

Chemical Hygiene Plan Template

The OSHA standard "Occupational Exposure to Hazardous Chemicals in Laboratories" (**29 CFR 1910.146**), also known as the OSHA laboratory standard, requires that each facility engaged in the laboratory use of hazardous chemicals develop and implement a written chemical hygiene plan. The chemical hygiene plan is a guide that sets forth procedures, engineering controls, personal protective equipment (PPE), and work practices that are capable of protecting employees from the health hazards presented by hazardous chemicals used in that particular workplace.

Synthetic opioids are highly toxic organic solids (UN2811); powders are readily aerosolized and present a respiratory hazard. A dermal hazard exists with direct skin contact with bulk amounts. There are no established Permissible exposure limits (PELs) and Threshold Limit Values (TLVs) for many synthetic opioids. Chemicals may be classified as hazardous without a published PEL and employers must protect employees even without the publication of a PEL.

The Safety Data Sheet for fentanyl citrate (<https://medicalpurchasingsolutions.com/PDF/MSDS/Fentanyl20ml%20MSDS.pdf>) does provide an Employee Exposure Limit (EEL) of 0.1 mcg/m³ over an 8-hour time weighted average.

Exposure Guidelines Exposure limits			
Component	OSHA-PEL	ACGIH-TLV	Hospira EEL
Fentanyl Citrate	8 hour TWA: Not Established	8 hour TWA: Not Established	8 hour TWA: 0.1 mcg/m ³ STEL: Not Established

OSHA PEL: US Occupational Safety and Health Administration – Permissible Exposure Limit
 ACGIH TLV: American Conference of Governmental Industrial Hygienists – Threshold Limit Value.
 EEL: Employee Exposure Limit.
 TWA: 8- hour Time Weighted Average.
 STEL: 15-minute Short Term Exposure Limit.

Required Chemical Hygiene Plan Elements

#	Element	Description of Element	Staff Training Date	Implementation Date
1	Standard operating procedures for the safe handling of synthetic opioids evidence	Describe basics of SOP		
2	Criteria for implementation of control measures to reduce exposure to hazardous materials	List engineering controls, use of personal protective equipment, and work and hygiene practices with particularly attention to synthetic opioids potential exposure		
3	Fume hoods and other protective equipment are functioning according to manufacturer specifications	List specific measures to ensure proper and adequate performance of such equipment		

4	Information provided to personnel processing evidence and working with hazardous substances	<p>List information provided to staff such as:</p> <ol style="list-style-type: none"> 1. Contents of the laboratory standard and its appendices 2. Location and availability of laboratory Chemical Hygiene Plan 3. Permissible exposure limits (PELs) for various synthetic opioids 4. Signs and symptoms associated with exposures to synthetic opioids 5. Location and availability of known reference materials on the hazards, safe handling, storage, and disposal of synthetic opioids in the laboratory, including but not limited to SDS received from the chemical supplier 		
5	The circumstances under which a particular laboratory operation, procedure or activity requires prior approval from the employer before being implemented			
6	Designate responsible person for implementation of the Chemical Hygiene Plan	Assignment of a Chemical Hygiene Officer and if appropriate establishment of Chemical Hygiene Committee		
7	Provisions for additional worker protection for work with particularly hazardous substances	<p>List provisions and specific considerations that must be given to following provisions such as:</p> <ol style="list-style-type: none"> 1. Establishment of designated area to process synthetic opioid type evidence 2. Use of containment devices such as fume hoods or glove boxes 3. Procedures for safe removal of contaminated waste 4. Decontamination procedures 		
8	Review and evaluate the effectiveness of the CHP annually	Establish process for review and updating CHP		

Worker Training Elements			
1	Establishing methods for detecting presence or release of hazardous materials	List provisions to be taken such as continuous monitoring, visual appearance or odor of chemicals being released	
2	Identify physical and health hazards in work area	Procedures to implement when processing synthetic opioids so as not to expose others	
3	Identify measures workers can take to protect themselves from hazards of synthetic opioids	Summarize procedures employer has implemented to protect workers from exposure, such as appropriate work practices, emergency procedures, and personal protective equipment to be used	
4	Applicable details of employers CHP	Employer should state specific location where CHP can be found	

Medical Exams and Consultation			
1	<p>Employer must provide all personnel who work with hazardous materials an opportunity to receive medical attention including follow up visits deemed necessary by an examining physician under these circumstances:</p> <ol style="list-style-type: none"> 1. Worker develops signs or symptoms associated with exposure 2. Where exposure monitoring reveals an exposure level routinely above the action level for which there are exposure monitoring and medical surveillance requirements or medical surveillance should be established for affected workers 	List provisions that will be taken by employer for the safety of employee	