

# Senior Analytical Chemist (P-4)

## Principal Functions

Reporting to the Head, Laboratory and in accordance with the OPCW Core Values of Integrity, Professionalism and Respect for Diversity/Gender Equality, the Senior Analytical Chemist performs the following duties:

### SAC Environmental

Assisting in conducting the inter-laboratory proficiency testing programmes by:

1. Assisting Head of the Laboratory with planning and organising tests;
2. Advising the Preparing laboratory on sample preparation and shipping;
3. Supervising and performing independent analyses of test samples;
4. Supervising and writing the OPCW Laboratory reports from analyses of samples;
5. Evaluation of the participants' reports of the tests, providing evaluation reports;
6. Advising Evaluating laboratory on performing analyses and checking of their draft evaluation report;
7. Acting as a key member in meetings to discuss evaluation results with the evaluating laboratory;
8. Checking of evaluation reports;
9. Assisting in drafting of the preliminary evaluation reports;
10. Assisting with the meetings to discuss results of proficiency tests;
11. Assisting with finalisation of test results;
12. Maintaining and updating the QDOCs related to this activity;
13. Taking the lead with respect to audits by OIO and/or RvA for proficiency testing.

### SAC Bioanalytical

1. Research, develop and implement methods for: 1. Protein/DNA adducts of chemical weapons agents (Secondary focus); 2. Toxin analysis (e.g. Ricin) (Primary focus); 3. Other compounds as determined by the Head of the Laboratory.
2. Develop a training programme for internal and external participants in the analysis of biomedical samples and toxins;
3. Assist with the management of the biomedical proficiency testing programme;
4. Oversee the maintenance and use of the LC/MS system
5. Perform LC/MS analysis in support of both the environmental and biomedical proficiency testing programmes
6. Oversee the Toxin Confidence Building Exercise: 1. Prepare and ship samples; 2. Evaluate reports; 3. Perform administrative work related to the exercise.

*All Senior Analytical Chemists in the laboratory share the following responsibilities:*

**Provide training and certification exercises for AC inspectors or other trainees on performing analyses using GC/MS systems and sample collection and preparation kits:**

1. Assist with the planning of the scope, technical and organisational aspects of the training;
2. Development of training materials;
3. Preparation and validation of instruments for the training;
4. Preparation of the samples for the training and certification exercises;
5. Act as key lecturer and instructor during training and exercises;
6. Supervise the work of trainees in the laboratory;
7. Evaluate and report the performance of the trainees.

**Develop and provide training for both internal and external participants on 1) performing analyses using analytical equipment such as GC/MS, LC/MS and NMR, 2) methods/techniques supporting the proficiency testing programme, 3) safe handling of chemical agents, 4) synthesis of chemical agents, 5) other training courses as determined by the Head of the Laboratory:**

1. Assist with the planning of the scope, technical and organisational aspects of the training;
2. Development of training materials;
3. Preparation and validation of instruments for the training;
4. Preparation of the samples for the training;
5. Act as key lecturer and instructor during training and exercises;
6. Supervise the work of trainees in the laboratory;
7. Evaluate and report the performance of the trainees.

**Maintain OPCW Laboratory accreditation and support QMS:**

1. Actively contribute to the maintenance and development of the QMS in the relevant areas;
2. Maintain and develop QMS documentation, including SOPs and WIs;
3. Support internal audit activities, receive audit reports and ensure corrective action where necessary;
4. Assist with the preparation of the quality manuals, the document control mechanism and the recording reporting methods;
5. Actively participate in cross training activities to support continuity of expertise in all laboratory processes in case of staff replacement;
6. Assist with performing QA audits.

**Ensure safe and efficient operation of the OPCW Laboratory in Rijswijk Facility including procurement and maintenance of laboratory equipment in a timely and efficient manner:**

1. Assist with planning and drafting the annual OPCW Laboratory budget;
2. Assist with evaluating, selecting and delegating staff for relevant laboratory tasks;
3. Act as senior analytical and CW expert by advising, undertaking and supervising experimental work in the Laboratory;
4. Assist with activities necessary to ensure a safe working environment;
5. Participate in internal Health and Safety audits;
6. Report to the Head of OPCW Laboratory on the operational situation, progress and results;
7. Provide an information and place orders to ensure that there is enough equipment and chemicals to support efficient work of the OPCW Laboratory;
8. Supervise and undertake procedures for the use, maintenance, calibration and quality assurance of analytical equipment are in place;
9. Support procurement of equipment in technical aspects and advise the Committee on Contracts as needed.

**Provide technical advice, training and support on inspection analytical equipment-related issues and verification-related analytical issues:**

1. Develop, test and validate analytical methods;
2. Receive and evaluate information and documents related to inspection equipment and sample analysis;
3. Provide technical advice and support to the Head of the Laboratory when required;
4. Ensure that different divisions and branches of OPCW are provided with technical advice and information relating to inspection analytical equipment and verification-related analytical issues when requested;
5. Assist the Inspectorate by acting as an Analytical Chemist Inspector;
6. Perform research on industrial chemicals and their analysis prior to an inspection;
7. Prepare for mission by taking part in pre-mission briefings, get medical clearance, fit personal protective equipment;
8. Travel on inspections and function as an Analytical Chemist;
9. Report/brief post inspection.

**Perform other duties as required.**

## **Educational qualifications required for this post**

### **Education**

#### **Essential**

An advanced degree in Chemistry or equivalent from a recognized institution. A first-level university degree in combination with extensive relevant laboratory experience (minimum 9 years) may be accepted in lieu of the advanced university degree.

## **Desirable**

Ph.D. in Chemistry, Biochemistry or Toxicology preferably with a focus on Analytical or Bioanalytical Chemistry

## **Experience**

### **Essential**

1. At least 7 years experience in the field of analytical chemistry and instrumental analysis with advanced degree or 9 years with first level degree;
2. A minimum of 6 years recent and practical experience as operator of GC/MS and/or LC/MS and/or NMR instrumentation;
3. (SAC Environmental): Several years of recent and practical experience in the analysis of chemical weapons related samples; including sample collection and sample preparation procedures for environmental samples;
4. (SAC Bioanalytical): Several years of recent and practical experience in the analysis of DNA and/or proteins and/or peptides.

### **Desirable**

(SAC Environmental): Experience in the analysis of biomedical samples will be an asset.

(SAC Environmental and Bioanalytical): Skills in the small-scale synthesis of CWC related chemicals for analysis are highly desirable. Experience developing & teaching training courses will be an asset.

## **Skills and Abilities (key competencies)**

1. Knowledge of the chemistry of Scheduled chemicals, their precursors and degradation products that are listed in the 'Annex on Chemicals' in the CWC;
2. Knowledge of sampling and analysis procedures for the analysis of chemical weapons related chemicals and of related instrumental analytical methods and techniques (GC/MS, LC/MS, FTIR, NMR);
3. Knowledge of quality assurance and quality control procedures and international standards;
4. Strong computer software and electronic data management skills;
5. (SAC Bioanalytical): Practical knowledge of LC/MS systems and processing software;
6. Basic understanding of general analytical methods including their limitations and of modern instrumentation needed to apply these methods in field as well as laboratory situations;
7. A broad understanding of the various analytical techniques (and their limitations) used by laboratories in the analysis of Convention related chemicals;
8. Ability to manage teams in working on technical projects, background in quality management systems;
9. Tact, discretion, and the ability to work harmoniously in a multi-cultural environment

## Language Requirements

Fluency in English is essential and a good working knowledge of one of the other official languages (Arabic, Chinese, French, Russian, and Spanish) is desirable.