

# Missouri Department of Transportation

Code: R04072

Title: Intermediate Chemist

Exemption Status: Non-Exempt

Grade: 13

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## **Job Description**

**Effective Date** 12-01-2013

**Replaces (Effective Date)** 04-01-2006

**General Summary** The intermediate chemist conducts varied and moderately complex chemical and physical tests and analyses by gravimetric, volumetric, and potentiometric methods, using specialized instruments to determine properties and ensure compliance with specifications. Responsibilities are performed under moderate supervision.

**Minimum/Required Qualifications** Bachelor's Degree: Chemistry  
Two years of experience in chemical testing procedures.

**Supervisory Responsibilities** None

**Location** Central Office - Construction and Materials

**Special Working Conditions/Job Characteristics** Job requires exposure to physical hazards, health and safety risks, and/or adverse or otherwise undesirable characteristics in the environment.

Job requires moderate physical activity.

Job may require operation of vehicles to plow snow and spread ice control materials.

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## **Examples of Work**

- (1) Conducts quantitative and qualitative analyses of bituminous materials, cements, paints, petroleum products, metals, soils, reflective materials, wood, and other materials used in the construction and maintenance of the state highway system.
- (2) Performs calculations, maintains records, tracks materials, and prepares reports on all testing activities and results.
- (3) Demonstrates test procedures during on-site American Association of State Highway and Transportation Officials (AASHTO) Materials Reference Laboratory and the Cement and Concrete Reference Laboratory inspections, maintains assigned Quality Systems Manual, and accurately analyzes proficiency samples as required to maintain national laboratory accreditation.
- (4) Calibrates, repairs, and maintains precision test equipment including pycnometers, Ph meters, thermometers, and other test equipment.
- (5) Contacts and maintains communications with cement, fly ash, slag, power generating stations, sign and related.
- (6) Inspects established and new, instate and out-of-state, manufacturing facilities for cement, fly ash, and

GGBFS for compliance with existing and new qualifications.

- (7) Provides technical support and training to department personnel.
- (8) Follows necessary procedures to properly handle and dispose of hazardous and carcinogenic waste generated by laboratory testing.
- (9) Utilizes specialized testing equipment such as infrared spectrophotometer and inductively coupled plasma spectrophotometer to conduct tests necessary to increase proficiency in equipment usage.
- (10) Monitors supplies and equipment for availability, and requests the re-supply of chemicals and glassware as needed.
- (11) Performs other responsibilities as required or assigned.

**The Missouri Department of Transportation promotes an equal opportunity workplace that includes reasonable accommodation of otherwise disabled applicants and employees. Please see your manager should you have any questions about this policy or these job duties.**