

SECTOR PROFILE:

Bio and Life Sciences

JULY 2025

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MAINE.
ECONOMIC & COMMUNITY
DEVELOPMENT

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associates



PROJECT OVERVIEW

Report Purpose

This report provides an in-depth analysis of the Bio and Life Sciences Cluster in Maine, including its domestic trade activity.

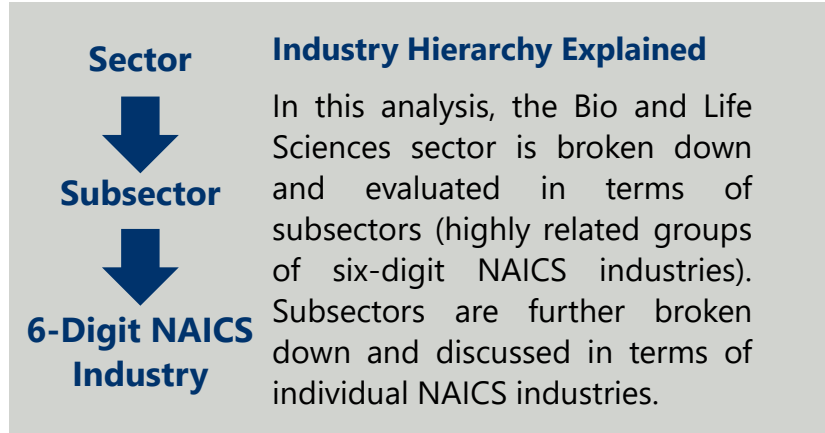
Industry classification ranges from 2-digit industries (most broad) to 6-digit industries (most specific) under the North American Industry Classification System (NAICS). This report focuses on the 5- to 6-digit industry level to give more detailed analysis of Maine’s domestic trade activity in the Bio and Life Science related industries.

Project Funding

This project is commissioned by the Office of Business Development and is funded by the Maine Jobs & Recovery Plan.

Data and Methodology

The most recent year of data in this report is 2024. Five-year growth rates refer to changes from 2019-2024, and five-year projections refer to 2024-2029, unless otherwise specified. As a note, the domestic trade data uses 2022, which is the most recent year available through our data source, IMPLAN. The following analysis examines the performance of Maine’s Bio and Life Sciences sector overall as well as each of the subsectors and industries when appropriate.



SECTOR, SUBSECTOR, AND INDUSTRY

Bio and Life Sciences encompass a variety of services and commodities that cannot be neatly defined in terms of North American Industry Classification System (NAICS) codes. To address this challenge, the following report uses 22, six-digit industries, outlined below, as the Bio and Life Sciences Sector definition. Grey rows indicate subsectors which are also referenced throughout the report for easier comparisons.

NAICS	Description
32541	Pharmaceutical & Medicine Mfg.
325411	Medicinal & Botanical Mfg.
325412	Pharmaceutical Preparation Mfg.
325413	In-Vitro Diagnostic Substance Mfg.
325414	Biological Product (except Diagnostic) Mfg.
327212	Other Pressed & Blown Glass & Glassware Mfg.
33451	Nav., Measure., Electromedical, & Control Instrument Mfg.
334510	Electromedical & Electrotherapeutic Apparatus Mfg.
334516	Analytical Laboratory Instrument Mfg.
334517	Irradiation Apparatus Mfg.
33911	Med. Equipment & Supplies Mfg.
339112	Surgical & Medical Instrument Mfg.
339113	Surgical Appliance & Supplies Mfg.
339114	Dental Equipment & Supplies Mfg.

NAICS	Description
339115	Ophthalmic Goods Mfg.
339116	Dental Laboratories
423450	Med., Dental, & Hospital Equip. & Supplies Merchant Wholesalers
423460	Ophthalmic Goods Merchant Wholesalers
541380	Testing Laboratories & Services
54171	R&D in the Physical, Engineering, & Life Sciences
541713	R&D in Nanotechnology
541714	R&D in Biotechnology (except Nanobiotechnology)
541715	R&D in the Physical, Engineering, & Life Sci. (exc. Nanotech & Biotech)
62151	Medical & Diagnostic Labs
621511	Medical Laboratories
621512	Diagnostic Imaging Centers
621991	Blood & Organ Banks

Source: NAICS, Camoin Associates

Data Definition: A North American Industry Classification System (NAICS) code is a number used by businesses and government agencies to classify industries in the US, Canada, and Mexico. NAICS codes follow a hierarchical structure, with two-digit codes being the broadest and six-digit codes being the most specific.

KEY FINDINGS: MAINE'S BIO AND LIFE SCIENCES SECTOR

- Pharmaceutical & Medicine Manufacturing is the most concentrated subsector in Maine (LQ = 1.88) and employs the largest number of workers (2,837), making it the cornerstone of the state's Bio and Life Sciences sector.
- At the industry level, In-Vitro Diagnostic Substance Manufacturing was the most concentrated with an LQ of 9.54 and strong employment growth of 521 jobs or 78% between 2019 and 2024.
- Maine meets only 25% of its total Bio and Life Sciences demand in-region; 75% is met through imports, creating an opportunity to expand capacity so that more goods and services needed by Maine entities can be fulfilled in-state.
- While dependent on imports, Maine exports 69% of its Bio and Life Sciences production, signaling competitive strength in select product categories, particularly pharmaceuticals and surgical supplies.
- Hospitals, physician offices, and government entities account for the majority of in-region demand for Bio and Life Sciences goods
- Maine ranks 35th among all states for its share of Bio and Life Sciences demand met in-region, falling slightly behind neighboring New Hampshire (30th) but ahead of Vermont (37th).
- Massachusetts is Maine's top domestic supplier while Canada is the top foreign supplier
- Four categories—pharmaceuticals, surgical appliances, medicines/botanicals, and in-vitro diagnostics—make up 87% of Maine's Bio and Life Sciences exports
- Many key inputs (e.g., biological products, organic chemicals, and lab equipment) are heavily imported (some with >90% import share), pointing to strategic opportunities for local industry expansion and resilience building.
- Job growth in Maine's Bio and Life Sciences Sector (+10%) outpaced growth in Maine's economy overall (+4%).

NATIONAL TRENDS



Jobs (2024)
2.7 Million



Job Growth
2019-2024: 17%
2024-2029: 16%



Establishments (2024)
181,814



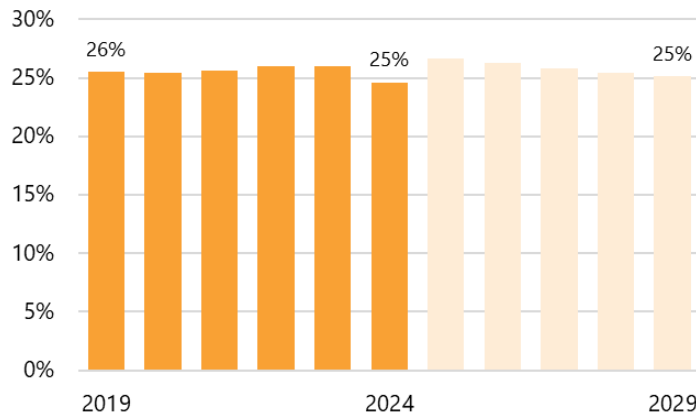
Avg. wages (2024)
\$116,016



Domestic Demand (2024)
\$1,536.9 Billion

The national trade trends for the Bio and Life Sciences sector reveal a consistent pattern of foreign import reliance and a persistent trade deficit. Foreign exports as a share of industry revenue have declined slightly from 14% in 2019 to 12% in 2024, with modest recovery expected by 2029.

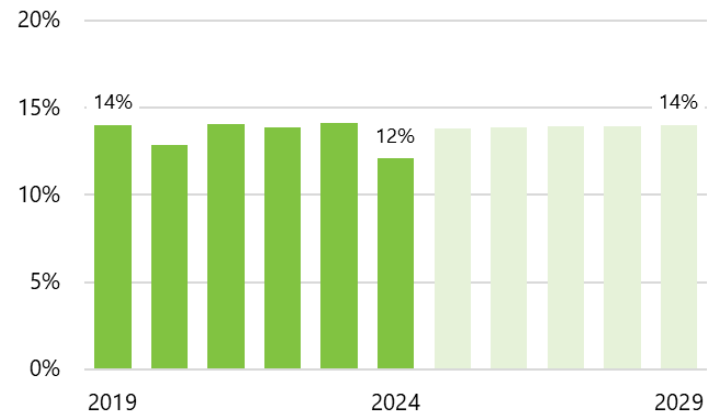
Imports Share of Domestic Demand



Source: IBISWorld

The sector's trade balance shows a widening deficit, with total foreign imports growing from \$393 billion in 2019 to a projected \$504 billion by 2029, while foreign exports remain relatively flat. These trends show the structural trade imbalance, suggesting that domestic production is not keeping pace with demand and that the sector remains heavily reliant on international supply chains.

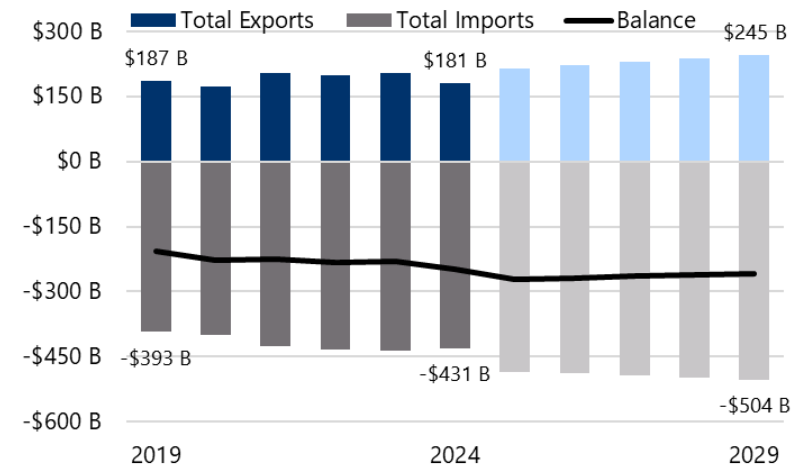
Exports Share of Revenue



Source: IBISWorld

Foreign imports as a share of domestic demand have remained steady at around 25–26% from 2019 through projections for 2029, indicating a sustained dependence on foreign-sourced goods.

Trade Balance: Exports and Imports



Source: IBISWorld

NATIONAL TRENDS

Compound Annual Growth Rate of Key Indicators

	Revenue	Val. Added	Exports	Imports
2019-2024	2.4%	2.1%	-0.6%	1.9%
2024-2029	3.1%	3.0%	6.2%	3.2%

Source: IBISWorld

The Bio and Life Sciences sector is expected to experience modest but accelerating growth nationally. From 2024 to 2029, revenue and value-added are projected to grow at compound annual rates of 3.1% and 3.0% respectively—an improvement over the 2019–2024 period. Exports are also expected to rebound, growing at 6.2% annually after having declined slightly between 2019 and 2024. Import growth is expected to remain steady but below export growth, potentially indicating a slight narrowing of the trade imbalance.

The sector is driven by high-revenue product lines, including surgical and medical instruments, antidiabetics, and various life science and pharmaceutical goods. In 2024, the top product category—surgical, medical, and hospital instruments and equipment—is expected to generate \$45.3 billion in revenue. Other key segments such as antidiabetics, immunotherapies, and analytical lab instruments also make up a significant market share.

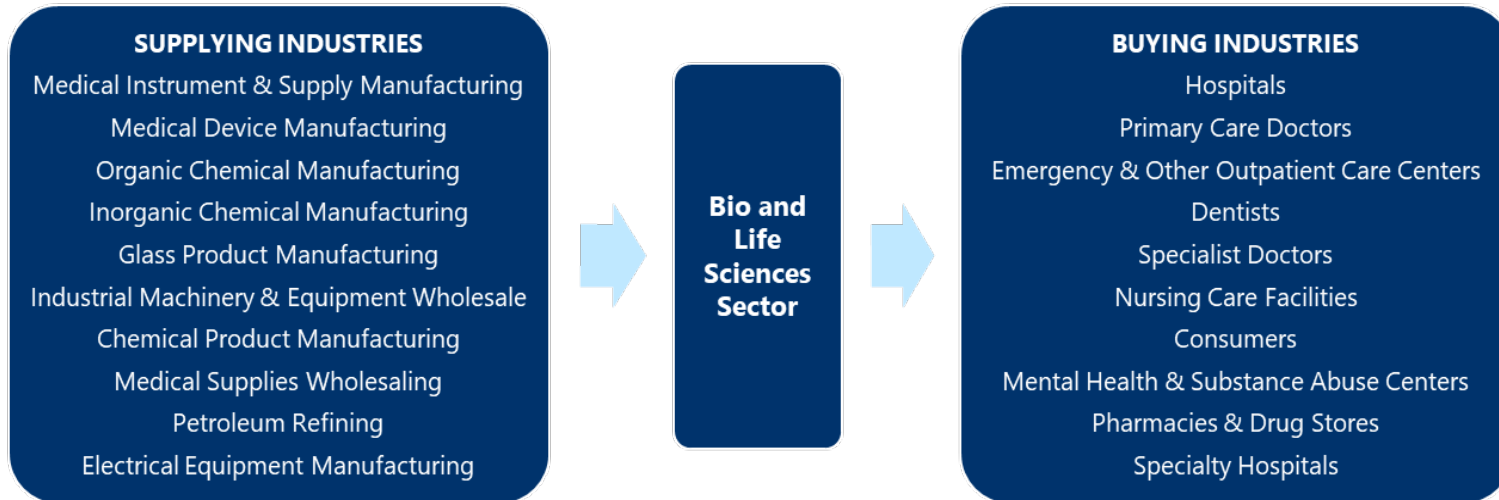
Top 20 Products and Services of the Bio and Life Sciences Sector, US, 2024

Product/Service	2024 Revenue
Surgical, medical and hospital instruments and equipment	\$45.3 B
Antidiabetics	\$31.7 B
Medical and health sciences	\$22.4 B
Life sciences	\$21.9 B
Surgical, medical and hospital supplies	\$16.8 B
Search, detection and navigation instruments	\$16.0 B
Immunosuppressants	\$13.1 B
Physical and engineering sciences	\$12.6 B
Surgical appliances	\$11.5 B
Surgical instruments	\$11.4 B
Anticoagulants	\$10.0 B
Orthopedic and prosthetic appliances and supplies	\$9.6 B
General pathology services	\$9.5 B
Pharmaceuticals	\$9.5 B
Analytical laboratory instruments	\$9.2 B
Immunotherapies	\$9.1 B
Biotechnology	\$9.0 B
Dental equipment, instruments and supplies	\$8.5 B
Industrial process control instruments	\$8.5 B
Glass products made from purchased glass	\$8.4 B

Source: IBISWorld

NATIONAL TRENDS

Bio and Life Sciences Supply Chain, US, 2024



Source: IBISWorld

The Bio and Life Sciences sector in the US serves a wide range of downstream industries. On the supply side, it is supported by high-tech and chemical-intensive industries such as medical device manufacturing, organic and inorganic chemical production, and equipment wholesaling. These upstream sectors provide the specialized materials and tools necessary for life sciences innovation and production. Downstream, the sector primarily supplies products and services to hospitals, outpatient care centers, nursing facilities, pharmacies, and consumers.

Market leadership within the sector is highly fragmented. The largest companies—such as Johnson & Johnson (2.5%), AbbVie (2.3%), and Pfizer (2.1%)—hold relatively small proportions of the total market. This competitive structure, highlights the importance of innovation and agility, as firms must evolve to meet rapidly changing demand.

Top 10 Companies in the Bio and Life Sciences Sector in the US, 2024

Company	Approximate Market Share
Johnson & Johnson	2.5%
Abbvie Inc.	2.3%
Pfizer Inc.	2.1%
Bristol-Myers Squibb Sa	2.0%
Merck & Co	1.9%
Eli Lilly and Company	1.5%
Glaxosmithkline Plc	1.2%
Medtronic Plc	1.1%
Raytheon Technologies Corporation	0.8%
Abbott Laboratories	0.6%

Source: IBISWorld, Camoin Associates

SECTOR SUMMARY: MAINE'S PERFORMANCE

Bio and Life Sciences Sector Summary

Jobs: 8,811

- Data for 2024
- About 1.0% of the state's total Jobs

Job Growth Rate: +10%

- Data compares 2019-2024
- Sector growth in Maine trailed sector growth in the US (+15%)

Concentration: 0.78

- Data for 2024
- Maine falls below the national average in terms of jobs concentration

Competitive Effect: -416

- Data compares 2019-2024
- A negative competitive effect means that, after accounting for national economic conditions and industry trends, the sector is underperforming in the region

Productivity: \$263,198

- Data for 2024
- Slightly behind the US rate of \$285,062 GRP per worker

Source: Lightcast

Job Growth: 816

- Data compares 2019-2024
- Job gains are around 3% of all Maine job gains during the study period

Average Earnings: \$116,731

- Data for 2024
- Higher than the State's Average earnings for all sectors (\$72,943) but lower than the U.S. rate for this sector (\$157,021)

Establishments: 476

- Data for 2024
- The average firm size of 13.7 jobs makes it higher than Maine's average for all sectors

Gross Regional Product: \$2.3 Billion

- Data for 2024
- 2.6% of Maine's total GRP (just below the US where this sector accounts for 2.9% of the total)

Total Sales: \$3.8 Billion

- Data for 2024
- 69% of sales exported out of state



Key Terms

Competitive Effect: Measure of how much of the job change is due to regional competitive advantages. It is a component of shift-share analysis.

Total Demand: The total market demand for goods and services the specified industry or sector produces.

Earnings: Industry earnings are the total industry wages, salaries, supplements, and proprietor income in the region, divided by the number of jobs in the region.

Gross Regional Product (GRP): Measures the final market value of all goods and services produced in the region of study.

Jobs: A job is any position in which a worker provides labor in exchange for monetary compensation.

Location quotient: A measure of the concentration of a particular industry in a region compared to a larger geographic area, such as the nation. A location quotient greater than 1 indicates a higher concentration in the region.

Source: Lightcast Knowledge Base

KEY INDUSTRY PERFORMANCE

Key Summary Statistics for Industries in the Bio and Life Sciences Sector, Maine

NAICS	Description	2019 Jobs	2024 Jobs	Change 2019-2024	Pct. Change 2019-2024	Avg. Earnings Per Job	2024 Competitive LQ	2024 Bus. Effect	2024 Locations	2024 GRP
32541	Pharmaceutical & Medicine Mfg.	2,277	2,837	560	25%	\$ 141,788.46	1.88	713	50	\$1400.2 M
325411	Medicinal & Botanical Mfg.	104	174	70	67%	\$ 175,855	0.90	172	18	\$62.6 M
325412	Pharmaceutical Preparation Mfg.	1,283	1,222	(60)	(5%)	\$ 166,866	1.23	36	11	\$784.3 M
325413	In-Vitro Diagnostic Substance Mfg.	667	1,188	521	78%	\$ 123,232	9.54	535	17	\$434.6 M
325414	Biological Product (except Diagnostic) Mfg.	223	253	29	13%	\$ 84,282	1.28	(29)	3	\$118.8 M
327212	Other Pressed & Blown Glass & Glassware Mfg.	1	2	1	100%	\$ 26,452	0.03	(2)	0	\$0.7 M
33451	Nav., Measure., Electromedical, & Control Instru. Mfg.	145	176	31	21%	122,230	0.31	(49)	6	\$41.9 M
334510	Electromedical & Electrotherapeutic Apparatus Mfg.	59	93	34	58%	\$ 100,196	0.29	(69)	2	\$18.6 M
334516	Analytical Laboratory Instrument Mfg.	67	70	3	5%	\$ 147,737	0.36	9	3	\$18.9 M
334517	Irradiation Apparatus Mfg.	19	13	(6)	(31%)	\$ 141,818	0.23	11	1	\$4.4 M
33911	Med. Equipment & Supplies Mfg.	999	814	(185)	(19%)	83,416	0.56	(274)	46	\$126.4 M
339112	Surgical & Medical Instrument Mfg.	17	11	(6)	(35%)	\$ 127,596	0.02	5	5	\$3.0 M
339113	Surgical Appliance & Supplies Mfg.	862	714	(148)	(17%)	\$ 84,243	1.62	(209)	18	\$116.0 M
339114	Dental Equipment & Supplies Mfg.	26	1	(25)	(96%)	\$ 54,543	0.01	(21)	1	\$0.3 M
339115	Ophthalmic Goods Mfg.	1	3	2	264%	\$ 75,834	0.03	(14)	1	\$0.4 M
339116	Dental Laboratories	94	85	(9)	(9%)	\$ 71,350	0.40	(35)	21	\$6.7 M
423450	Med., Dental, & Hospital Equip. & Supplies Merchant Wholesalers	491	611	120	25%	\$ 179,431	0.45	286	207	\$175.6 M
423460	Ophthalmic Goods Merchant Wholesalers	36	15	(21)	(57%)	\$ 141,436	0.16	(3)	16	\$3.4 M
541380	Testing Laboratories & Services	295	350	55	19%	\$ 73,794	0.46	79	52	\$33.9 M
54171	R&D in the Physical, Engineering, & Life Sciences	2,406	2,521	115	5%	279,253	0.68	(1,084)	201	\$341.1 M
541713	R&D in Nanotechnology	4	12	8	237%	\$ 58,405	0.11	(20)	2	\$1.1 M
541714	R&D in Biotechnology (except Nanobiotechnology)	1,577	1,507	(71)	(4%)	\$ 108,206	1.21	(1,491)	67	\$198.0 M
541715	R&D in the Physical, Engineering, & Life Sci. (exc. Nanotech & Biotech)	825	1,003	177	21%	\$ 112,643	0.42	428	132	\$142.0 M
62151	Medical & Diagnostic Labs	1,210	1,330	120	10%	84,130	0.95	(59)	56	\$184.7 M
621511	Medical Laboratories	1,012	1,121	109	11%	\$ 83,693	1.11	(31)	24	\$154.9 M
621512	Diagnostic Imaging Centers	198	209	11	6%	\$ 86,478	0.54	(27)	32	\$29.8 M
621991	Blood & Organ Banks	135	154	19	14%	\$ 68,057	0.39	(23)	10	\$11.2 M
Maine, Total Bio & Life Sciences		7,995	8,811	816	10%	\$ 116,731	0.78	-416	643	\$2318.9 M
Maine, Total Economy		714,866	742,711	27,845	4%	\$ 72,943	1	-56,989	64,986	\$88920.8 M

Note: Grey rows indicate subsectors. Where possible, industries have been aggregated to the five-digit NAICS level to support easier comparison. Six-digit industries that could not be grouped under a five-digit NAICS code are listed as independent subsectors.

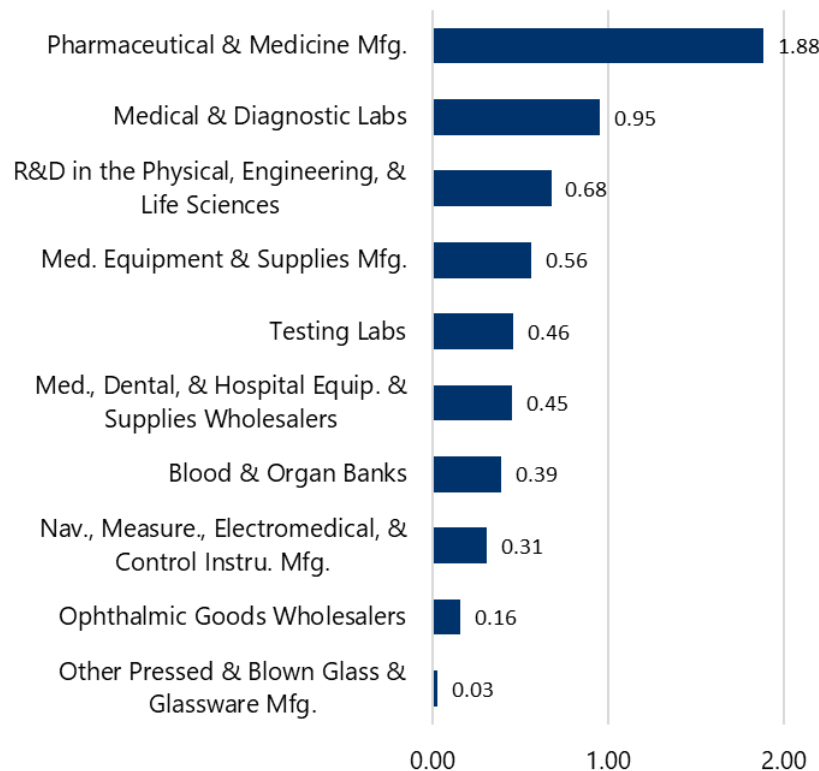
Source: Lightcast

KEY SUBSECTOR PERFORMANCE

In 2024, Maine had 8,811 jobs in the Bio and Life Sciences Sector

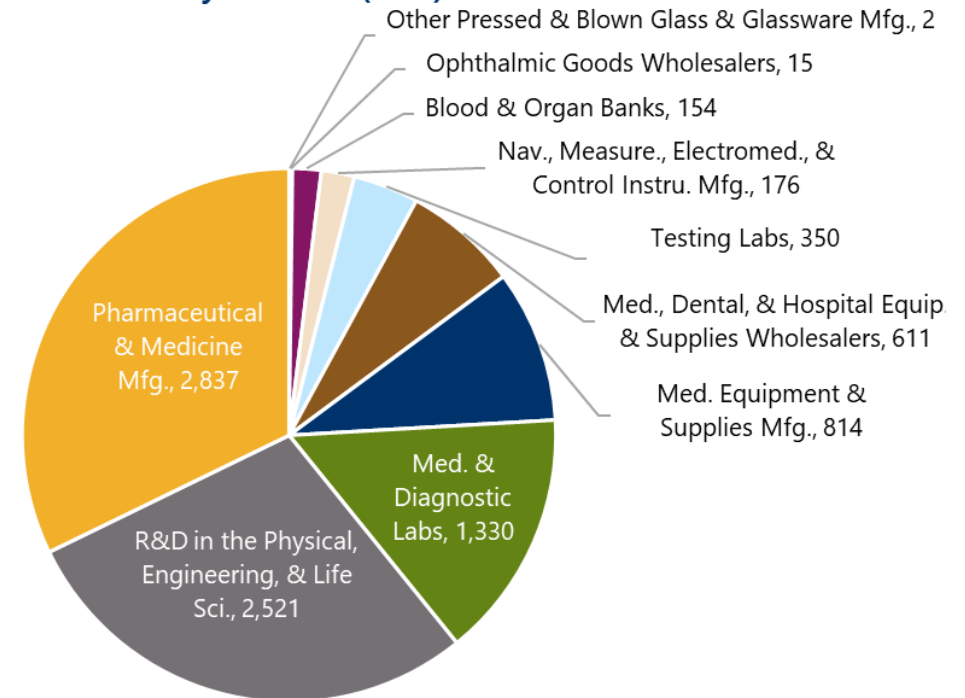
- Pharmaceutical & Medicine Manufacturing is the standout sector, with the highest location quotient (LQ 1.88), indicating it is nearly twice as concentrated in Maine as the national average. It also employs the largest number of workers (2,837).
- R&D in the Physical, Engineering, and Life Sciences follows closely in job count (2,521) but has a lower LQ (0.68), suggesting underrepresentation relative to the US. Please note that this R&D subsector does not include academic institutions.
- Medical & Diagnostic Labs have a relatively high employment (1,330) and is almost as concentrated in Maine as it is in the US overall (LQ 0.95).

LQ by Subsector, Maine, 2024



Source: Lightcast

Job Distribution by Subsector (2024)



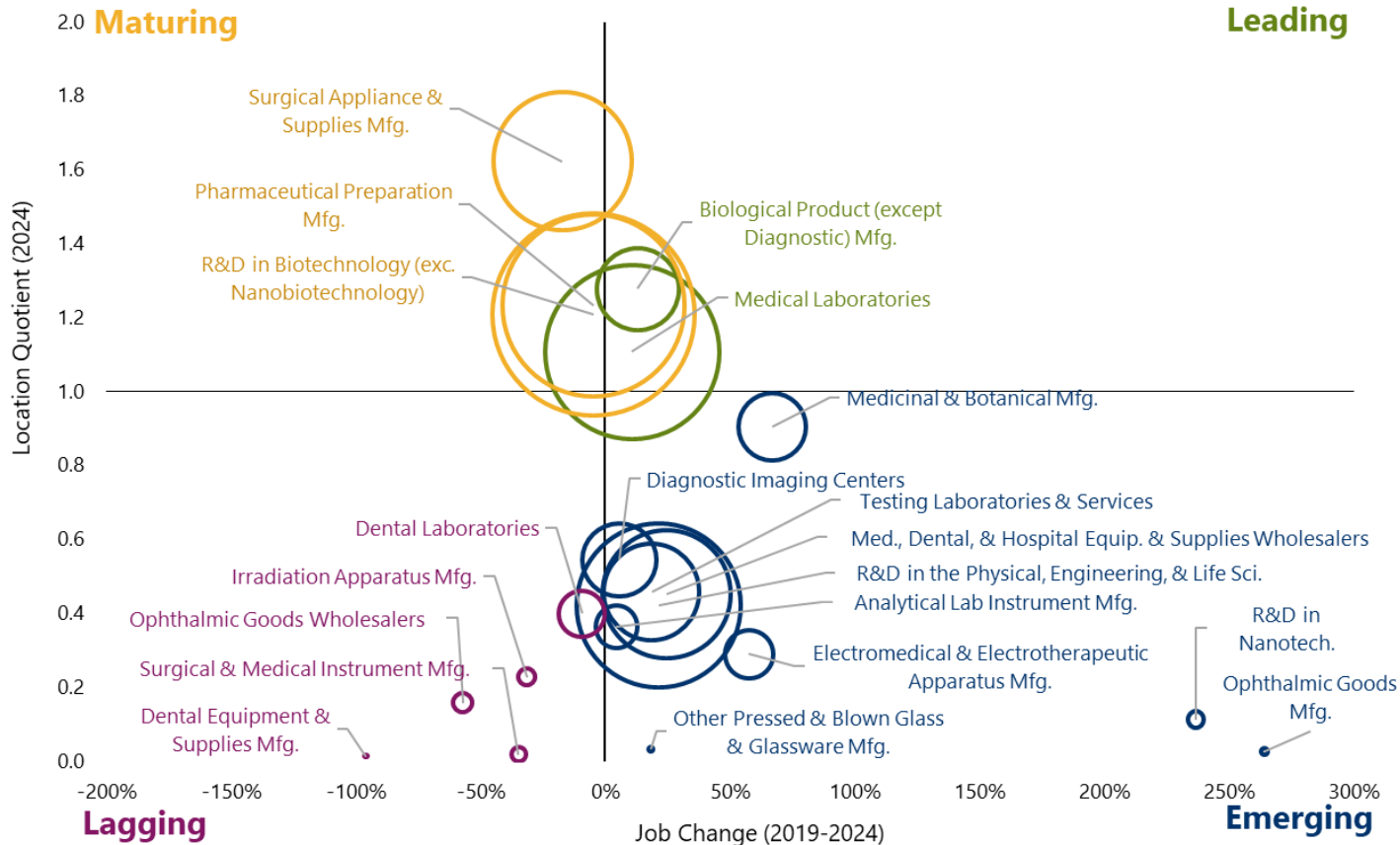
Source: Lightcast

DATA DEFINITION: Location quotient (LQ) is a measure of industry concentration within a region. An LQ of 1.0 means that an industry is as concentrated within the region as it is on a national level. An LQ greater than 1.0 indicates that an industry is more concentrated in a region than at the national level.

KEY INDUSTRY PERFORMANCE

Key Industry Metrics

Bubble size indicates 2024 job count



This chart displays how these sectors compare. Each sector is classified as **leading**, **emerging**, **maturing**, or **lagging**.

Leading industries experienced job growth over the last five years and have a location quotient greater than 1.

Emerging industries saw positive job growth over the last five years but have a location quotient of less than 1.

Maturing industries have a location quotient greater than 1 but had negative job growth over the last five years.

Lagging industries have a location quotient of less than 1 and saw negative job growth over the last five years.

Source: Lightcast

Key Leading Industries: Diagnostic and Laboratory Services Are Growing and Concentrated: Fields like Medical Laboratories and Biological Product Manufacturing are both concentrated (LQ > 1) and experienced job growth during the study period.

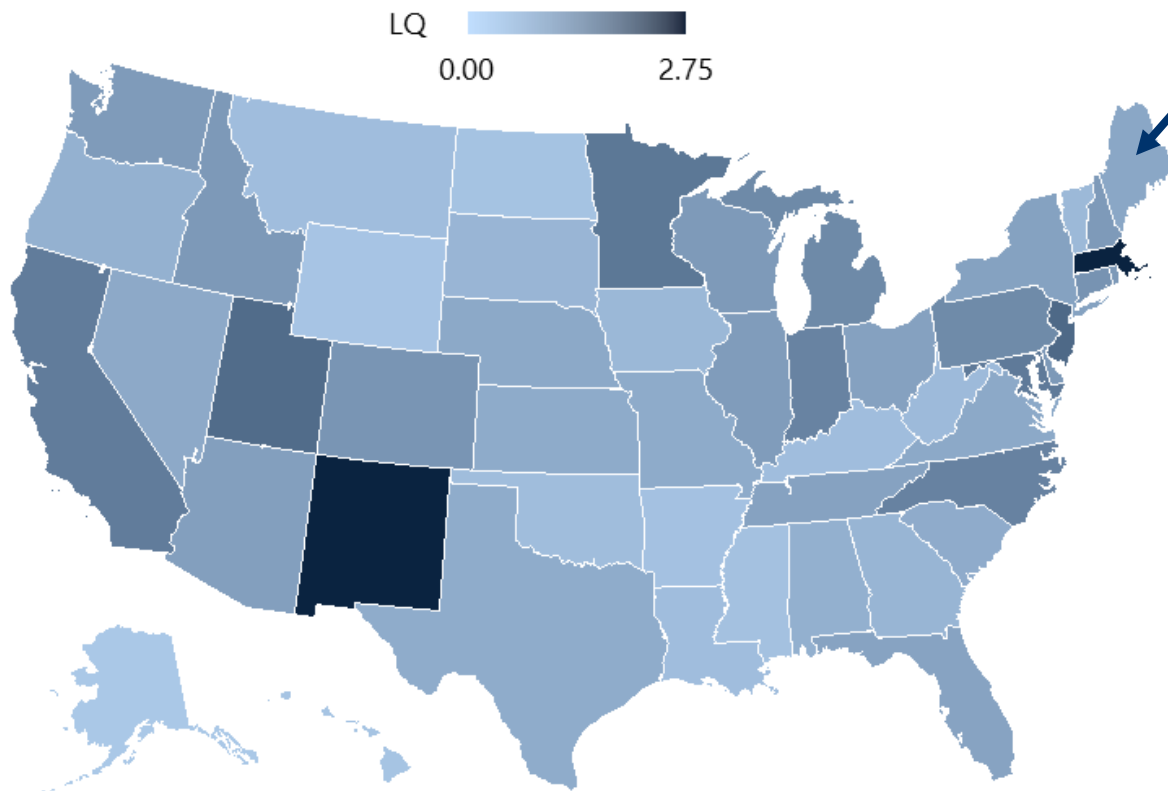
Growth in Emerging Segments: Industries such as R&D in Nanotechnology and Medicinal and Botanical Manufacturing experienced rapid job growth despite currently lower employment concentrations, indicating they may be key industries in the future.

Maturing High-Concentration Industries: Surgical Appliance & Supplies Manufacturing, Pharmaceutical Preparation Manufacturing, and R&D in Biotechnology have high location quotients (1.2–1.6) but negative job growth, suggesting they are established and regionally concentrated, but may be nearing saturation for the current market conditions.

Lagging Industries Facing Decline: Several industries—including Dental Equipment & Supplies Manufacturing, Surgical & Medical Instrument Manufacturing, and Ophthalmic Goods Wholesalers—experienced job losses and have low location quotients, signaling contraction and weak regional presence.

KEY NATIONAL PLAYERS

Bio and Life Sciences Sector Location Quotient by State



Maine's LQ = 0.78,
Maine ranks 26th out
of all US states

Top 10 States by 2024 LQ for the Bio and Life Sciences

State	LQ
New Mexico	2.61
Massachusetts	2.61
New Jersey	1.64
Utah	1.60
Minnesota	1.43
Maryland	1.40
California	1.37
North Carolina	1.29
Indiana	1.27
Michigan	1.19

Source: Lightcast

Source: Lightcast

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Industry Demand and Purchases

Where is Maine's Bio and Life Sciences Sector buying from?

DEMAND BY INDUSTRY AND SECTOR GROUP

Overall,

- Maine imports 75% of its total Bio and Life Sciences sector demand, meeting 25% in-region.
- The state exports a large share of its production, with 69% of total sales going out of state.

Demand and Sales for Industries in the Bio and Life Sciences Sector, Maine, 2024

NAICS	Description	Pct. Demand met In-Region	Pct. Demand met by Imports	Total Demand	Pct. In-Region Sales	Pct. Exported Sales	Total Sales
32541	Pharmaceutical & Medicine Mfg.	33%	67%	\$1240.8 M	18%	82%	\$2181.8 M
325411	Medicinal & Botanical Mfg.	33%	67%	\$122.9 M	35%	65%	\$116.3 M
325412	Pharmaceutical Preparation Mfg.	27%	73%	\$856.8 M	20%	80%	\$1169.6 M
325413	In-Vitro Diagnostic Substance Mfg.	75%	25%	\$100.9 M	11%	89%	\$721.6 M
325414	Biological Product (except Diagnostic) Mfg.	36%	64%	\$160.1 M	33%	67%	\$174.2 M
327212	Other Pressed & Blown Glass & Glassware Mfg.	9%	91%	\$14.9 M	89%	11%	\$1.4 M
33451	Nav., Measure., Electromedical, & Control Instru. Mfg.	4%	96%	\$188.3 M	13%	87%	\$62.8 M
334510	Electromedical & Electrotherapeutic Apparatus Mfg.	4%	96%	\$124.6 M	16%	84%	\$28.2 M
334516	Analytical Laboratory Instrument Mfg.	6%	94%	\$43.6 M	9%	91%	\$27.6 M
334517	Irradiation Apparatus Mfg.	5%	95%	\$20.1 M	15%	85%	\$7.0 M
33911	Med. Equipment & Supplies Mfg.	7%	93%	\$362.7 M	13%	87%	\$188.5 M
339112	Surgical & Medical Instrument Mfg.	0%	100%	\$165.9 M	19%	81%	\$4.2 M
339113	Surgical Appliance & Supplies Mfg.	15%	85%	\$125.6 M	11%	89%	\$171.9 M
339114	Dental Equipment & Supplies Mfg.	1%	99%	\$15.3 M	45%	55%	\$0.5 M
339115	Ophthalmic Goods Mfg.	0%	100%	\$26.8 M	13%	87%	\$0.6 M
339116	Dental Laboratories	15%	85%	\$29.1 M	38%	62%	\$11.3 M
423450	Med., Dental, & Hospital Equip. & Supplies Merchant Wholesalers	14%	86%	\$413.2 M	20%	80%	\$281.8 M
423460	Ophthalmic Goods Merchant Wholesalers	9%	91%	\$20.3 M	33%	67%	\$5.4 M
541380	Testing Laboratories & Services	38%	62%	\$124.3 M	92%	8%	\$50.8 M
54171	R&D in the Physical, Engineering, & Life Sciences	21%	79%	\$1858.9 M	55%	45%	\$708.8 M
541713	R&D in Nanotechnology	5%	95%	\$42.9 M	96%	4%	\$2.2 M
541714	R&D in Biotechnology (except Nanobiotechnology)	14%	86%	\$776.1 M	27%	73%	\$411.5 M
541715	R&D in the Physical, Engineering, & Life Sci. (exc. Nanotech & Biotech)	27%	73%	\$1039.8 M	94%	6%	\$295.0 M
62151	Medical & Diagnostic Labs	63%	37%	\$312.8 M	76%	24%	\$256.3 M
621511	Medical Laboratories	69%	31%	\$225.0 M	72%	28%	\$214.9 M
621512	Diagnostic Imaging Centers	47%	53%	\$87.7 M	99%	1%	\$41.4 M
621991	Blood & Organ Banks	35%	65%	\$55.3 M	97%	3%	\$19.6 M
Total		25%	75%	\$4591.4 M	31%	69%	\$3757.2 M

Source: Lightcast

Top Performing Subsectors & Industries

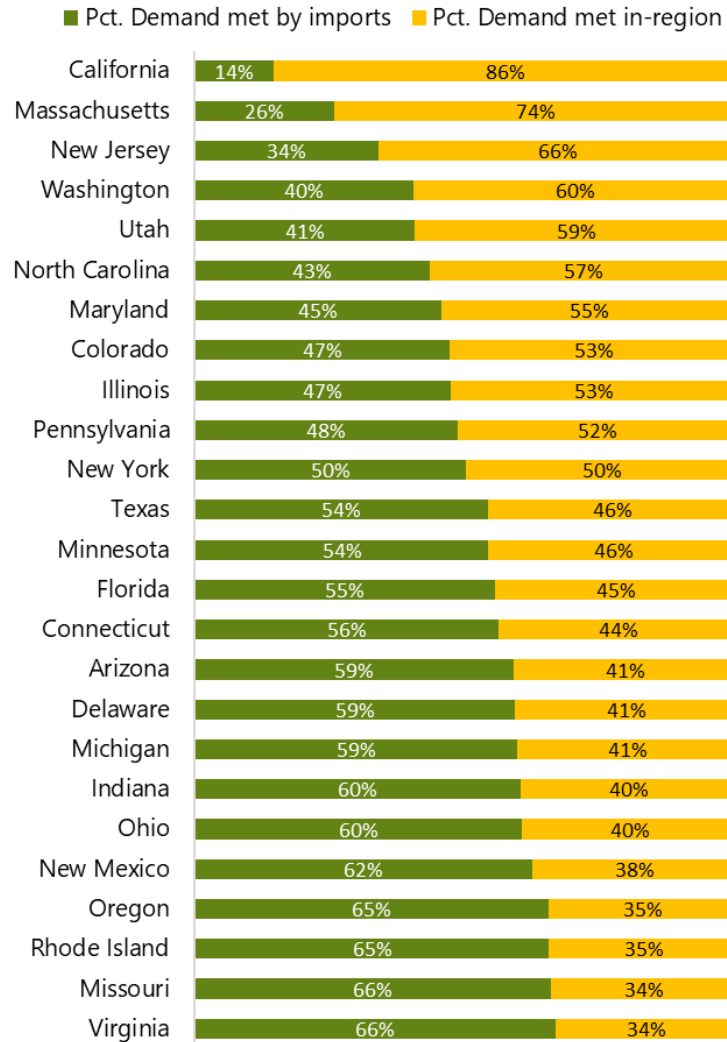
- Pharmaceutical & Medicine Manufacturing is the largest subsector by total demand (\$1.24B) and total sales (\$2.18B), though only 33% of demand is met in-region.
- Within this group, In-Vitro Diagnostic Substance Manufacturing stands out with 75% in-region demand met and strong export levels (89% of sales).
- Medical & Diagnostic Labs are highly self-sufficient, meeting 63% of regional demand and exporting only 24% of sales.
- Testing Laboratories & Services also show high in-region activity: 38% demand met locally and 92% of sales happen in-region.

DEMAND COMPARISON BY STATE

Maine ranks 35th among all states for total demand met in-region

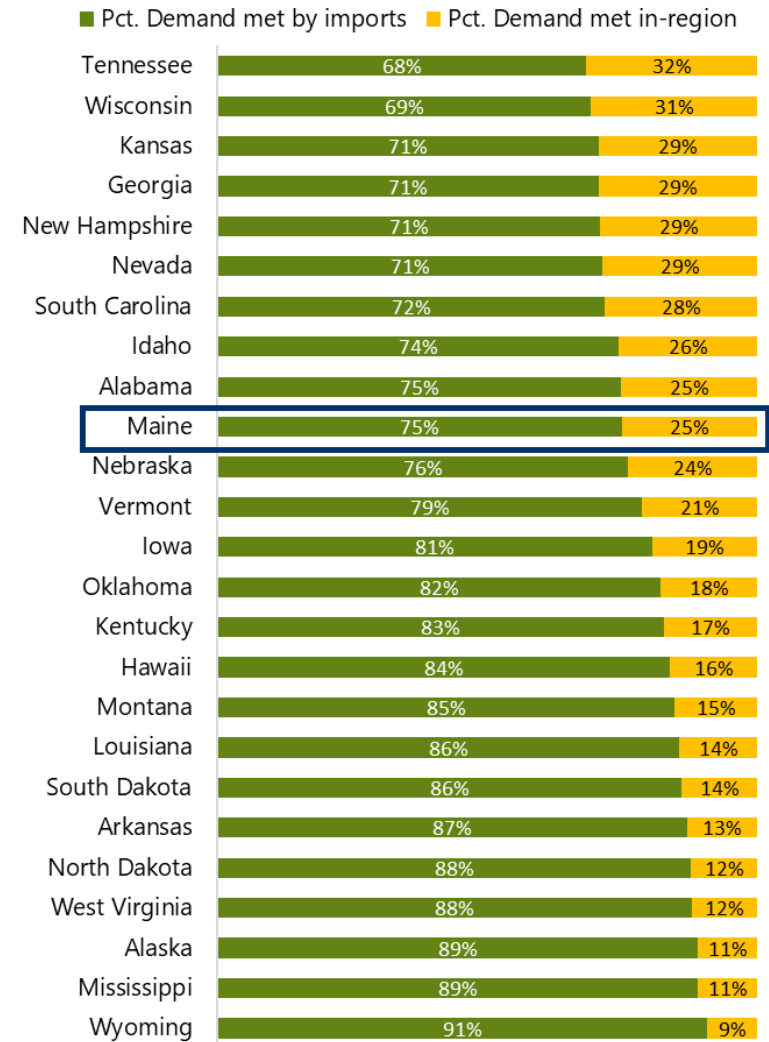
- California (86%), Massachusetts (74%), and New Jersey (66%) lead the nation in meeting their Bio and Life Sciences demand locally
- Many rural or less industrialized states (e.g., Wyoming, Mississippi, Alaska) meet less than 15% of their demand internally, which may suggest limited infrastructure and industry presence.
- Maine’s lower in-region fulfillment signals an opportunity for growth in local production, research, and diagnostics within the Bio and Life Sciences sector. Efforts to boost local industry capacity could help reduce import reliance, improve supply chain resilience, and create new economic development pathways.

Top 25 States by Share of Bio and Life Sciences Demand Met In-Region, 2024



Source: Lightcast

Bottom 25 States by Share of Bio and Life Sciences Demand Met In-Region, 2024

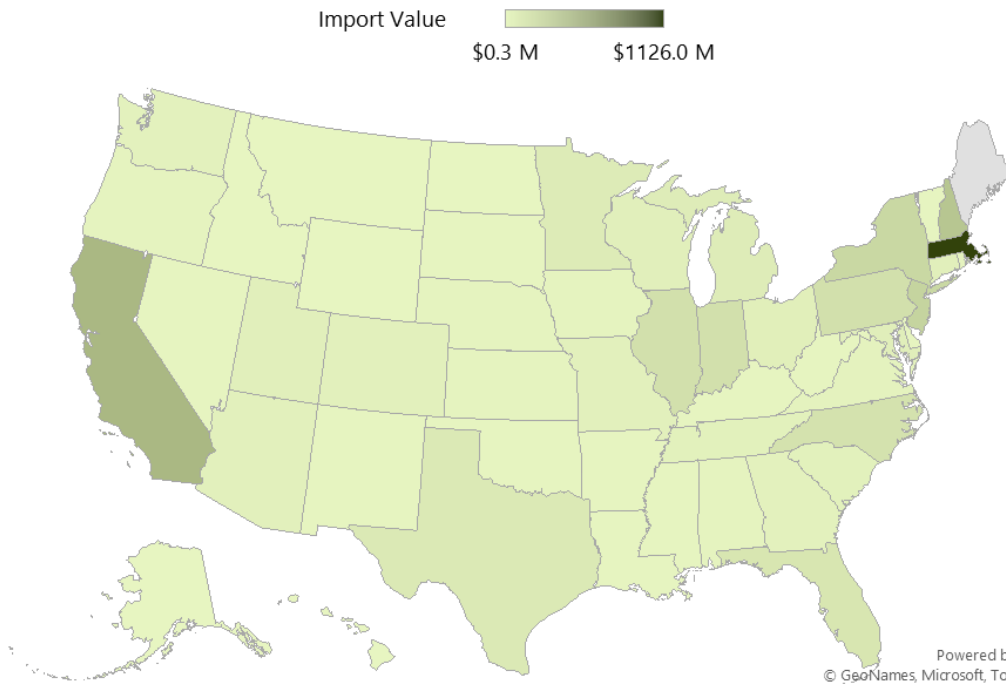


Source: Lightcast

ABOUT THE DATA: Metrics for sector demand by state indicate the states that have the largest local markets for this type of activity. States whose local demand is met by imports at a high rate are using imports instead of local firms and could be a good target for Maine exports.

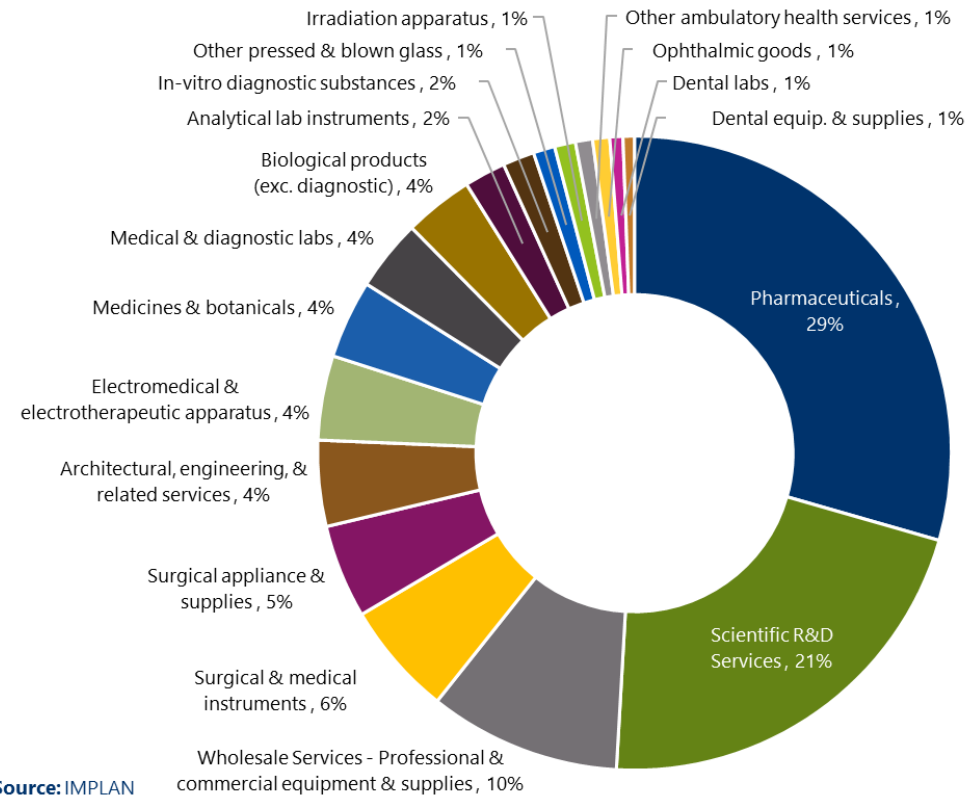
DOMESTIC IMPORT SUMMARY

Out-of-State Suppliers for Maine's Bio and Life Sciences Sector



Source: IMPLAN

Import Summary for Bio and Life Sciences Commodities, Maine, 2022



Maine imported Bio and Life Science products from every state in 2022.

- The total domestic import value for Bio and Life Sciences was approximately \$3.57 billion, reinforcing earlier findings that Maine meets only 25% of its sector demand in-region and must import the vast majority of critical inputs and services.
- Pharmaceuticals are Maine's largest import category, totaling over \$1.05 billion and making up 29% of all Bio and Life Sciences imports.
- Scientific research and development services follows and accounts for \$765.7 million or 21%, of sector imports
- Massachusetts is Maine's top out-of-state supplier for Bio and Life Sciences, with imports totaling approximately \$1.1 billion in 2022. This suggests strong regional supply chain ties and likely dependence on Massachusetts-based R&D, pharmaceuticals, or medical manufacturing firms.

ABOUT THE DATA: Figures on this page are derived from IMPLAN's Data Library, which models domestic trade flows based on commodities, defined as the specific goods and services produced by industries. This commodity-based framework differs from other data in this report, which is reported using NAICS industry classifications.

FOREIGN IMPORT SUMMARY

Foreign Imports: Top Commodities Related to the Bio and Life Sciences Sector, Maine, 2024

Commodity	Value	Share
Basic Chemicals	\$ 99,056,048	38%
Navigational/measuring/medical/control Instrument	\$ 76,839,435	29%
Electrical Equipment	\$ 41,232,716	16%
Pharmaceuticals & Medicines	\$ 14,700,779	6%
Other Chemical Products & Preparations	\$ 10,088,631	4%
Medical Equipment & Supplies	\$ 9,501,131	4%
Glass & Glass Products	\$ 6,741,160	3%
Soaps, Cleaning Compounds & Toilet Preparations	\$ 4,788,102	2%
Total, Top Related Commodities	\$ 262,948,002	100%

Source: USA Trade Online

Top Imported Commodities

- Basic Chemicals are the leading import, making up 38% of total foreign Bio and Life Science-related imports (\$99 million).
- Navigational, Measuring, Medical, and Control Instruments account for another 29% (\$76.8 million), reflecting strong foreign reliance on specialized equipment.
- Electrical Equipment ranks third at 16%, supporting the sector's tech infrastructure.
- Pharmaceuticals & Medicines represent only 6% of imports, indication that a larger share is sourced domestically or from other US states.

Top 10 Foreign Bio and Life Science Import Partners, Maine, 2024

Country	Value	Share
Canada	\$ 110,161,555	42%
United Kingdom	\$ 34,607,526	13%
Brazil	\$ 16,025,695	6%
Germany	\$ 13,575,855	5%
Japan	\$ 9,838,821	4%
Netherlands	\$ 9,578,664	4%
Belgium	\$ 9,214,066	4%
Hungary	\$ 8,841,846	3%
China	\$ 8,309,607	3%
Italy	\$ 5,792,683	2%
All Other	\$ 37,001,684	14%
Total, Foreign Bio and Life Science Imports	\$ 262,948,002	100%

Source: USA Trade Online

Top Foreign Trade Partners

- Canada is Maine's top foreign supplier, providing 42% of total foreign Bio and Life Sciences imports (\$110.2 million). This highlights the importance of regional trade relationships.
- The United Kingdom is the second-largest source at 13%, followed by Brazil (6%) and Germany (5%).
- The top 10 countries make up 86% of total imports, with the remaining 14% coming from All Other countries

ABOUT THE DATA: As with domestic commodities, foreign commodities are not tracked using the standard NAICS system. The commodities listed above reflect those most relevant to Maine's Bio and Life Sciences Sector; however, it is likely not an exhaustive list of all related commodities.

PURCHASING INDUSTRIES

Top 25 Industries the Bio and Life Sciences Sector Purchased From, 2024

NAICS	Purchases from	In-region Purchases	% In-region Purchases	Imported Purchases	% Imported Purchases	Total Purchases
424210	Drugs and Druggists' Sundries Merchant Wholesalers	\$ 60,369,985	38%	\$ 97,371,206	62%	\$ 157,741,191
325414	Biological Product (except Diagnostic) Manufacturing	\$ 31,286,964	38%	\$ 50,475,875	62%	\$ 81,762,839
551114	Corporate, Subsidiary, and Regional Managing Offices	\$ 56,238,047	92%	\$ 4,847,523	8%	\$ 61,085,570
541110	Offices of Lawyers	\$ 36,482,701	77%	\$ 11,162,978	23%	\$ 47,645,679
325411	Medicinal and Botanical Manufacturing	\$ 18,176,771	42%	\$ 24,754,893	58%	\$ 42,931,664
541611	Administrative Management and General Management Consulting Services	\$ 20,890,272	78%	\$ 5,852,587	22%	\$ 26,742,859
531110	Lessors of Residential Buildings and Dwellings	\$ 21,398,330	95%	\$ 1,143,825	5%	\$ 22,542,156
541990	All Other Professional, Scientific, and Technical Services	\$ 17,816,446	91%	\$ 1,697,799	9%	\$ 19,514,245
531210	Offices of Real Estate Agents and Brokers	\$ 15,711,567	82%	\$ 3,450,379	18%	\$ 19,161,946
325199	All Other Basic Organic Chemical Manufacturing	\$ 1,553,051	9%	\$ 16,444,208	91%	\$ 17,997,259
533110	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	\$ 905,080	5%	\$ 16,605,631	95%	\$ 17,510,712
325412	Pharmaceutical Preparation Manufacturing	\$ 9,530,042	59%	\$ 6,678,644	41%	\$ 16,208,686
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	\$ 14,808,409	95%	\$ 851,536	5%	\$ 15,659,945
561320	Temporary Help Services	\$ 11,830,915	76%	\$ 3,713,383	24%	\$ 15,544,298
522110	Commercial Banking	\$ 7,919,825	53%	\$ 7,016,317	47%	\$ 14,936,141
531390	Other Activities Related to Real Estate	\$ 9,446,824	67%	\$ 4,699,854	33%	\$ 14,146,678
541330	Engineering Services	\$ 10,570,588	77%	\$ 3,174,248	23%	\$ 13,744,836
516210	Media Streaming Distribution Services, Social Networks, and Other Media Networks and Content Providers	\$ 1,317,116	10%	\$ 11,621,133	90%	\$ 12,938,250
325120	Industrial Gas Manufacturing	\$ 715,140	6%	\$ 11,850,715	94%	\$ 12,565,854
518210	Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services	\$ 3,724,388	33%	\$ 7,632,725	67%	\$ 11,357,113
561110	Office Administrative Services	\$ 2,425,107	24%	\$ 7,728,299	76%	\$ 10,153,406
541690	Other Scientific and Technical Consulting Services	\$ 4,891,087	56%	\$ 3,919,145	44%	\$ 8,810,232
541613	Marketing Consulting Services	\$ 8,243,787	99%	\$ 61,133	1%	\$ 8,304,919
531311	Residential Property Managers	\$ 7,797,618	95%	\$ 376,507	5%	\$ 8,174,126

Source: Lightcast

Maine's Bio and Life Sciences sector is locally supported by, legal, and corporate services, but remains dependent on imported scientific materials and select technical services

- Many of the sector's largest purchases are more than 50% imported, including: Drugs and Druggists' Sundries (62%) Biological Products (except Diagnostic) (62%) Other Basic Organic Chemical Manufacturing (91%), etc.
- Corporate, Subsidiary, and Regional Managing Offices purchases are 92% in-region, representing over \$56 million locally

ABOUT THE DATA: This table gives greater insight into supply chain gaps within the Bio and Life Science. Industries that have low shares of in-region purchases indicate opportunities where Maine relies heavily on imported supply, but where Maine businesses could potentially expand to recapture transactions.



Industry Sales and Exports

Where is Maine's Bio and Life Sciences Sector selling to?

INDUSTRY SALES

Top 25 Industries the Bio and Life Sciences Sector Sold To, Maine, 2024

NAICS	Sales to	Total In-Region Sales	Pct. of In-Region Sales
622110	General Medical and Surgical Hospitals	\$80,911,863	21%
621111	Offices of Physicians (except Mental Health Specialists)	\$64,809,081	17%
901199	Federal Government, Civilian, Excluding Postal Service	\$48,277,950	12%
325412	Pharmaceutical Preparation Manufacturing	\$36,606,430	9%
901200	Federal Government, Military	\$14,548,642	4%
325413	In-Vitro Diagnostic Substance Manufacturing	\$13,846,608	4%
541940	Veterinary Services	\$9,887,230	3%
621420	Outpatient Mental Health and Substance Abuse Centers	\$6,356,745	2%
902999	State Government, Excluding Education and Hospitals	\$5,690,824	1%
621498	All Other Outpatient Care Centers	\$5,640,649	1%
621210	Offices of Dentists	\$5,536,451	1%
903999	Local Government, Excluding Education and Hospitals	\$4,893,273	1%
621610	Home Health Care Services	\$4,197,312	1%
325414	Biological Product (except Diagnostic) Manufacturing	\$4,105,422	1%
541330	Engineering Services	\$3,839,124	1%
325411	Medicinal and Botanical Manufacturing	\$3,722,868	1%
551114	Corporate, Subsidiary, and Regional Managing Offices	\$3,126,931	1%
903611	Elementary and Secondary Schools (Local Government)	\$3,122,614	1%
424210	Drugs and Druggists' Sundries Merchant Wholesalers	\$2,808,714	1%
622210	Psychiatric and Substance Abuse Hospitals	\$2,761,697	1%
623110	Nursing Care Facilities (Skilled Nursing Facilities)	\$2,608,946	1%
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	\$2,238,660	1%
621112	Offices of Physicians, Mental Health Specialists	\$2,172,231	1%
622310	Specialty (except Psychiatric and Substance Abuse) Hospitals	\$1,897,397	0%
541714	Research and Development in Biotechnology (except Nanobiotechnology)	\$1,842,166	0%

Source: Lightcast

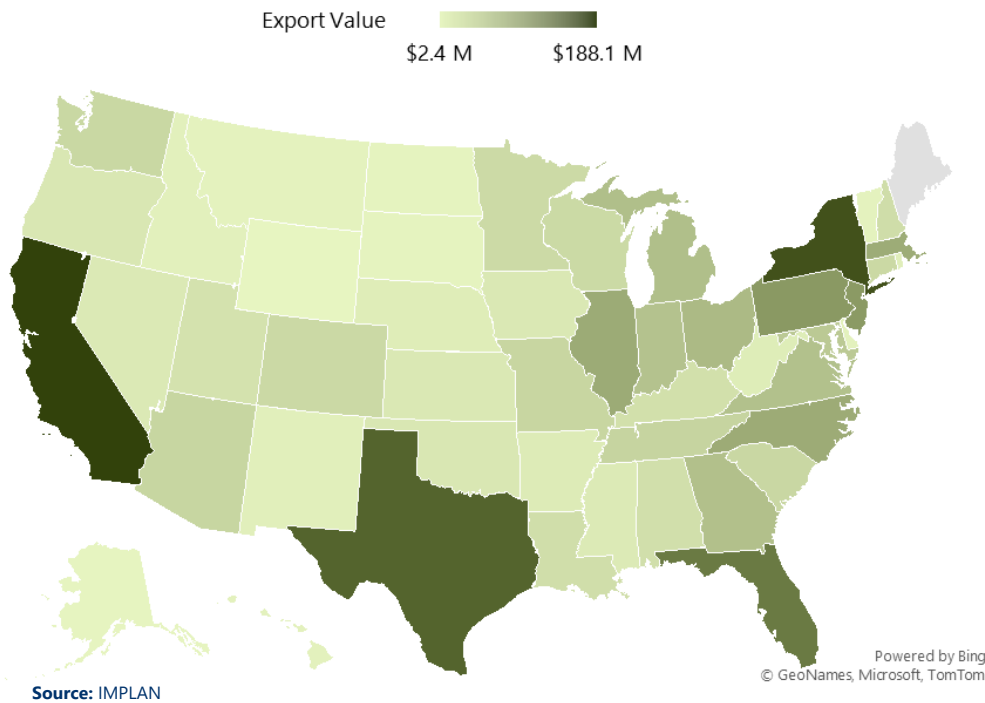
Maine's Bio and Life Sciences firms primarily sell to local hospitals, physician offices, and the public sector, with limited penetration into advanced R&D or specialty service markets.

- General Medical and Surgical Hospitals (\$80.9M) and Offices of Physicians (\$64.8M) are the top two buyers, accounting for a combined 38% of total in-region Bio and Life Sciences sales.
- Federal (civilian and military) and state/local governments together make up a sizable share of demand, with multiple entries (e.g., Federal Civilian at \$48.3M, Military at \$14.5M).
- Only three sectors account for more than 10% of in-region sales each. The remaining 22 industries each represent less than 10% Bio and Life Sciences Sales.

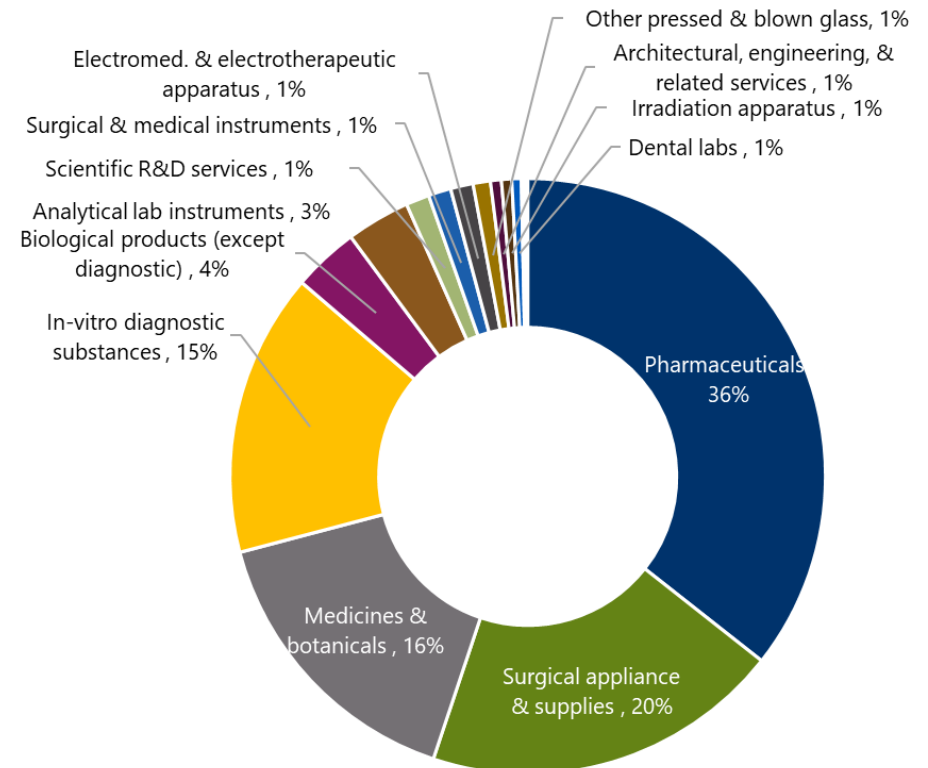
ABOUT THE DATA: The sales in this table do not add up to total in-region sales because it only captures sales to other industries, and not other entities like consumers. The Percent of Total In-Region Sector Sales shows the portion of sales to a given industry as it relates to total sales to *all industries*, not total in-region sales including sales to consumers.

DOMESTIC EXPORT SUMMARY

Out-of-State Buyers for Bio and Life Sciences



Export Summary for Bio and Life Sciences Commodities, Maine, 2022



Note: Labels shown for Commodities that make up 1% or more total exports
Source: Lightcast

Maine exported Bio and Life Sciences products to every state in 2022

- California, New York, and Texas were Maine's top domestic buyers of Bio and Life Sciences goods during 2022
- While Maine's Bio and Life Sciences exports reach buyers nationwide, demand is concentrated in a few high-population and innovation-heavy states.
- Maine's total domestic Bio and Life Sciences exports reached approximately \$2.04 billion in 2022.
- Pharmaceuticals dominate Maine's domestic exports in this sector, accounting for 36% of total export value (over \$726 million).
 - The next top categories are: (1) Surgical appliances and supplies – 20%, (2) Medicines and botanicals – 16%, (3) In-vitro diagnostic substances – 15%
 - These four categories alone make up 87% of Maine's total Bio and Life Sciences export value.
- Several areas, including ophthalmic goods, dental equipment, and medical and diagnostic labs, make up less than 1%.

ABOUT THE DATA: Figures on this page are derived from IMPLAN's Data Library, which models domestic trade flows based on commodities, defined as the specific goods and services produced by industries. This commodity-based framework differs from other data in this report, which is reported using NAICS industry classifications.

FOREIGN EXPORTS SUMMARY

Foreign Exports: Top Commodities Related to the Bio and Life Sciences Sector, Maine, 2024

Commodity	Value	Share
Pharmaceuticals & Medicines	\$ 228,989,703	54%
Navigational/measuring/medical/control Instrument	\$ 115,895,137	27%
Electrical Equipment	\$ 38,606,533	9%
Basic Chemicals	\$ 22,132,195	5%
Medical Equipment & Supplies	\$ 6,558,945	2%
Soaps, Cleaning Compounds & Toilet Preparations	\$ 5,610,628	1%
Glass & Glass Products	\$ 2,751,665	1%
Other Chemical Products & Preparations	\$ 2,335,115	1%
Total, Top Related Commodities	\$ 422,879,921	100%

Source: USA Trade Online

Top Exported Commodities

- Pharmaceuticals & Medicines account for the majority of Maine's bio-related foreign exports, totaling \$229 million, or 54% of all foreign exports in the sector.
- Navigational/medical instruments make up 27% of exports (\$115.9 million), followed by electrical equipment at 9%, showing strong international demand for Maine's precision and diagnostic technologies.
- Maine exported more than \$422 million in Bio and Life Sciences-related commodities to foreign trade partners in 2024.

Top 10 Foreign Bio and Life Science Export Partners, Maine, 2024

Country	Value	Share
Japan	\$ 126,608,804	30%
Netherlands	\$ 95,353,618	23%
Canada	\$ 48,497,904	11%
Brazil	\$ 33,171,565	8%
Korea, South	\$ 13,522,333	3%
China	\$ 11,117,391	3%
Mexico	\$ 8,989,159	2%
United Kingdom	\$ 8,391,975	2%
Germany	\$ 6,193,106	1%
Singapore	\$ 5,847,312	1%
All Other	\$ 65,186,754	15%

Total, Foreign Bio and Life Science Exports **\$ 422,879,921** **100%**

Source: USA Trade Online

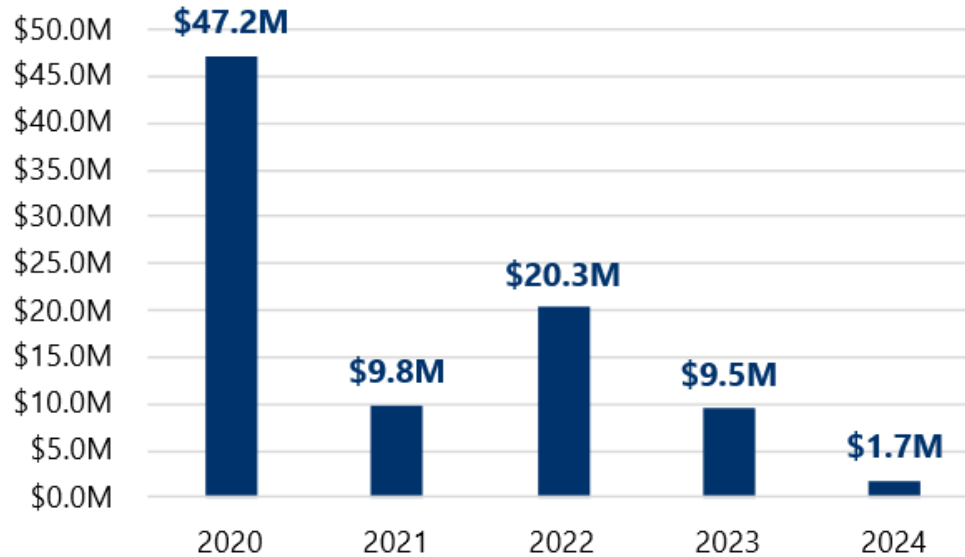
Top Foreign Trade Partners

- Japan (30%) and the Netherlands (23%) are the leading foreign customers, together purchasing over half of Maine's bio exports.
- The top 3 countries (Japan, Netherlands, Canada) account for 64% of all foreign exports in this sector.

ABOUT THE DATA: As with domestic commodities, foreign commodities are not tracked using the standard NAICS system. The commodities listed above reflect those most relevant to Maine's Bio and Life Sciences Sector; however, it is likely not an exhaustive list of all related commodities.

VENTURE CAPITAL

Venture Capital Raised by Maine Life Science Companies, 2020-Present



Source: Crunchbase

Capital Raised

- Almost \$90 Million since 2020
- Raised in Veterinary Science, Biomed R&D software, Health Monitoring, Bio data analytics, and pharmaceuticals

Maine Venture Capital Recipients, 2020-Present

- Rarebreed Veterinary Partners
- RxAnte
- RockStep Solutions
- Hawkin Dynamics, Inc.
- Novo Biosciences
- Cerahelix
- Biofine Developments Northeast
- ALM Ortho
- Nest Veterinary
- Blue Rabbit
- Covetrus

GLOSSARY

Competitive Effect: Competitive effect indicates how much of the job change within a given region is the result of some unique competitive advantage of the region. This is because the competitive effect, by definition, measures the job change that occurs within a regional industry that cannot be explained by broader trends (i.e. the National Growth Effect and the Industrial Mix Effect). It's important to note that this effect can be positive even if regional employment is declining. This would indicate that regional employment is declining *less* than national employment.

Demand: Regional sales demand for sales of Industry

Trade-Weighted Index (TWI): Also known as the real broad index, measures the strength of the US dollar relative to the currencies of the nation's trading partners. Weightings are determined by the share of trade with each country, with the five largest allocated to the Euro, Canadian dollar, Chinese yuan, Japanese yen and Mexican peso. These five currencies account for over two-thirds of the TWI.

Exports: The amount of money that is spent by industries located outside the region in exchange for goods or services produced by an industry located in the region. Exports can be either foreign or domestic.

Earnings: Industry earnings are the total industry wages, salaries, supplements, and proprietor income in the region, divided by the number of jobs in the region.

Gross Regional Product (GRP): Gross Regional Product (GRP) is simply GDP for the region of study. More commonly, GRP is GDP for any region smaller than the United States, such as a state or metro. GRP measures the final market value of all goods and services produced in the region of study. GRP is the sum of total industry earnings, taxes on production & imports, and profits, less subsidies

Jobs: A job is any position in which a worker provides labor in exchange for monetary compensation. This includes those who work as employees for businesses (a.k.a. "wage and salary" employees) and proprietors who work for themselves. Lightcast reports employment as annual averages. Employment averages represent jobs, not workers, since one individual may hold multiple jobs. Due to limitations of source data, both full- and part-time jobs are included and counted equally, i.e., job counts are not adjusted to full-time equivalents. Geographically, payroll jobs are always reported by the place of work rather than the worker's place of residence.

Location quotient: Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region "unique." For example, if the leather products manufacturing industry accounts for 10% of jobs in your area but 1% of jobs nationally, then the area's leather-producing industry has an LQ of 10. So, in your area, leather manufacturing accounts for a larger than average "share" of total jobs—the share is ten times larger than normal.

Payrolled Business Locations: Also referred to as a "Establishments", is a single physical location of some type of economic activity (a business), used for reporting purposes in government data sources. A single company may have multiple establishments.

Source: Lightcast Knowledge Base

DATA SOURCES



Lightcast (formerly Emsi Burning Glass) is a global leader in labor market analytics, offering a data platform that gives a comprehensive, nuanced, and up-to-date picture of labor markets at all scales from national to local. Key components of the platform include traditional labor market information, job postings analytics, talent profile data, compensation data, and skills analytics. Lightcast integrates government data with information from online job postings, talent profiles, and resumes to produce timely intelligence on the state of the labor market. Job and compensation data is available by industry, occupation, educational program, and skill type. [Click to learn more.](#)



TradeStats Express (TSE) National and State Dashboards present data on US exports and imports by trade partner and product for 2009 forward. Data are presented using two classification systems: the Harmonized System (HS) and the North American Industrial Classification System (NAICS). National trade statistics in TSE cover the physical movement of merchandise between the United States and foreign regions. State trade statistics cover the physical movement of merchandise between a given state and foreign regions. [Click to learn more.](#)



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Service Lines



Strategic and
Organizational
Planning



Real Estate
Development
Services



Impact
Analysis



Lead Generation
and Relationships



Industry and
Workforce
Analytics



Entrepreneurship
and Innovation



Business
Attraction and
Retention

