

Labor Market Analysis: 0113.00/Food Processing and Related Technologies Quality Control Food Technician

Associate of Science (A.S.) degree; Certificate requiring 16 to <30 semester units
Los Angeles Center of Excellence, April 2023

Summary

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, 25th)	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"/>	

The Los Angeles Center of Excellence for Labor Market Research (LA COE) prepared this report to provide regional labor market supply and demand data related to two middle-skill occupation(s):

- **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.¹
- **Inspectors, Testers, Sorters, Samplers, and Weighers (51-9061)** Inspect, test, sort, sample, or weigh nonagricultural raw materials or processed, machined, fabricated, or assembled parts or products for defects, wear, and deviations from specifications. May use precision measuring instruments and complex test equipment.²

Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.³ This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupations.

Based on the available data, there appears to be a supply gap for these quality control food technician occupations in the region. While entry-level wages are lower than the self-sufficiency

¹ [Food Science Technicians \(bls.gov\)](#)

² [Inspectors, Testers, Sorters, Samplers, and Weighers \(bls.gov\)](#)

³ 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.

standard wage in both Los Angeles and Orange counties, more than one-third of current workers in the field have completed some college or an associate degree. **Therefore, due to some of the criteria being met, the LA COE endorses this proposed program.** Detailed reasons include:

Demand:

- **Supply Gap Criteria** – Over the next five years, **3,265 jobs are projected to be available annually** in the region due to retirements and workers leaving the field, **which is more than the three-year average of 52 awards conferred** by educational institutions in the region.
 - However, the *inspectors, testers, sorters, samplers, and weighers* (51-9061) SOC code data includes jobs across all industries (mostly in manufacturing industries), including agricultural and/or food science. Since the SOC code does not solely represent agricultural/food science jobs, **the number of annual job openings is likely overstated.**
 - Over the past 12 months, there were **503 online job postings related to quality control food technician occupations** (the occupations of interest that included the keyword “food” in the job posting). The highest number of job postings were for quality control inspectors, quality control technicians, quality inspectors, quality assurance specialists, and line inspectors.
- **Living Wage Criteria** – Within Los Angeles County, the majority (97%) of annual job openings for these quality control food technician occupations have **entry-level wages below the self-sufficiency standard hourly wage** (\$18.10/hour).⁴
- **Educational Criteria** – Within the greater LA/OC region, **98% of the annual job openings** for occupations related to quality control food technicians **typically require a high school diploma or equivalent.**
 - However, the national-level educational attainment data indicates **between 36% and 37% of workers in the field have completed some college or an associate degree.**

Supply:

- There are **2 community colleges** in the greater LA/OC region that issue awards related to agriculture technology, conferring an average of **3 awards annually** between 2018 and 2021.
 - Currently, there are no programs in the LA/OC region that fall under the most relevant TOP code for this quality control food technician program (**0113.00-Food Processing and Related Technologies**).
- Between 2017 and 2020, there was an average of **49 bachelor’s degrees conferred annually** in related training programs by non-community college institutions throughout the greater LA/OC region.

⁴ Self-Sufficiency Standard wage data was pulled from The Self-Sufficiency Standard Tool for California. For more information, visit: <http://selfsufficiencystandard.org/california>.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for these quality control food technician occupations. In the greater Los Angeles/Orange County region, the number of jobs related to these occupations is projected to slightly decrease by less than 1% through 2026. However, there will be nearly 3,300 job openings per year through 2026 due to retirements and workers leaving the field. It is important to note that the *inspectors, testers, sorters, samplers, and weighers* (51-9061) SOC code data includes jobs across all industries, mostly in manufacturing, and not solely within the agricultural/food science industry sector. Therefore, the data in Exhibit 1 is likely overstated for quality control food technician jobs.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties⁵

Geography	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	Annual Openings
Los Angeles	17,381	17,096	(285)	(2%)	2,216
Orange	8,150	8,278	128	2%	1,049
Total	25,531	25,374	(157)	(1%)	3,265

Wages

The labor market endorsement in this report considers the entry-level hourly wages for these quality control food technician 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 LA/OC region. Detailed wage information, by county, is included in Appendix A.

Los Angeles County

The majority (97%) of annual openings for the occupations of interest have entry-level wages below the self-sufficiency standard wage for one adult (\$18.10 in Los Angeles County). *Food science technicians* typically earn entry-level hourly wages above the county's self-sufficiency standard wage (\$18.20), while entry-level *inspectors, testers, sorters, samplers, and weighers* typically earn less than the self-sufficiency standard (\$16.49). Experienced workers can expect to earn wages between \$27.74 and \$30.27, which are higher than the self-sufficiency standard.

Exhibit 2: Earnings for Occupations in LA County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Food Science Technicians (19-4013)	\$18.20	\$22.64	\$30.27	\$47,100
Inspectors, Testers, Sorters, Samplers, and Weighers (51-9061)	\$16.49	\$18.76	\$27.74	\$39,000

*rounded to the nearest \$100

⁵ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Orange County

Both occupations of interest have entry-level wages below the self-sufficiency standard wage for one adult (\$20.63 in Orange County). Typical entry-level hourly wages are in a range between \$16.90 and \$17.68. Experienced workers can expect to earn wages between \$28.07 and \$28.56, which are higher than the self-sufficiency standard.

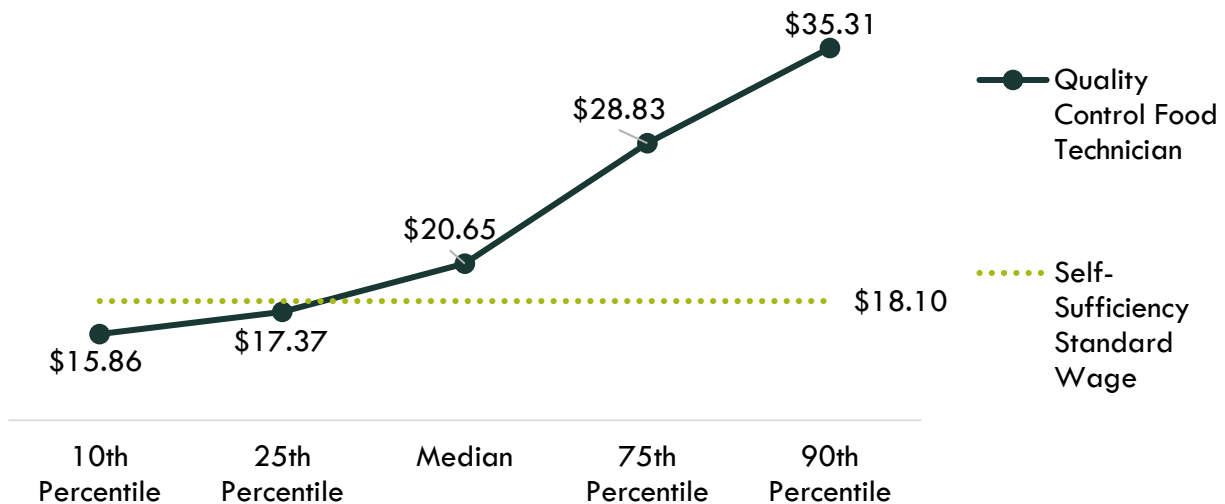
Exhibit 3: Earnings for Occupations in Orange County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Forensic Science Technicians (19-4092)	\$17.68	\$21.75	\$28.56	\$45,200
Inspectors, Testers, Sorters, Samplers, and Weighers (51-9061)	\$16.90	\$19.08	\$28.07	\$39,700

*rounded to the nearest \$100

On average, the entry-level earnings for the occupations in this report are \$17.37; this is below the living wage for one single adult in Los Angeles County (\$18.10). Exhibit 4 shows the average wage for the occupations in this report, from entry-level to experienced workers.

Exhibit 4: Average Hourly Earnings for Quality Control Food Technician Occupations in LA/OC

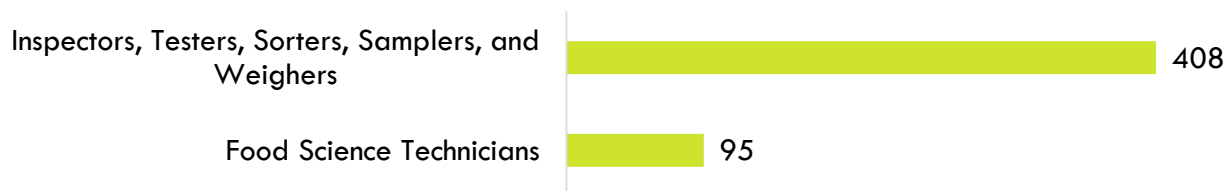


Job Postings

There were 503 online job postings related to quality control food technicians listed in the past 12 months (the occupations of interest that included the keyword “food” in the job posting). Exhibit 5 displays the number of job postings by occupation. The majority of job postings (81%) were for *inspectors, testers, sorters, samplers, and weighers*, followed by *food science technicians* (19%). The highest number of job postings were for quality control inspectors, quality control technicians, quality inspectors, quality assurance specialists, and line inspectors. The top skills were Good

Manufacturing Practices (GMP), food safety and sanitation, auditing, Hazard Analysis and Critical Control Points (HACCP), food manufacturing, food quality assurance and control, and food science. The top three employers, by number of job postings, in the region were Aerotek, Actalent, and SkillsetGroup.

Exhibit 5: Job postings by occupation (last 12 months)



Educational Attainment

The Bureau of Labor Statistics (BLS) lists the following typical entry-level education levels for the occupations in this report:

- **Associate degree:** *Food science technicians*
- **High school diploma or equivalent:** *Inspectors, testers, sorters, samplers, and weighers*

In the greater LA/OC region, the majority of annual job openings (98%) typically require a high school diploma or equivalent. However, the national-level educational attainment data indicates between 36% and 37% of workers in the field have completed some college or an associate degree. Of the 55% of occupation/program job postings listing a minimum education requirement in the greater Los Angeles/Orange County region, 60% (165) requested high school or vocational training, 5% (13) requested an associate degree, and 35% (97) requested a bachelor’s degree.

Educational Supply

Community College Supply

Exhibit 6 shows the annual and three-year average number of awards conferred by community colleges in the related TOP code: Agriculture Technology and Sciences, General (0101.00). Currently, there are no programs in the LA/OC region that fall under the most relevant TOP code for this quality control food technician program (0113.00-Food Processing and Related Technologies).

Exhibit 6: Regional community college awards (certificates and degrees), 2018-2021

TOP	Program	College	2018-19 Awards	2019-20 Awards	2020-21 Awards	3-Year Average
0101.00	Agriculture Technology and Sciences, General	LA Pierce	1	2	-	1
		Mt San Antonio	3	3	-	2
		LA Subtotal	4	5	-	3
Supply Total/Average			4	5	-	3

Non-Community College Supply

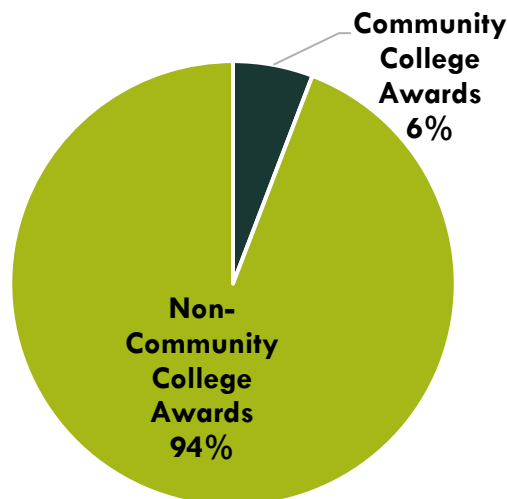
For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training programs for quality control food technicians. Exhibit 7 shows the annual and three-year average number of awards conferred by these institutions in relevant programs. Due to different data collection periods, the most recent three-year period of available data is from 2017 to 2020. Between 2017 and 2020, non-community college institutions in the region conferred an average of 49 bachelor’s degrees in programs that rain for the occupations of interest. Bachelor’s awards are included in this report, as they are the only comparable awards offered in the region for the occupations of interest.

Exhibit 7: Regional non-community college awards, 2017-2020

CIP	Program	Institution	2017-18 Awards	2018-19 Awards	2019-20 Awards	3-Year Average
01.0102	Agribusiness/Agricultural Business Operations	California State Poly University-Pomona	48	32	27	36
01.1002	Food Technology and Processing	CSU-Los Angeles	10	14	15	13
Supply Total/Average			58	46	42	49

Exhibit 8 shows the proportion of community college awards conferred in LA/OC compared to the number of non-community college awards for the programs in this report. Nearly all the awards conferred in these programs are awarded by non-community colleges in the LA/OC region. However, it’s important to reiterate that the non-community college awards in the region are all bachelor’s-level awards, and not associate-level awards.

Exhibit 8: Community College Awards Compared to Non-Community College Awards in LA/OC Region, 3-Year Average



Appendix A: Occupational demand and wage data by county

Exhibit 9. Los Angeles County

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Food Science Technicians (19-4013)	388	400	11	3%	58	\$18.20	\$22.64	\$30.27
Inspectors, Testers, Sorters, Samplers, and Weighers (51-9061)	16,993	16,696	(297)	(2%)	2,158	\$16.49	\$18.76	\$27.74
Total	17,381	17,096	(285)	(2%)	2,216	-	-	-

Exhibit 10. Orange County

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Food Science Technicians (19-4013)	113	121	8	7%	18	\$17.68	\$21.75	\$28.56
Inspectors, Testers, Sorters, Samplers, and Weighers (51-9061)	8,037	8,157	120	1%	1,031	\$16.90	\$19.08	\$28.07
Total	8,150	8,278	128	2%	1,049	-	-	-

Exhibit 11. Los Angeles and Orange Counties

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	% Age 55 and older*	Typical Entry-Level Education
Food Science Technicians (19-4013)	502	521	19	4%	76	28%	Associate degree
Inspectors, Testers, Sorters, Samplers, and Weighers (51-9061)	25,030	24,853	(176)	(1%)	3,190	34%	HS diploma or equivalent
Total	25,531	25,374	(157)	(1%)	3,265	-	-

*The average percentage of workers age 55 and older across all occupations in the greater LA/OC region is 27%. Inspectors, testers, sorters, samplers, and weighers have a larger share of older workers, which typically indicates greater replacements needs to offset the amount of impending retirements.

Appendix B: 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)

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