any transaction costs. We utilize a fair value hierarchy based upon the observability of inputs used in valuation techniques as follows:

Level 1: Observable inputs such as quoted prices in active markets;

Level 2: Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and

Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

Cash and Cash Equivalents

Cash and cash equivalents consist of bank demand accounts, savings deposits, certificates of deposit and commercial paper with original maturities of 90 days or less. Cash and cash equivalents were \$83,074,000 and \$77,567,000 at May 31, 2018 and 2017, respectively. The carrying value of these assets approximates fair value due to the short maturity of these instruments and meets the Level 1 criteria. Cash held by foreign subsidiaries was \$7,101,000 and \$8,132,000 at May 31, 2018 and 2017, respectively.

Marketable Securities

We have marketable securities held by banks or broker-dealers at May 31, 2018, consisting of short-term domestic certificates of deposit of \$27,400,000 and commercial paper rated at least A-2/P-2 with maturities between 91 days and one year of \$100,336,000. Total outstanding marketable securities at May 31, 2018 was \$127,736,000; there were \$66,068,000 in marketable securities outstanding at May 31, 2017. These securities are classified as available for sale. The primary objective of our short-term investment activity is to preserve capital for the purpose of funding operations, capital expenditures and business acquisitions; short-term investments are not entered into for trading or speculative purposes. These securities are recorded at fair value (that approximates cost) based on recent trades or pricing models and therefore meet the Level 2 criteria. Interest income on these investments is recorded within Other Income on the income statement.

Inventories

Inventories are stated at the lower of cost or net realizable value, determined on the first-in, first-out method. The components of inventories were as follows:

<i>(in thousands)</i>	<b>Year ended May 31</b>	
	<b>2018</b>	<b>2017</b>
Raw Materials	\$ 36,702	\$ 33,190
Work-in-process	5,993	4,831
Finished goods	33,310	35,123
	\$ 76,005	\$ 73,144

Our inventories are analyzed for slow moving, expired and obsolete items no less frequently than quarterly and the valuation allowance is adjusted as required. The valuation allowance for inventory was \$2,200,000 and \$2,000,000 at May 31, 2018 and 2017, respectively.

Property and Equipment

Property and equipment is stated at cost. Expenditures for major improvements are capitalized while repairs and maintenance are charged to expense. Depreciation is provided on the straight-line method over the estimated useful lives of the respective assets, which are generally seven to 39 years for buildings and improvements and three to ten years for furniture, fixtures, machinery and equipment. Depreciation expense was \$10,315,000, \$8,783,000 and \$7,452,000 in fiscal years 2018, 2017 and 2016, respectively.

Goodwill and Other Intangible Assets

Goodwill represents the excess of purchase price over fair value of tangible net assets of acquired businesses after amounts are allocated to other identifiable intangible assets. Other intangible assets include customer relationships, trademarks, licenses, trade names, covenants

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not-to-compete and patents. Amortizable intangible assets are amortized on either an accelerated or a straight-line basis, generally over 5 to 25 years. We review the carrying amounts of goodwill and other non-amortizable intangible assets annually, or when indications of impairment exist, to determine if such assets may be impaired by performing a quantitative assessment. If the carrying amounts of these assets are deemed to be less than fair value based upon a discounted cash flow analysis and comparison to comparable earnings multiples of peer companies, such assets are reduced to their estimated fair value and a charge is made to operations. The remaining weighted-average amortization period for intangibles was 11 years, at both May 31, 2018 and May 31, 2017, respectively.

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## Long-lived Assets

Management reviews the carrying values of its long-lived assets to be held and used, including definite-lived intangible assets, for possible impairment whenever events or changes in business conditions warrant such a review. The carrying value of a long-lived asset is considered impaired when the anticipated separately identifiable undiscounted cash flows over the remaining useful life of the asset are less than the carrying value of the asset. In such an event, fair value is determined using discounted cash flows, and if lower than the carrying value, impairment is recognized through a charge to operations.

## Reclassifications

Certain amounts in the fiscal 2017 and 2016 financial statements have been reclassified to conform to the fiscal 2018 presentation.

## Stock Options

At May 31, 2018, we had stock option plans which are described more fully in Note 5.

The weighted-average fair value per share of stock options granted during fiscal years 2018, 2017 and 2016, estimated on the date of grant using the Black-Scholes option pricing model, was \$14.47, \$11.89 and \$9.83, respectively. The fair value of stock options granted was estimated using the following weighted-average assumptions:

	Year ended May 31		
	2018	2017	2016
Risk-free interest rate	1.6%	1.2%	1.2%
Expected dividend yield	0.0%	0.0%	0.0%
Expected stock volatility	27.7%	35.2%	33.3%
Expected option life	4.0 years	4.0 years	4.0 years

The risk-free interest rate for periods within the expected life of options granted is based on the United States Treasury yield curve in effect at the time of grant. Expected stock price volatility is based on historical volatility of our stock. The expected option life, representing the period of time that options granted are expected to be outstanding, is based on historical option exercise and employee termination data. Prior to the fiscal 2017 grants, we recognized the fair value of stock options using the accelerated method over their requisite service periods which we have determined to be the vesting periods; for options granted in fiscal years 2017 and 2018, we recognized the fair value of stock options using the straight-line method.

## Revenue Recognition

Revenue from products and services is recognized when the product has been shipped or the service performed, the sales price is fixed and determinable, and collection of any receivable is probable. To the extent that customer payment has been received before all recognition criteria are met, these revenues are initially deferred and later recognized in the period that all recognition criteria have been met. Customer credits for sales returns, pricing and other disputes, and other related matters (including volume rebates offered to certain distributors as marketing support) represent approximately 3% of reported net revenue in fiscal years 2018, 2017 and 2016.

## Shipping and Handling Costs

Shipping and handling costs that are charged to and reimbursed by the customer are recognized as revenues, while the related expenses incurred by Neogen are recorded in sales and marketing expense; these expenses totaled \$12,147,000, \$10,185,000 and \$9,734,000 in fiscal years 2018, 2017 and 2016, respectively.

## Income Taxes

We account for income taxes using the asset and liability method. Under this method, deferred income tax assets and liabilities are determined based on differences between the financial reporting and tax bases of assets and liabilities and for tax credit carryforwards, and are measured using the enacted tax rates in effect for the years in which the differences are expected to reverse. Deferred income tax expense represents the change in net deferred income tax assets and liabilities during the year.

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Our wholly-owned foreign subsidiaries are comprised of Neogen Europe, Lab M Holdings, Quat-Chem, Neogen do Brasil, Deoxi Biotecnologia Ltda, Rogama Industria e Comercio Ltda, Acumedia do Brasil, Neogen Latinoamérica, Neogen Bio-Scientific Technology Co (Shanghai), Neogen Food and Animal Security (India), Neogen Canada, and Neogen Australasia Pty Limited. Based on historical experience, as well as our future plans, earnings from these subsidiaries are expected to be re-invested indefinitely for future expansion and working capital needs. Furthermore, our domestic operations have historically produced sufficient operating cash flow to mitigate the need to remit foreign earnings. On an annual basis, we evaluate the current business environment and whether any new events or other external changes might require a re-evaluation of the decision to indefinitely re-invest foreign earnings. At May 31, 2018, unremitted earnings of our foreign subsidiaries were \$43,784,000.

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On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the Tax Act) was signed into law, making significant changes to the Internal Revenue Code. Changes include a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings. On December 22, 2017, Staff Accounting Bulletin No. 118 (SAB 118) was issued to address the application of U.S. GAAP to situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Act. In accordance with SAB 118, we have determined that the \$6.0 million of deferred tax benefit recorded in connection with the remeasurement of certain deferred tax assets and liabilities and the \$1.2 million of current tax expense recorded in connection with the transition tax on the mandatory deemed repatriation of foreign earnings was a provisional amount at May 31, 2018. Any subsequent adjustment to these amounts will be recorded to current tax expense in the quarter of 2019 when any further analysis of our deferred tax assets and liabilities and our historical foreign earnings is completed.

**Research and Development Costs**

Research and development costs, which consist primarily of compensation costs, administrative expenses and new product development, among other items, are expensed as incurred.

**Advertising Costs**

Advertising costs are expensed as incurred and totaled \$1,699,000, \$1,643,000 and \$1,463,000 in fiscal years 2018, 2017 and 2016, respectively.

**Net Income Attributable to Neogen per Share**

Basic net income per share is based on the weighted average number of common shares outstanding during each year. Diluted earnings per share is based on the weighted average number of common shares and dilutive potential common shares outstanding. Our dilutive potential common shares outstanding during the years result entirely from dilutive stock options. The following table presents the net income per share calculations:

<i>(in thousands, except per share)</i>	<b>Year ended May 31</b>		
	<b>2018</b>	<b>2017</b>	<b>2016</b>
Numerator for basic and diluted net income per share - Net Income attributable to Neogen	\$ 63,145	\$ 43,793	\$ 36,564
Denominator for basic net income per share - Weighted average shares	51,358	50,544	49,869
Effect of dilutive stock options	791	621	631
Denominator for diluted net income per share	52,149	51,165	50,500
Net income attributable to Neogen per share			
Basic	\$ 1.23	\$ 0.87	\$ 0.73
Diluted	\$ 1.21	\$ 0.86	\$ 0.72

At May 31, 2018, 2017 and 2016, the market price of the common stock exceeded the option exercise price for all outstanding options; therefore, no shares were excluded from the diluted net income per share computation.

**New Accounting Pronouncements**

In May 2014, the FASB issued ASU No. 2014-09 Revenue from Contracts with Customers (Topic 606). The new standard outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most

current revenue recognition guidance, including industry-specific guidance. The core principle of the revenue model is that an entity

should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration

to which the entity expects to be entitled in exchange for those goods or services. The standard is designed to create greater comparability for financial statement users across industries and jurisdictions and also requires enhanced disclosures. In April 2016, the FASB issued Accounting Standards Update No. 2016-10 Revenue from Contracts with Customers (Topic 606), which amends and adds clarity to certain aspects of the guidance set forth in ASU 2014-09 related to identifying performance obligations and licensing. The guidance is effective for fiscal years, and interim periods within those years, beginning after December 15, 2017. The guidance permits two methods of adoption: a full retrospective method to each prior reporting period presented or a modified retrospective approach with the cumulative effect of initially applying the guidance recognized at the date of initial application. Our internal task force identified all revenue streams at each significant subsidiary and reviewed contracts to evaluate the impact of adopting the new standard on our revenue recognition policies, procedures and control framework and ultimately on our consolidated financial statements and related disclosures. In our review of contracts in each revenue stream, we noted no material impact in the implementation of the standard. We have determined the impact of adopting the standard on our control framework and noted minimal, insignificant changes to our system and other controls processes. We adopted this standard on June 1, 2018 using the full retrospective approach. This approach was chosen to provide appropriate comparisons against our prior year financial statements. We are finalizing the impact of this ASU on the disclosures for our financial statement footnotes and expect the disclosures to be enhanced in the first quarter of fiscal 2019.

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In February 2016, the FASB issued ASU No. 2016-02 Leases to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. A lessee should recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. The recognition, measurement and presentation of expenses and cash flows arising from a lease by a lessor have not significantly changed from previous U.S. GAAP. This ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2018; early adoption is permitted. Modified retrospective application is permitted with certain practical expedients. We will adopt this ASU on June 1, 2019 and are currently in the process of evaluating our lessee and lessor arrangements to determine the impact of this amendment on our consolidated financial condition and results of operations. This evaluation includes a review of revenue through leasing arrangements as well as lease expenses, which are primarily through operating lease arrangements at most of our facilities.

In March 2016, the FASB issued ASU No. 2016-09 Compensation-Stock Compensation (Topic 718): Improvements to Employee

Share-Based Payment Accounting to provide guidance that changes the accounting for certain aspects of share-based payments to

employees. The guidance requires the recognition of the income tax effects of awards in the income statement when the awards vest or are settled, thus eliminating additional paid-in capital pools. The guidance also allows for the employer to repurchase more of an

employee's shares for tax withholding purposes without triggering liability accounting. In addition, the guidance allows for a policy

election to account for forfeitures as they occur rather than on an estimated basis. We adopted this standard effective June 1,

2017. Adoption of this ASU decreased income tax expense by \$4,816,000 in fiscal 2018; refer to Note 6 of our Consolidated Financial Statements for further information.

In June 2016, the FASB issued ASU No. 2016-13 Measurement of Credit Losses on Financial Instruments, which changes how companies measure credit losses on most financial instruments measured at amortized cost and certain other instruments, such as loans, receivables and held-to-maturity debt securities. Rather than generally recognizing credit losses when it is probable that the loss has been incurred, the revised guidance requires companies to recognize an allowance for credit losses for the difference between the amortized cost basis of a financial instrument and the amount of amortized cost that the company expects to collect over the instrument's contractual life. ASU 2016-13 is effective for fiscal periods beginning after December 15, 2019 and must be adopted as a cumulative effect adjustment to retained earnings. Early adoption is permitted. We do not believe adoption of this guidance will have an impact on our consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15 Classification of Certain Cash Receipts and Cash Payments (a consensus of the Emerging Issues Task Force). The amendments in ASU 2016-15 address eight specific cash flow issues and apply to all entities that are required to present a statement of cash flows under FASB Accounting Standards Codification (FASB ASC) 230, Statement of Cash Flows. The amendments in ASU 2016-15 are effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early adoption is permitted, including adoption during an interim period. We will adopt this ASU on June 1, 2019 and are currently evaluating its impact on our consolidated financial statements.

## 2. Goodwill and Other Intangible Assets

Management has completed the annual impairment analysis of goodwill and intangible assets with indefinite lives using a quantitative assessment as of the first day of the fourth quarter of fiscal years 2018, 2017 and 2016, respectively, and determined that recorded amounts were not considered impaired and that no write-down was necessary.

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The following table summarizes goodwill by reportable segment:

<i>(in thousands)</i>	<b>Food Safety</b>	<b>Animal Safety</b>	<b>Total</b>
Balance, May 31, 2016	\$ 26,889	\$ 61,617	\$ 88,506
Goodwill acquired	19,051		19,051
Goodwill adjustments and/or currency (1)	(20)	(2,778)	(2,798)
Balance, May 31, 2017	\$ 45,920	\$ 58,839	\$ 104,759
Goodwill acquired		757	757
Goodwill adjustments and/or currency (1)	(5,919)	(39)	(5,958)
Balance, May 31, 2018	\$ 40,001	\$ 59,557	\$ 99,558

(1) Includes final purchase price allocation adjustment.

At May 31, 2018, non-amortizable intangible assets included licenses of \$569,000, trademarks of \$12,989,000 and other intangibles of \$1,224,000. At May 31, 2017, non-amortizable intangible assets included licenses of \$569,000, trademarks of \$12,530,000 and other intangibles of \$1,224,000.

Amortizable intangible assets consisted of the following and are included in customer-based intangible and other non-current assets within the consolidated balance sheets:

<i>(in thousands)</i>	<b>Gross Carrying Amount</b>	<b>Less Accumulated Amortization</b>	<b>Net Carrying Amount</b>
Licenses	\$ 9,491	\$ 2,523	\$ 6,968
Covenants not to compete	801	483	318
Patents	9,693	5,013	4,680
Customer-based intangibles	56,420	24,579	31,841
Other products and service-related intangibles	15,299	4,451	10,848
Balance, May 31, 2018	\$ 91,704	\$ 37,049	\$ 54,655
Licenses	\$ 5,989	\$ 2,011	\$ 3,978
Covenants not to compete	1,208	309	899
Patents	9,304	4,601	4,703
Customer-based intangibles	56,829	20,846	35,983
Other products and service-related intangibles	12,065	3,010	9,055
Balance, May 31, 2017	\$ 85,395	\$ 30,777	\$ 54,618

Amortization expense for intangibles totaled \$6,743,000, \$5,908,000 and \$4,730,000 in fiscal years 2018, 2017, and 2016, respectively. The estimated amortization expense for each of the five succeeding fiscal years is as follows: \$6,179,000 in 2019, \$5,865,000 in 2020, \$5,435,000 in 2021, \$5,048,000 in 2022 and \$4,702,000 in 2023. The amortizable intangible assets useful lives are 2 to 20 years for licenses, 5 to 13 years for covenants not to compete, 5 to 25 years for patents, 5 to 20 years for customer-based intangibles and 2 to 20 years for other product and service-related intangibles, which primarily consist of product formulations. All definite-lived intangibles are amortized on a straight line basis with the exception of definite-lived customer-based intangibles and product and service-related intangibles, which are amortized on either a straight-line or an accelerated basis.



3. Business Combinations

The Consolidated Statements of Income reflect the results of operations for business acquisitions since the respective dates of purchase. All are accounted for using the acquisition method. Goodwill recognized in the acquisitions described below relates primarily to enhancing our strategic platform for the expansion of available product offerings.

**Table of Contents****Fiscal 2016**

On June 1, 2015, we acquired the assets of Sterling Test House, a commercial food testing laboratory based in India. Consideration for the purchase was \$1,118,000 in cash and approximately \$102,000 of a contingent consideration liability, due in installments on the first two anniversary dates, based on an excess sales formula. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of \$43,000, inventory of \$14,000, property and equipment of \$141,000, contingent consideration accrual of \$102,000, intangible assets of \$345,000 (with an estimated life of 5-15 years) and the remainder to goodwill (deductible for tax purposes). These values are Level 3 fair value measurements. This business continues to operate in its current location and reports within the Food Safety segment. In July 2016, we paid the former owner \$70,000 for contingent consideration based on the achievement of sales targets, and reduced the recorded liability by a corresponding amount. In May 2016, we charged the remaining contingent consideration accrual of \$32,000 to Other Income because sales targets for the applicable periods were not achieved.

On August 26, 2015, we acquired all the stock of Lab M Holdings, a developer, manufacturer and supplier of microbiological culture media and diagnostic systems located in the United Kingdom. Consideration for the purchase was \$12,436,000 in cash. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included cash of \$285,000, accounts receivable of \$975,000, inventory of \$1,169,000, property and equipment of \$3,337,000, other current assets of \$309,000, current liabilities of \$948,000, non-current deferred tax liability of \$784,000, intangible assets of \$3,611,000 (with an estimated life of 5-15 years) and the remainder to goodwill (non-deductible for tax purposes). These values are Level 3 fair value measurements. This business continues to operate in its current location and reports within the Food Safety segment.

On December 22, 2015, we acquired the rodenticide assets of Virbac Corporation, the North American affiliate of the France-based Virbac group, a global animal health company. The acquired assets include a rodenticide active ingredient that complements Neogen's existing active ingredients, and more than 40 regulatory approvals for a variety of formulations in the United States, Canada and Mexico. The acquired assets also include a large retail and OEM customer base. Consideration for the purchase was \$3,525,000 in cash and up to \$300,000 of contingent consideration. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included inventory of \$317,000, property and equipment of \$60,000, current liabilities of \$300,000, intangible assets of \$1,759,000 (with an estimated life of 5-15 years), non-amortizable trademarks of \$200,000 and the remainder to goodwill (deductible for tax purposes). These values are Level 3 fair value measurements. The products are manufactured at our production facility in Randolph, Wisconsin, and report within the Animal Safety segment. In fiscal 2016, we paid the former owner \$300,000 of contingent consideration based on the achievement of specific objectives, and reduced the recorded liability by a corresponding amount.

On April 26, 2016, we acquired the stock of Deoxi Biotecnologia Ltda., an animal genomics laboratory located in Aracatuba, Brazil. This acquisition is intended to help accelerate the growth of Neogen's animal genomics services in Brazil. Consideration for the purchase was \$1,549,000 in cash and up to \$2,552,000 of contingent consideration, due at the end of each of the first two years, based on an excess net sales formula. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of \$132,000, inventory of \$89,000, other current assets of \$9,000, property and equipment of \$232,000, current liabilities of \$266,000, contingent consideration accrual of \$453,000, non-current deferred tax liability of \$184,000, non-amortizable trademarks of \$193,000, intangible assets of \$350,000 (with an estimated life of 5-10 years) and the remainder to goodwill (deductible for tax purposes). These values are Level 3 fair value measurements. This business continues to operate in its current location and is managed by Neogen do Brasil, reporting within the Food Safety segment. In June 2017, we paid the former owners \$393,000 in contingent consideration based on the achievement of sales targets, and charged \$14,000 to Other Expense. In June 2018, we agreed to pay the former owners \$122,000 in contingent consideration based on the achievement of sales targets and charged \$42,000 to Other Expense; the funds are currently in escrow awaiting settlement of a legal matter.

On May 1, 2016, we acquired the stock of Preserve International and its sister company, Tetradyne LLC, manufacturers and marketers of cleaners, disinfectants and associated products to the swine, poultry, food processing and dairy markets. Preserve and Tetradyne have manufacturing locations in Memphis, Tennessee and Turlock, California. Consideration for the purchase was \$24,245,000 in cash. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of \$1,629,000, inventory of \$1,964,000, other current assets of \$269,000, land, property and equipment of \$1,625,000, current liabilities of \$987,000, non-current liabilities of \$660,000, intangible assets of \$11,950,000 (with an estimated life of 5-15 years), non-amortizable trademarks of \$2,600,000, and the remainder to goodwill (partially deductible for tax purposes). These values are Level 3 fair value measurements. This business continues to operate in its current locations and reports within the Animal Safety segment.

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**Table of Contents****Fiscal 2017**

On December 1, 2016, we acquired the stock of Quat-Chem Ltd., a chemical company that manufactures biosecurity products, based in Rochdale, England. Consideration for the purchase was \$21,606,000 in cash and up to \$3,778,000 of contingent consideration, due at the end of each of the first two years, based on an excess net sales formula. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of \$4,684,000, inventory of \$1,243,000, land, property and equipment of \$2,526,000, accounts payable of \$2,197,000, deferred tax liability of \$1,758,000, contingent consideration accrual of \$1,058,000, other current liabilities of \$604,000, non-amortizable intangible assets of \$1,889,000, intangible assets of \$6,900,000 (with an estimated life of 5-15 years) and the remainder to goodwill (non-deductible for tax purposes). These values are Level 3 fair value measurements. In January 2018, we paid the former owners \$249,000 in contingent consideration based on the achievement of sales targets in the first year, and recorded a credit of \$255,000 to Other Income, reducing the contingent consideration accrual by a corresponding amount; \$554,000 remains accrued for contingent consideration payable at the end of the second year. This business continues to operate in its current location and is managed by Neogen Europe, reporting within the Food Safety segment.

On December 27, 2016, we acquired the stock of Rogama Industria e Comercio, Ltda., a company that develops and manufactures rodenticides and insecticides, based near São Paulo, Brazil. Consideration for the purchase was \$12,423,000 in cash and up to \$2,069,000 of contingent consideration, due at the end of each of the first two years, based on an excess net sales formula. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included accounts receivable of \$1,866,000, other non-current assets of \$26,000, inventory of \$960,000, land, property and equipment of \$4,734,000, current liabilities of \$2,562,000, contingent consideration accrual of \$213,000, deferred tax liability of \$2,034,000, non-amortizable intangible assets of \$870,000, intangible assets of \$5,112,000 (with an estimated life of 5-15 years) and the remainder to goodwill (deductible for tax purposes). These values are Level 3 fair value measurements. In April 2018, we paid the former owners \$130,000 in contingent consideration based on the achievement of sales targets in the first year. The contingent consideration accrual was reduced by the same amount; \$83,000 remains accrued for contingent consideration payable at the end of the second year. This business continues to operate in its current location and is managed by Neogen do Brasil, reporting within the Food Safety segment.

**Fiscal 2018**

On September 1, 2017, we acquired the assets of The University of Queensland Animal Genetics Laboratory, an animal genomics laboratory located near Brisbane, Australia. This acquisition is intended to accelerate the growth of our animal genomics business in Australia and New Zealand. Consideration for the purchase was \$2,063,000; \$468,000 has been paid in cash with the remainder due in annual installments over the next five years. The final purchase price allocation, based upon the fair value of these assets and liabilities determined using the income approach, included inventory of \$19,000, equipment of \$419,000, non-current liabilities of \$1,629,000, intangible assets of \$902,000 (with an estimated life of 5-15 years) and the remainder to goodwill (non-deductible for tax purposes). These values are Level 3 fair value measurements. The new business, renamed Neogen Australasia, continues to operate in its current location, reporting within the Animal Safety segment.

**4. Long-Term Debt**

We have a financing agreement with a bank providing for an unsecured revolving line of credit, which was amended on November 30, 2016 to increase the line from \$12,000,000 to \$15,000,000, and extend the maturity from September 1, 2017 to September 30, 2019. There were no advances against the line of credit during fiscal years 2017 and 2018; there was no balance outstanding at May 31, 2018. Interest on any borrowings is at LIBOR plus 100 basis points (rate under the terms of the agreement was 3.14% at May 31, 2018). Financial covenants include maintaining specified levels of tangible net worth, debt service coverage, and funded debt to EBITDA, each of which we were in compliance with at May 31, 2018.

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## 5. Equity Compensation Plans

Qualified and non-qualified options to purchase shares of common stock may be granted to directors, officers and employees of Neogen under the terms of our stock option plans. These options are granted at an exercise price of not less than the fair market value of the stock on the date of grant. Remaining shares available for grant under stock option plans were 1,913,000, 2,525,000 and 3,276,000 at May 31, 2018, 2017 and 2016, respectively. Options vest ratably over three and five-year periods and the contractual terms are generally five or ten years.

<i>(options in thousands)</i>	<b>Options</b>	<b>Weighted-Average Exercise Price</b>	<b>Weighted-Average Grant Date Fair Value</b>
Outstanding at May 31, 2015 (852 exercisable)	2,651	23.29	6.90
Granted	732	35.23	9.83
Exercised	(569)	17.60	5.36
Forfeited	(39)	28.93	8.36
Outstanding at May 31, 2016 (875 exercisable)	2,775	27.53	7.97
Granted	828	40.68	11.89
Exercised	(827)	22.82	6.77
Forfeited	(77)	32.04	9.17
Outstanding at May 31, 2017 (661 exercisable)	2,699	32.88	9.51
Granted	829	59.37	14.47
Exercised	(821)	28.18	8.20
Forfeited	(208)	39.57	11.12
Outstanding at May 31, 2018 (508 exercisable)	2,499	42.63	11.44

The following is a summary of stock options outstanding at May 31, 2018:

<i>(options in thousands)</i>	<b>Options Outstanding</b>			<b>Options Exercisable</b>	
	<b>Number</b>	<b>Contractual Life (in years)</b>	<b>Weighted-Average Exercise Price</b>	<b>Number</b>	<b>Weighted-Average Exercise Price</b>
Range of Exercise Price					
\$8.27 - \$30.03	515	1.5	\$ 27.08	226	\$ 24.78
\$30.04 - \$37.26	522	3.2	34.84	179	34.00
\$37.27 - \$40.91	619	3.8	40.45	90	40.44
\$40.92 - \$59.78	173	6.0	50.85	13	42.19
\$59.79 - \$68.96	670	4.5	60.55		
	2,499	3.5	42.63	508	31.23

The weighted average exercise price of shares that were exercisable at May 31, 2018 and 2017 was \$31.23 and \$26.49, respectively.

Compensation expense related to share-based awards was \$4,909,000, \$5,261,000 and \$5,468,000 in fiscal years 2018, 2017 and 2016, respectively. Remaining compensation cost to be expensed in future periods for non-vested options was \$15,367,000 at May 31, 2018, with a weighted average expense recognition period of 3.5 years.

The aggregate intrinsic value of options outstanding and options exercisable was \$82,649,000 and \$22,572,000, respectively, at May 31, 2018, \$39,388,000 and \$13,929,000 respectively, at May 31, 2017 and \$26,344,000 and \$12,912,000 respectively, at May 31, 2016. The aggregate intrinsic value of options exercised during the year was \$25,844,000 in fiscal 2018, \$18,067,000 in fiscal 2017 and \$12,980,000 in fiscal 2016.

Common stock totaling 332,000 of the 450,000 originally authorized shares are reserved for issuance under the terms of the 2011 Employee Stock Purchase Plan. The plan gives eligible employees the option to purchase common stock at a 5% discount to the lower of the market value of the stock at the beginning or end of each participation period; the discount is recorded in general and administrative expense. Total individual

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purchases in any year are limited to 10% of compensation. Shares purchased by employees were 22,127 in fiscal 2018, 24,953 in fiscal 2017 and 24,369 in fiscal 2016.

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## 6. Income Taxes

Income before income taxes by source consists of the following amounts:

<i>(in thousands)</i>	Year ended May 31		
	2018	2017	2016
U.S.	\$ 62,310	\$ 55,171	\$ 50,662
Foreign	11,155	11,502	4,851
	\$ 73,465	\$ 66,673	\$ 55,513

The provision for income taxes consisted of the following:

<i>(in thousands)</i>	Year ended May 31		
	2018	2017	2016
Current:			
U.S. Taxes	\$ 10,129	\$ 20,259	\$ 14,630
Foreign	3,066	2,514	1,756
Deferred	(2,945)	(73)	2,589
Provision for Income Taxes	\$ 10,250	\$ 22,700	\$ 18,975

The reconciliation of income taxes computed at the U.S. federal statutory tax rate to income tax expense is as follows:

<i>(in thousands)</i>	Year ended May 31		
	2018	2017	2016
Tax at U.S. statutory rate	\$ 21,459	\$ 23,336	\$ 19,429
Section 199 domestic production deduction	(1,167)	(1,057)	(1,143)
Foreign rate differential	(461)	(1,247)	(699)
Subpart F income	816	996	1,049
Excess tax benefits on stock-based compensation	(4,816)		
Release of FIN 48 reserve from closed tax years	(1,035)		
Provision for state income taxes, net of federal benefit	975	972	779
Remeasurement of deferred taxes	(6,022)		
Transition tax on foreign earnings and profits	1,223		
Amended U.S. Federal tax returns FY12, FY13 & FY14			(777)
Tax credits and other	(722)	(300)	337
	\$ 10,250	\$ 22,700	\$ 18,975

On June 1, 2017, the Company adopted ASU No. 2016-09, which simplifies the accounting for share-based payments to employees. The guidance requires the recognition of the income effects of awards in the income statement when the awards vest or are settled, thus eliminating additional paid-in capital pools. The guidance also allows for a policy election to account for forfeitures as they occur, rather than on an estimated basis, and requires that excess tax benefits be classified as an operating activity on the Statement of Cash Flows. The adoption of this ASU decreased income tax expense by \$4.8 million in fiscal 2018.

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the Tax Act) was signed into law, making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a federal corporate tax rate decrease from 35% to 21% for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of foreign earnings. On December 22, 2017, Staff Accounting



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Bulletin No. 118 (SAB 118) was issued to address the application of U.S. GAAP to situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. In accordance with SAB 118, we have determined that the \$6.0 million of deferred tax benefit recorded in connection with the remeasurement of certain deferred tax assets and liabilities and the \$1.2 million of current tax expense recorded in connection with the transition tax on the mandatory deemed repatriation of foreign earnings was a provisional amount at May 31, 2018. Any subsequent adjustment to these amounts will be recorded to current tax expense in the quarter of 2019 when any further analysis of our deferred tax assets and liabilities and our historical foreign earnings is completed.

Deferred income taxes reflect the tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred income tax liabilities and assets are as follows:

<i>(in thousands)</i>	<b>Year ended May 31</b>	
	<b>2018</b>	<b>2017</b>
Deferred income tax liabilities		
Indefinite and long-lived assets	\$ (17,503)	\$ (23,177)
Prepaid expenses	(573)	(640)
	(18,076)	(23,817)
Deferred income tax assets		
Stock Options	1,489	2,604
Inventories and accounts receivable	1,593	2,603
Tax loss carryforwards	134	436
Accrued expenses and other	757	1,126
	3,973	6,769
<b>Net deferred income tax liabilities</b>	<b>\$ (14,103)</b>	<b>\$ (17,048)</b>

We had no accrual for unrecognized tax benefits at both May 31, 2018 and 2017. Should the accrual of any interest or penalties relative to unrecognized tax benefits be necessary, such accruals will be reflected within income tax accounts.

#### 7. Commitments and Contingencies

We are involved in environmental remediation and monitoring activities at our Randolph, Wisconsin manufacturing facility and accrue for related costs when such costs are determined to be probable and estimable. We expense annual costs of remediation which have ranged from \$38,000 to \$74,000 per year over the past five years. Our estimated liability for these costs is \$916,000 at both May 31, 2018 and 2017, measured on an undiscounted basis over an estimated period of 15 years; \$100,000 of the liability is recorded within current liabilities and includes \$45,000 to perform an updated Corrective Measures Study, per a request received in 2017 from the Wisconsin Department of Natural Resources and the remainder is recorded within other non-current liabilities in the consolidated balance sheet.

We have agreements with unrelated third parties that provide for the payment of license fees and royalties on the sale of certain products. Royalty expense, recorded in sales and marketing, under the terms of these agreements was \$2,876,000, \$2,659,000 and \$1,969,000 for fiscal years 2018, 2017 and 2016, respectively. Some of these agreements provide for guaranteed minimum royalty payments to be paid each fiscal year by the Company for certain technologies. Future minimum royalty payments are as follows: 2019 \$634,000, 2020 \$641,000, 2021 \$649,000, 2022 \$572,000 and 2023 \$568,000.

We lease office and manufacturing facilities under non-cancelable operating leases. Rent expense for fiscal years 2018, 2017 and 2016 was \$799,000, \$729,000 and \$662,000, respectively. Future fiscal year minimum rental payments for these leases over their remaining terms are as follows: 2019 \$498,000, 2020 \$86,000, 2021 \$108,000, 2022 \$141,000, and 2023 and later \$73,000.



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We are subject to certain legal and other proceedings in the normal course of business that, in the opinion of management, should not have a material effect on our future results of operations or financial position.

### 8. Defined Contribution Benefit Plan

We maintain a defined contribution 401(k) benefit plan covering substantially all domestic employees. Employees are permitted to defer compensation up to IRS limits, with Neogen matching 100% of the first 3% of deferred compensation and 50% of the next 2% deferred. Our expense under this plan was \$1,325,000, \$1,259,000, and \$1,188,000 in fiscal years 2018, 2017 and 2016, respectively.

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## 9. Segment Information

We have two reportable segments: Food Safety and Animal Safety. The Food Safety segment is primarily engaged in the development, production and marketing of diagnostic test kits and related products used by food producers and processors to detect harmful natural toxins, foodborne bacteria, allergens and levels of general sanitation. The Animal Safety segment is primarily engaged in the development, production and marketing of products dedicated to animal safety, including a complete line of consumable products marketed to veterinarians and animal health product distributors; this segment also provides genomic identification and related interpretive bioinformatic services. Additionally, the Animal Safety segment produces and markets rodenticides, disinfectants, and insecticides to assist in control of rodents, insects and disease in and around agricultural, food production and other facilities.

Neogen's international operations in the United Kingdom, Mexico, Brazil, China and India originally focused on the sales and marketing of our Food Safety products, and each of these units reports through the Food Safety segment. In recent years, these operations have expanded to offer our complete line of products and services, including those usually associated with the Animal Safety segment such as cleaners, disinfectants, rodenticides, insecticides, veterinary instruments and genomics services. These additional products and services are managed and directed by existing management, and are reported through the Food Safety segment.

The accounting policies of each of the segments are the same as those described in Note 1.

Segment information is as follows:

<i>(in thousands)</i>	<b>Food Safety</b>	<b>Animal Safety</b>	<b>Corporate and Eliminations (1)</b>	<b>Total</b>
<b>Fiscal 2018</b>				
Product revenues to external customers	\$ 176,123	\$ 159,431	\$	\$ 335,554
Service revenues to external customers	19,924	46,774		66,698
Total revenues to external customers	196,047	206,205		402,252
Operating income (loss)	34,561	39,529	(3,896)	70,194
Depreciation and amortization	9,083	7,975		17,058
Total Assets	186,570	220,629	210,810	618,009
Expenditures for long-lived assets	10,538	10,408		20,946
<b>Fiscal 2017</b>				
Product revenues to external customers	\$ 155,795	\$ 150,717	\$	\$ 306,512
Service revenues to external customers	15,530	39,552		55,082
Total revenues to external customers	171,325	190,269		361,594
Operating income (loss)	33,971	34,841	(3,867)	64,945
Depreciation and amortization	7,088	7,603		14,691
Total Assets	190,895	210,927	126,587	528,409
Expenditures for long-lived assets	10,332	4,246		14,578
<b>Fiscal 2016</b>				
Product revenues to external customers	\$ 133,743	\$ 139,827	\$	\$ 273,570
Service revenues to external customers	12,678	35,027		47,705
Total revenues to external customers	146,421	174,854		321,275
Operating income (loss)	28,984	30,978	(3,576)	56,386
Depreciation and amortization	5,609	6,572		12,181
Total Assets	143,303	215,374	91,263	449,940
Expenditures for long-lived assets	9,192	5,030		14,222

- (1) Includes corporate assets, including cash and cash equivalents, marketable securities, current and deferred tax accounts, and overhead expenses not allocated to specific business segments. Also includes the elimination of intersegment transactions and non-controlling interests.



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Revenues to customers located outside the United States amounted to \$151,262,000 or 37.6% of consolidated revenues in fiscal 2018, \$129,322,000 or 35.8% in fiscal 2017 and \$107,680,000 or 33.5% in fiscal 2016 and were derived primarily in various countries throughout Europe, Canada, South and Central America and Asia. No customer represented revenues in excess of 10% of consolidated net sales in any of the three years. The U.S. based operations represent 75% of the Company's long-lived assets as of May 31, 2018 and 76% as May 31, 2017.

**10. Stock Repurchase**

In December 2008, our Board of Directors authorized a program to purchase, subject to market conditions, up to 1,500,000 shares of our common stock. As of May 31, 2018, 149,368 cumulative shares have been purchased in negotiated and open market transactions for a total price, including commissions, of approximately \$923,000. There were no purchases in fiscal years 2018, 2017 or 2016. Shares purchased under the program were retired.

**11. Summary of Quarterly Data (Unaudited)**

<i>(in thousands, except per share)</i>	Quarter Ended			
	August 2017	November 2017	February 2018	May 2018
Total Revenue	\$ 95,256	\$ 101,817	\$ 95,892	\$ 109,287
Gross Margin	45,871	49,271	45,521	49,589
Net income	11,936	17,153	16,581	17,545
Net income attributable to Neogen	11,914	17,100	16,586	17,545
Basic net income per share	0.23	0.33	0.32	0.34
Diluted net income per share	0.23	0.33	0.32	0.33

<i>(in thousands, except per share)</i>	Quarter Ended			
	August 2016	November 2016	February 2017	May 2017
Total Revenue	\$ 83,645	\$ 90,717	\$ 88,385	\$ 98,847
Gross Margin	40,479	43,591	40,880	47,018
Net income	9,934	11,171	10,377	12,491
Net income attributable to Neogen	9,881	11,151	10,287	12,474
Basic net income per share	0.20	0.22	0.20	0.25
Diluted net income per share	0.20	0.22	0.20	0.24

Quarterly net income per share is based on weighted-average shares outstanding and potentially dilutive stock options for the specific period, and as a result, will not necessarily aggregate to total net income per share as computed for the year as disclosed in the consolidated statements of income.