

ILLINOIS DEPARTMENT OF CENTRAL MANAGEMENT SERVICES  
CLASS SPECIFICATION

LABORATORY RESEARCH SPECIALIST SERIES

<u>CLASS TITLE</u>	<u>POSITION CODE</u>
LABORATORY RESEARCH SPECIALIST I	23027
LABORATORY RESEARCH SPECIALIST II	23028

Effective: 2-16-90

SERIES DISCUSSION:

The Laboratory Research Specialist series encompasses nonsupervisory professional positions primarily conducting applied research in a state laboratory. This research tests theories and hypotheses by transforming them into practical laboratory experiments. Excluded from this series are those positions, subject to the provisions of the Illinois Clinical Laboratory Act, which conduct laboratory research experiments with specimens obtained from the human body, and those engaged in psychological/scientific research work that does not include the conduct of laboratory experiments.

Progression within the Laboratory Research Specialist series is predicated upon supervision exercised. Both the Laboratory Research Specialist I and II conduct professional laboratory research work; however, the Laboratory Research Specialist II is distinguished by serving as a designated lead worker to professional laboratory research staff.

LABORATORY RESEARCH SPECIALIST I                      POSITION CODE: 23027

DISTINGUISHING FEATURES OF WORK:

Under general supervision, performs professional scientific laboratory research work; conducts laboratory experiments to ascertain the causes and treatment of a variety of diseases/disorders, or to acquire knowledge of the mechanism whereby contaminants affect the environment.

ILLUSTRATIVE EXAMPLES OF WORK:

1. Uses laboratory animals (e.g., white rats) to perform research into the causes, diagnoses and treatment of mental disorders resulting from alterations or incorrect formation of critical areas in the central nervous system during its life cycle; uses historical and autoradiographic techniques to conduct experiments on structural disorders of the central nervous system.

## LABORATORY RESEARCH SPECIALIST I (Continued)

2. Performs biochemical laboratory research in an effort to understand the mechanisms by which normal brain growth occurs during development; researches literature; sets up and performs biochemical experiments; conducts instrument and chemical analyses of biological material; analyzes experiment results and reports same.
3. Conducts laboratory research into the means by which industrial by-products are retained in - and thus pollute - the ecosystem.
4. Prepares tissue cultures to study the growth of spinal motor neurons in relation to target-generated growth factors and effects of extracellular matrix materials; uses a microscope and photography to evaluate tissues.
5. Designs, implements and ensures completion of research projects associated with the regulation of biosynthesis of adenosylmethionine.
6. Assists in preparing materials for publication, for presentation at scientific meetings and for grant applications.
7. Assists in formulation of experiments designed to meet the overall goals of the laboratory.
8. May trains students in research techniques used in the laboratory.
9. Performs other duties as required or assigned which are reasonably within the scope of the duties enumerated above.

### DESIRABLE REQUIREMENTS:

#### Education and Experience

Requires a bachelor's degree from a recognized college or university in the chemical or biological sciences, supplemented by one year's chemical or biological laboratory experience.

#### Knowledges, Skills and Abilities

Requires working knowledge of the research techniques in the area of specialization.

Requires ability to organize, direct and teach others simple research procedures.

Requires ability to use specialized equipment in the performance of scientific experimental procedures.

Requires ability to analyze results of experiments and record scientific information.

LABORATORY RESEARCH SPECIALIST II

POSITION CODE: 23028

**DISTINGUISHING FEATURES OF WORK:**

Under direction, serves as designated lead worker of Laboratory Research Specialist I's; conducts laboratory experiments to obtain knowledge of the process whereby the environment is polluted by contaminants, to ascertain causes and treatments of a variety of diseases/disorders, or to better understand normal growth.

**ILLUSTRATIVE EXAMPLES OF WORK:**

1. As a lead worker to Laboratory Research Specialist I's, assigns and reviews subordinates' work activities; provides guidance, direction and training to staff for the efficient completion of duties; provides input into performance evaluations of subordinate employees.
2. Uses laboratory animals and neuroanatomic, pathologic, immunologic and biochemical methods and apparatus to design and conduct biological experiments on seizure disorders and seizure related brain damage; analyzes test results.
3. Guides other professionals in conducting and/or conducts laboratory research experiments to ascertain the processes inherent in the environmental pollution cycle.
4. Conducts experiments using state-of-the-art scientific technology to plan, direct and engage in research activities directed toward understanding the biochemical basis of the control of growth with respect to developmental disabilities of the nervous system.
5. Prepares and submits proposals for private and/or federal grants to seek external support for research projects; performs extensive writing and substantial library research to prepare the proposals.
6. Prepares and publishes manuscripts of research findings in scientific and medical journals; presents research findings at seminars and scientific meetings.
7. Performs other duties as required or assigned which are reasonably within the scope of the duties enumerated above.

## LABORATORY RESEARCH SPECIALIST II (Continued)

### DESIRABLE REQUIREMENTS:

#### Education and Experience

Requires a bachelor's degree in the chemical or biological sciences, supplemented by four years' professional laboratory experience.

#### Knowledges, Skills and Abilities

Requires extensive knowledge of relevant scientific literature in the principles of experimental design.

Requires thorough knowledge of basic research in the causes diagnosis and treatment of mental, behavioral, aging and social disorders in an area of investigation or the evaluation of the ecosystem pollution cycle.

Requires ability to train subordinate staff and to assign them tasks and direct and review their work.

Requires ability to establish problem areas and outline techniques to be followed in research.

Requires ability to use specialized equipment and perform difficult scientific experimental procedures.

Requires ability to plan, perform, analyze, interpret, prepare and publish reports on independent and original scientific research.

Requires ability to deliver lectures to various professional and lay groups.