

**QUALIFICATIONS ASSESSMENT  
for  
RESEARCH SCIENTIST I (CHEMICAL SCIENCES)**

**GENERAL INSTRUCTIONS**

1. It is your responsibility to make sure you meet the education and/or experience requirements (minimum qualifications) stated on the bulletin for the specialty for which you want to apply. NOTE: Both "Core" and "Specialty" Qualifications Assessments constitute the entire examination. You must complete the "Core" and the "Specialty" Qualifications Assessments.
2. Your responses to the Core questions and the Specialty questions must be provided on the Qualifications Assessment documents. Answer all questions.
3. You must submit a complete examination package. Missing information will delay the processing of your examination. The following documents comprise a complete examination application package for one Research Scientist I examination:
  - Completed Employment Application (STD. 678) which can be found at <http://jobs.ca.gov/pdf/std678.pdf>
  - Affirmation
  - Conditions of Employment (Form 631)
  - "Core" Qualifications Assessment
  - "Specialty" Qualifications Assessment
  - A copy of your official degree and transcripts may assist in the evaluation of your qualifications
4. Before you mail the completed examination package, please keep a photocopy your records. In the event that you are called for a hiring interview, you may be requested to provide a copy of your examination package.
5. Upon receipt of your completed examination package, documents become confidential information and are the property of the California Department of Public Health, Selection and Certification Section. Due to its confidential nature, such information cannot be returned.
6. Test results will be mailed to you within six to ten weeks after the date your completed application examination package is received. The complete examination package may be filed in person or by mail to:

California Department of Public Health  
Selection Unit  
1501 Capitol Avenue, Suite 1501, MS 1701  
P.O. Box 997378,  
Sacramento, CA 95899-7378
7. If you have any questions regarding this examination, please contact the Department of Public Health, Selection and Certification Section at (916) 319-9759.
8. It is your responsibility to notify the California Department of Public Health, Selection and Certification Section, of any changes in your address. All correspondence must include the examination title, your identification number, and your social security number.
9. Additional instructions are provided within the Qualifications Assessment.

RESEARCH SCIENTIST I (CHEMICAL SCIENCES)

AFFIRMATION

Provide your name and address below:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Thank you for your interest in California State civil service employment. The State of California is an Equal Employment Opportunity employer. The Research Scientist I (Chemical Sciences) examination will consist of the Core Qualifications Assessment and of a Specialty Qualifications Assessment. Both assessments will be used to evaluate your knowledge, experience, training, and familiarity or understanding of a particular subject or issue. This is a scored test and will account for 100% of your rating. It is important that you fill the questionnaire out completely and accurately.

**YOUR RESPONSES ARE SUBJECT TO VERIFICATION.** Your responses should be an accurate reflection of your personal experience and training. Candidates who fail to follow the instructions may be eliminated from this examination.

**THIS AFFIRMATION MUST BE COMPLETED:**

I hereby certify and understand that the information provided by me on this questionnaire is true and complete to the best of my knowledge and contains no willful misrepresentation or falsifications. I understand this information will be verified and may be discussed in a hiring interview. I also understand that if it is discovered that I have made any false representations, I will be removed from the examination process, removed from the list resulting from the examination, or dismissed from civil service status.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print name

\_\_\_\_\_  
Date

The complete examination package may be filed in person or by mail to:

California Department of Public Health  
Selection Unit  
1501 Capitol Avenue, Suite 1501, MS 1701  
P.O. Box 997378  
Sacramento, CA 95899-7378

**IMPORTANT NOTE:** Please ensure that the envelope has adequate postage. Facsimiles (FAX) or Email will NOT be accepted under any circumstances.

**CONDITIONS OF EMPLOYMENT (631)**

**Examination Title: RESEARCH SCIENTIST I (CHEMICAL SCIENCES)**

**Name:** \_\_\_\_\_

(Print: first, middle initial, last)

If you are successful in your examination, your name will be placed on the active employment list and certified to fill vacancies according to the conditions you specify on this form.

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**Counties in which you are willing to work:**

(Please check your choices - you will not be offered a job in locations not checked.)

- \_\_\_\_\_ 0100 Alameda
- \_\_\_\_\_ 0700 Contra Costa
- \_\_\_\_\_ 3400 Sacramento
- \_\_\_\_\_ 3800 San Francisco
- \_\_\_\_\_ 1900 Los Angeles
- \_\_\_\_\_ 3700 San Diego

**Type of employment desired:**

(Please check the type of appointment(s) you will accept.)

\_\_\_\_\_ Permanent    \_\_\_\_\_ Limited Term    \_\_\_\_\_ Full Time

\_\_\_\_\_ Part Time (regular hours less than 40)

\_\_\_\_\_ Intermittent (on call)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**NOTE: If you wish to make any changes in your availability for employment marked above, please submit in writing your request to the following address: California Department of Public Health, Selection Unit, 1501 Capitol Avenue, Suite 1501, MS 1701, P.O. Box 997378, Sacramento, CA 95899-7378.**

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**SECTION I: KNOWLEDGE AND TRAINING**

IN YOUR RESPONSES YOU MAY INCLUDE WORK RELATED TO COLLEGE COURSES AND ANY PAID OR VOLUNTARY WORK EXPERIENCE.

**Using the following ratings, mark the box that applies to your knowledge and training.**

- A. I have taken college-level or other advanced coursework or training in the subject and have applied that coursework or training.
- B. I have taken college-level or other advanced coursework or training in the subject, but have not had the opportunity to apply the coursework or training.
- C. I have had little or no training in the subject area.

**Not providing a response to an item will result in that item being assessed as a “C” response.**

- 1. Study design  
A  B  C
- 2. Data collection methods  
A  B  C
- 3. Analysis and interpretation of scientific data  
A  B  C
- 4. Quality control methods on collected data  
A  B  C

**SECTION II: EXPERIENCE AND ABILITIES**

IN YOUR RESPONSES YOU MAY INCLUDE WORK RELATED TO COLLEGE COURSES AND ANY PAID OR VOLUNTARY WORK EXPERIENCE.

**Using the following ratings, mark the box that applies to your experience and abilities.**

- A. I am sufficiently experienced such that I can be considered technically proficient without additional training; I am immediately ready to perform this task.
- B. I have experience and/or training in performing this task and, with minimal guidance or training, would be able to perform the task well right away.
- C. I have little or no experience or training in performing this task.

**Not providing a response to an item will result in that item being assessed as a “C” response.**

- 1. Analyze and interpret scientific literature  
A  B  C
- 2. Assess the quality and validity of scientific information  
A  B  C
- 3. Maintain accurate and complete records and logs  
A  B  C
- 4. Apply statistical methods of analysis  
A  B  C

**SECTION II: EXPERIENCE AND ABILITIES (cont.)**

- 5. Prepare tables and graphs  
A  B  C
- 6. Perform quality assurance to maintain the integrity of the data  
A  B  C
- 7. Work as part of a team  
A  B  C
- 8. Interpret the findings of data analysis  
A  B  C
- 9. Prepare clear, complete, and technically accurate report(s)  
A  B  C
- 10. Work independently on specific tasks  
A  B  C
- 11. Develop appropriate recommendations/solutions based on an analysis of a problem  
A  B  C
- 12. Presentation of scientific papers, reports, and manuscripts  
A  B  C
- 13. Communicating scientific information to a lay audience in writing or orally  
A  B  C

**SECTION III: COMPUTER SKILLS**

IN YOUR RESPONSES YOU MAY INCLUDE WORK RELATED TO COLLEGE COURSES AND ANY PAID OR VOLUNTARY WORK EXPERIENCE.

**Using the following ratings, mark the box that applies to your computer skills.**

- A. I am extensively skilled and proficient.
- B. I am moderately skilled and proficient.
- C. I have little or no skill and proficiency.

**Not providing a response to an item will result in that item being assessed as a “C” response.**

- 1. Spreadsheet software  
A  B  C
  - 2. Database software  
A  B  C
  - 3. Word processing software  
A  B  C
  - 4. Statistical software  
A  B  C
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**SECTION IV: KNOWLEDGE AND TRAINING**

IN YOUR RESPONSES YOU MAY INCLUDE WORK RELATED TO COLLEGE COURSES AND ANY PAID OR VOLUNTARY WORK EXPERIENCE.

**Using the following ratings, mark the box that applies to your knowledge and training.**

- A. I have taken college-level or other advanced coursework or training in the subject and have applied that coursework or training.
- B. I have taken college-level or other advanced coursework or training in the subject, but have not had the opportunity to apply the coursework or training.
- C. I have had little or no training in the subject area.

**Not providing a response to an item will result in that item being assessed as a “C” response.**

- 1. Inorganic Chemistry  
A  B  C
- 2. Organic Chemistry  
A  B  C
- 3. Analytical Chemistry  
A  B  C
- 4. Biochemistry  
A  B  C
- 5. Radiochemistry  
A  B  C
- 6. Principles of chemical instrumentation  
A  B  C
- 7. Principles of sample preparation  
A  B  C
- 8. Environmental Toxicology  
A  B  C
- 9. Chemical risk assessment  
A  B  C
- 10. Chemical exposure assessment  
A  B  C

**SECTION V: EXPERIENCE AND ABILITIES**

IN YOUR RESPONSES YOU MAY INCLUDE WORK RELATED TO COLLEGE COURSES AND ANY PAID OR VOLUNTARY WORK EXPERIENCE.

**Using the following ratings, mark the box that applies to your experience and abilities.**

- A. I am sufficiently experienced such that I can be considered technically proficient without additional training; I am immediately ready to perform this task.
- B. I have experience and/or training in performing this task and, with minimal guidance or training, would be able to perform the task well right away.
- C. I have little or no experience or training in performing this task.

**Not providing a response to an item will result in that item being assessed as a “C” response.**

1. Use of sample collection methods for the analysis of environmental or biological samples  
A  B  C
2. Use of sample extraction methods for the analysis of environmental or biological samples  
A  B  C
3. Use of radiochemical separation methods for the analysis of environmental or biological samples  
A  B  C
4. Use of atomic spectrometry instrumentation for elemental analysis  
A  B  C
5. Use of gas chromatography for the analysis of environmental or biological samples  
A  B  C
6. Use of high-performance liquid chromatography for the analysis of environmental or biological samples  
A  B  C
7. Use of mass spectrometric methods for the detection of contaminants in environmental or biological samples  
A  B  C
8. Use of ion chromatography for the determination of anions or cations in environmental or biological samples  
A  B  C
9. Use of radiation detection instrumentation for the analysis of environmental or biological samples  
A  B  C
10. Modification of existing methods of chemical analysis to improve method sensitivity, specificity, or ruggedness, or to reduce analysis time or cost  
A  B  C
11. Development of new methods of chemical analysis  
A  B  C
12. Maintenance and troubleshooting of laboratory instrumentation  
A  B  C

**SECTION V: EXPERIENCE AND ABILITIES (cont.)**

13. Use of models to examine the fate and transport of chemicals in the environment  
A  B  C
14. Assessment of the physical and chemical properties of environmental pollutants to characterize their potential for release into the environment and their fate and transport  
A  B  C
15. Use of laboratory information management system to archive, organize, and analyze chemical data  
A  B  C
16. Selection of appropriate instrumentation, methodologies, and resources needed to carry out research studies in chemical sciences  
A  B  C
17. Development of appropriate data quality objectives for research studies in the chemical sciences  
A  B  C
18. Maintaining data integrity by ensuring that all quality control and quality assurance requirements for a given research project are met  
A  B  C
19. Perform literature searches for scientific information to solve relevant chemical research questions  
A  B  C
20. Designing or adapting research strategies to investigate environmental or public health issues involving chemicals  
A  B  C
21. Characterizing potential adverse human and ecological effects of chemicals based on scientific publications  
A  B  C
22. Conducting exposure assessments to identify and estimate potential human exposures  
A  B  C

END

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