



Labor Market Analysis:

0113.00 – Food Processing and Related Technologies

01.1003 – Brewing Science

Brewer’s Assistant – Certificate requiring 30 to <60 semester units

Tap Room Manager – Certificate requiring 16 to <30 semester units

Los Angeles Center of Excellence, March 2026

Program Endorsement:	Endorsed: All Criteria Met <input type="checkbox"/>	Endorsed: Some Criteria Met <input checked="" type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Living Wage: (Entry-Level, 25 th)	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>
Education:	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Emerging Occupation(s)			
	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>

SUMMARY

This report analyzes whether local labor market demand is being met by community college programs aligned with the identified middle-skill occupations¹ or whether a shortage of workers exists. Labor market demand is measured by annual job openings while education supply is measured by the number of awards (degrees and certificates) conferred on average each year.

Based on the available data, there appears to be a supply gap for the three identified middle-skill occupations in the region. While entry-level wages are lower than the self-sufficiency standard wage in both Los Angeles and Orange counties, one-third of the current workforce holds an associate degree or some college as their highest level of educational attainment.

Recommendation: Due to two of three program endorsement criteria being met, the Los Angeles Center of Excellence for Labor Market Research (LA COE) endorses this proposed program.

¹ Middle-skill occupations typically require some postsecondary education, but less than a bachelor’s degree. The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor’s degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

Key Findings

Supply Gap

- 924 annual job openings are projected in the region through 2029. This number is substantially greater than the three-year average of 0 awards conferred by educational institutions in the region.

Living Wage

- All three occupations have entry-level wages **below** Los Angeles County's self-sufficiency standard hourly wage (\$24.03/hour).²

Educational Attainment

- 88% of the annual job openings typically require a high school diploma or equivalent for middle-skill occupations related to food processing in the LA/OC region.
- 33%-42% of workers in the field have completed some college or an associate degree, according to national educational attainment data.

Community college supply

- 4 community colleges throughout the state currently offer programs related to brewing technology.
- Rio Hondo's Brewing Technology program was approved in 2024 and has not yet conferred awards.

Other postsecondary supply

- No other educational institutions in the LA/OC region offer programs related to brewing technology.

TARGET OCCUPATIONS

LA COE prepared this report to provide regional labor market and postsecondary supply data related to three middle-skill food processing occupations. [For full occupation descriptions, please see Appendix.](#)

- **Food Science Technicians (19-4013)** ³
- **Food Batchmakers (51-9032)** ⁴
- **Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders (51-9012)** ⁵

OCCUPATIONAL DEMAND

Exhibit 1 shows the five-year occupational demand projections for these food processing-related occupations. In the greater Los Angeles/Orange County region, the number of jobs related to these occupations is projected to increase by 1% through 2029. There will be nearly 1,000 job

² Center for Women's Welfare, University of Washington. (2024). *The self-sufficiency standard for California 2024*. <http://selfsufficiencystandard.org/California>.

³ [Agricultural and Food Science Technicians \(bls.gov\)](#)

⁴ [Food Batchmakers \(bls.gov\)](#)

⁵ [Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders \(bls.gov\)](#)

openings per year through 2029 due to job growth and replacements. It is important to note that the *food science technicians* (19-4013) SOC code includes all food science, and not solely brewing technology. Additionally, the *separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders* (51-9012) SOC code and *food batchmakers* (51-3092) includes employees that operate various vat-type machinery, and not solely brewers. Since the data in Exhibit 1 includes employees who work with a variety of food, beverage, and machinery, Exhibit 1 is likely overstated for brewing technology occupations. The majority of jobs in 2024 for these food processing occupations (78%) were located in Los Angeles County.

Exhibit 1: Current employment and occupational demand, Los Angeles and Orange counties⁶

Geography	2024 Jobs	2029 Jobs	2024-2029 Change	2024-2029 % Change	Annual Openings
Los Angeles	5,394	5,388	(7)	(0%)	703
Orange	1,555	1,649	95	6%	222
Total	6,949	7,037	88	1%	924

Detailed Occupation Data

Exhibit 2 displays the current employment and projected occupational demand for each of the target occupations in Los Angeles County. The average percentage of workers aged 55+ across all occupations in the Los Angeles/Orange County region is 26%; occupations with a larger share of workers aged 55 and older typically have greater replacement needs to offset the amount of impending retirements. On average, 81% of workers across all occupations in California are employed full-time.

Exhibit 2: Detailed employment and occupational demand, Los Angeles County⁷

Occupation	2024 Jobs	2029 Jobs	5-Yr % Change	Annual Openings	% Aged 55 and older	% Full Time Workers
Food Science Technicians	597	591	(1%)	85	28%	100%
Food Batchmakers	3,440	3,461	1%	483	26%	100%
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	1,357	1,336	(2%)	135	21%	Data unavailable
Total	5,394	5,388	(0%)	703	-	-

⁶ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

⁷ Ibid.

WAGES

The labor market endorsement in this report considers the entry-level hourly wages for these middle-skill food processing occupations in Los Angeles County as they relate to the county's self-sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the greater Los Angeles/Orange County region.

Los Angeles County

All three occupations have entry-level wages below the self-sufficiency standard wage for one adult (\$24.03 in Los Angeles County). Typical entry-level hourly wages are in a range between \$17.50 and \$23.02. (Exhibit 3). Experienced *food batchmakers* can expect to earn \$21.71, which is lower than the self-sufficiency standard. However, experienced *food science technicians and separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders* can expect to earn wages between \$30.26 and \$37.64, which are higher than the self-sufficiency standard.

Exhibit 3: Earnings for occupations in Los Angeles County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Food Science Technicians	\$21.75	\$24.76	\$30.26	\$51,500
Food Batchmakers	\$17.50	\$18.39	\$21.71	\$38,300
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	\$23.02	\$30.05	\$37.64	\$62,500

*Rounded to the nearest \$100

Orange County

All three occupations have entry-level wages below the self-sufficiency standard wage for one adult (\$27.13 in Orange County). Typical entry-level hourly wages are in a range between \$16.89 and \$21.24 (Exhibit 4). Experienced *food batchmakers* can expect to earn \$20.98, which is lower than the self-sufficiency standard. However, experienced *food science technicians and separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders* can expect to earn wages between \$29.37 and \$34.70, which are higher than the self-sufficiency standard.

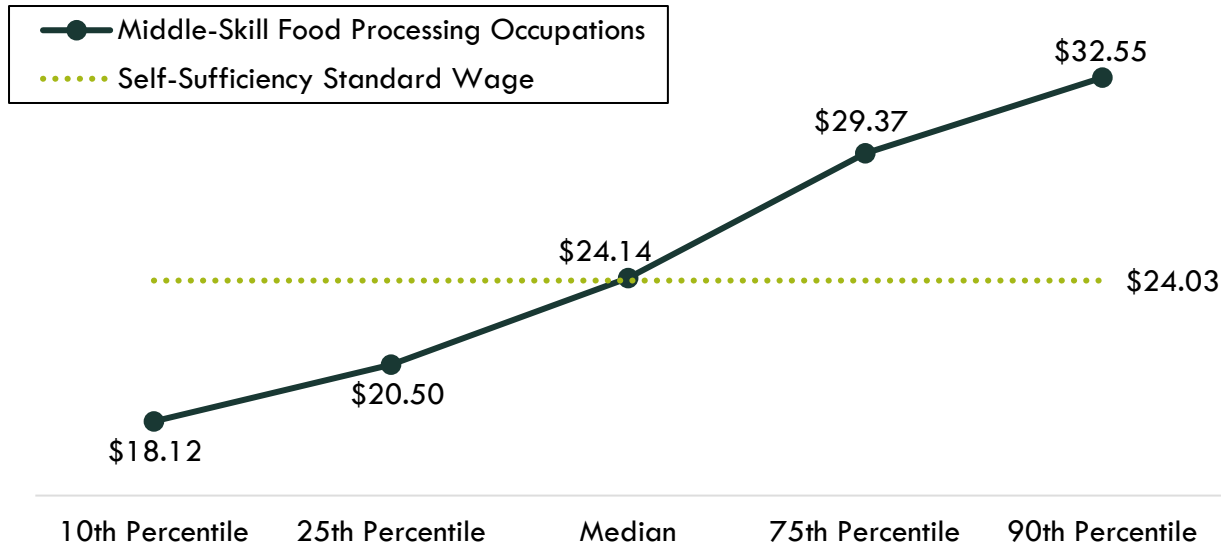
Exhibit 4: Earnings for occupations in Orange County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Food Science Technicians	\$21.11	\$24.03	\$29.37	\$50,000
Food Batchmakers	\$16.89	\$17.74	\$20.98	\$36,900
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	\$21.24	\$27.73	\$34.70	\$57,700

*Rounded to the nearest \$100

Across the greater Los Angeles and Orange County region, the average entry-level hourly earnings for the occupations in this report are \$20.50; this is below the living wage for one single adult in Los Angeles County (\$24.03). Exhibit 5 shows the average hourly wage for the occupations in this report, for entry-level to experienced workers.

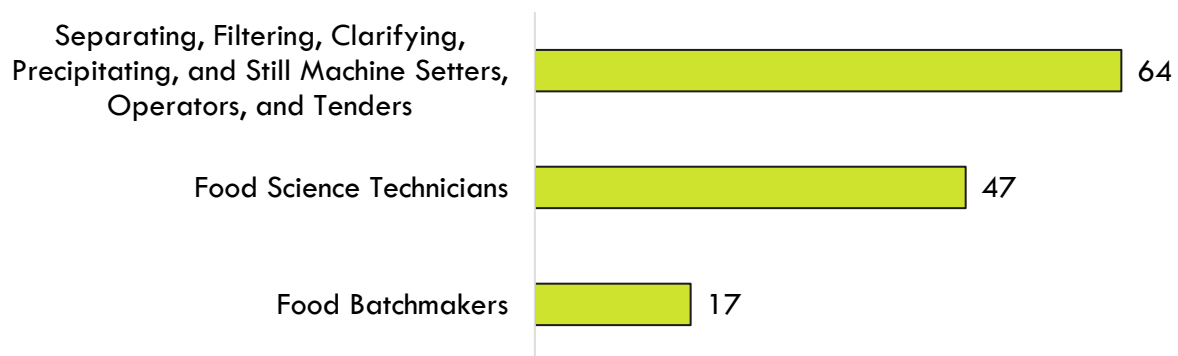
Exhibit 5: Average hourly earnings for target occupations, Los Angeles and Orange counties



JOB POSTINGS

There were 128 online job postings related to the target food processing occupations listed in the past 12 months in Los Angeles and Orange counties. Exhibit 6 displays the number of job postings by occupation. The majority of job postings (50%) were for *separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders*, followed by *food science technicians* (37%) and *food batchmakers* (13%).

Exhibit 6: Job postings by occupation (last 12 months), Los Angeles and Orange counties



Job postings were analyzed for the most common job titles, skills, and employers associated with the target occupations in this report (Exhibit 7).

Exhibit 7: Most commonly requested job titles, skills and employers in job postings, Los Angeles and Orange counties

Top Job Titles	Top Skills	Top Employers
<ul style="list-style-type: none"> • Brewers • Food safety technicians • Food equipment service technicians • Lead quality control technicians • Food safety quality assurance technicians 	<ul style="list-style-type: none"> • Food safety and sanitation • Packaging and labeling • Lifting ability • Warehousing • Good Manufacturing Practices • Auditing 	<ul style="list-style-type: none"> • IntelliSource • Brewery X • Flying Food Group • Anheuser-Busch • Mission Yogurt • King’s Hawaiian • Randstad* • Long Beach Beer Lab

*Staffing company

In the greater Los Angeles/Orange County region, 44% of the target job postings listed a minimum educational requirement. Exhibit 8 details the number and percentage of job postings by educational level.

Exhibit 8: Education levels requested in job postings for target occupations, Los Angeles and Orange counties

Education Level	Job Postings	% of Job Postings
Bachelor's degree	16	29%
Associate degree	0	0%
High school diploma or vocational training	40	71%

EDUCATIONAL ATTAINMENT

In the greater Los Angeles/Orange County region, the majority of annual job openings (88%) typically require a high school diploma or equivalent (Exhibit 9). However, the national-level data indicates 33% and 42% of workers in the field have completed some college or an associate degree as their highest level of educational attainment. The Bureau of Labor Statistics (BLS) lists the following typical entry-level education levels for the occupations in this report:

Exhibit 9: Entry-level education preferred by employers nationally, Bureau of Labor Statistics

Occupation	Education Level
Food Science Technicians	Associate degree
Food Batchmakers	High school diploma or equivalent
Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	High school diploma or equivalent

EDUCATIONAL SUPPLY

Community College Supply

Currently, no awards have been conferred in the past three years under the Food Processing and Related Technologies (0113.00) TOP Code in the Los Angeles/Orange County region. The Rio Hondo Brewing Technology (0113.00) program was approved in 2024 and has not yet conferred awards. Exhibit 10 displays the California community colleges that offer or have recently offered programs related to brewing technology and/or beer studies.

MiraCosta College Community Education & Workforce Development in San Diego offers a Craft Brewing Technician (BrewTech) Certificate, a workforce training class. This 210-hour BrewTech program is designed to train students to become productive brewers while gaining confidence in the brewhouse, cellar, or packaging line.⁸

Exhibit 10: Community college programs

TOP Code	TOP Title	Program	College	Status
0104.00	Viticulture, Enology, and Wine Business	Wine and Beer Studies	College of the Canyons	Active
0113.00	Food Processing and Related Technologies	Brewing Technology	Rio Hondo	Active (Approved 2024)
		Beer – Brewing and Cellaring	San Diego Mesa	Active
		Fermentation Management	San Diego Mesa	Active
		Brewing	Santa Rosa	Inactive
(Not in COCI)	(Not in COCI)	Craft Brewing Technician (BrewTech) Certificate	MiraCosta	(Not in COCI)

Other Postsecondary Supply

For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training programs for brewing technology. It is difficult to assess the supply data for brewing technology programs, as there are no other postsecondary programs in California that have conferred awards within the past three years under these related CIP programs: Brewing Science (01.1003) or Brewery/Brewpub Operations/Management (52.0910).

However, online research shows that brewing programs at postsecondary institutions in California are included under Food Science programs. For instance, students at UC Davis can earn a Food Science and Technology Bachelor of Science degree, with an emphasis in brewing. There are currently no other postsecondary institutes in the Los Angeles/Orange County region that offer brewing technology programs.

⁸ [Craft Brewing Technician \(BrewTech\) Certificate | Community Education & Workforce Development \(miracosta.edu\)](https://www.miracosta.edu/cewd/craft-brewing-technician-brewtech-certificate)

APPENDIX: OCCUPATION DESCRIPTIONS

LA COE prepared this report to provide regional labor market supply and demand data related to these target occupations:

- **Food Science Technicians (19-4013)** Work with food scientists or technologists to perform standardized qualitative and quantitative tests to determine physical or chemical properties of food or beverage products. Includes technicians who assist in research and development of production technology, quality control, packaging, processing, and use of foods.⁹
- **Food Batchmakers (51-3092)** Set up and operate equipment that mixes or blends ingredients used in the manufacturing of food products. Includes candy makers and cheese makers.¹⁰
- **Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders (51-9012)** Set up, operate, or tend continuous flow or vat-type equipment; filter presses; shaker screens; centrifuges; condenser tubes; precipitating, fermenting, or evaporating tanks; scrubbing towers; or batch stills. These machines extract, sort, or separate liquids, gases, or solids from other materials to recover a refined product. Includes dairy processing equipment operators.¹¹

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DATA SOURCES

- O*NET Online
- Lightcast (formerly Emsi)
- Bureau of Labor Statistics (BLS)
- California Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington
- Chancellor's Office Curriculum Inventory (COCI 2.0)

⁹ [Agricultural and Food Science Technicians \(bls.gov\)](https://www.bls.gov)

¹⁰ [Food Batchmakers \(bls.gov\)](https://www.bls.gov)

¹¹ [Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders \(bls.gov\)](https://www.bls.gov)

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