
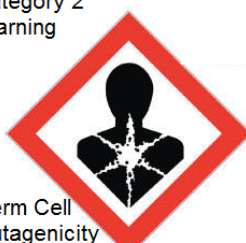








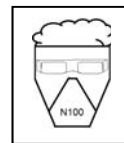


Chemical Safety Practices Recommendations

Oxaliplatin (Eloxatin, [(1R,2R)-cyclohexane-1,2-diamine](ethanedioato-O, O')platinum(II))

Exposure Hazards (1, 2)				
<p>Category 2 Warning</p>  <p style="text-align: center;">Carcinogenicity</p> <p style="text-align: center;">Suspected of Causing Cancer</p>	<p>Category 2 Warning</p>  <p style="text-align: center;">Germ Cell Mutagenicity</p> <p style="text-align: center;">Suspected of Causing Genetic Defects</p>	<p>Category 1 Warning</p>  <p style="text-align: center;">Skin Sensitization</p> <p style="text-align: center;">May Cause An Allergic Skin Reaction</p>	<p>Category 1 Danger</p>  <p style="text-align: center;">Respiratory Sensitizer</p> <p style="text-align: center;">May Cause Allergy or Asthma if Inhaled.</p>	<p>Category 2 Warning Toxic</p>  <p style="text-align: center;">Repeat/chronic exposure may damage gastro- intestinal tract, bone marrow, liver, kidneys, lungs, ears, and nervous system.</p>
<p>Category 2 Warning</p>  <p style="text-align: center;">Skin Irritation</p> <p style="text-align: center;">Causes Skin Irritation</p>	<p>Category 2A Warning</p>  <p style="text-align: center;">Eye Irritation</p> <p style="text-align: center;">Causes Serious Eye Irritation</p>	<p>Category 3 Warning Toxic</p>  <p style="text-align: center;">Toxic If Swallowed</p>	<p>Category 2 Warning</p>  <p style="text-align: center;">Toxic to Reproduction</p> <p style="text-align: center;">Suspected of Damaging Fertility or the Unborn Child</p>	<p>Category 3 Warning Toxic</p>  <p style="text-align: center;">May Cause Respiratory Irritation</p>
Response to Exposure				
Oral	Dermal	Inhalation	Injection	
Rinse mouth; do not induce vomiting. Report to OHS.	Wash skin with soap and water for 15 minutes. Rinse eyes for 15 minutes. Report to OHS.	Leave area; go to clean air. Report to OHS.	Report to OHS.	
Special Precautions	Pregnant women should exercise caution when working with Oxaliplatin.(3) Discard garments as hazardous if contaminated with Oxaliplatin.			
Personal Protective Equipment	Gloves (Double glove) (Latex or Nitrile) Skin Protection (Suit or Scrubs or Lab Coat) Eye Protection (Safety-glasses or Goggles) Closed-toe shoes Use N100 respirator if engineering controls are not available.			
Engineering Controls	Oxaliplatin powder- Chemical Fume Hood (CFH) (4) Oxaliplatin solution- CFH or Biosafety Cabinet (Class II, B2 BSC if aerosolized) Animal waste and bedding until one day after last treatment- CFH or Class II, B2 BSC (5, 6)			
Animal Handling	Avoid exposure to animal urine until one day after last treatment.			
Bedding Disposal	Dispose of bedding as hazardous material until one day after last treatment.			
Work Practices	Empty Oxaliplatin containers and unused Oxaliplatin must be disposed of as hazardous. Follow LASP SOPs for preparation, handling, dosing, and disposal of Oxaliplatin.			



Questions or concerns: Please contact EHS, Ted Witte, theodore.witte@nih.gov or 301-846-5860
 Reviewed 02/09/2015 *These recommendations are not final and may be updated.*

Chemical Safety Practices Recommendations

Oxaliplatin (Eloxatin, [(1*R*,2*R*)-cyclohexane-1,2-diamine](ethanedioato-*O*,*O'*)platinum(II))

References:

1. Oxaliplatin MSDS [Internet]. Sigma Aldrich. 2015 [cited 01/02/2015]. Available from: <http://www.sigmaaldrich.com/united-states.html>.
2. Oxaliplatin Injection Solution MSDS [Internet]. Hospira. 2009 [cited 01/02/2015]. Available from: <http://bdipharma.com/msds/hospira/oxaliplatininjectionsolution1.pdf>.
3. NIOSH. NIOSH list of antineoplastic and other hazardous drugs in healthcare settings 2014. Cincinnati, OH: National Institute for Occupational Safety and Health, DHHS (NIOSH), U.S. Department of Health and Human Services CfDcAP; 2014 September 2014. Report No.: 2014-138 Contract No.: 2014-138.
4. National Research Council Committee on Prudent Practices in the L. The National Academies Collection: Reports funded by National Institutes of Health. Prudent Practices in the Laboratory: Handling and Management of Chemical Hazards: Updated Version. Washington (DC): National Academies Press (US) National Academy of Sciences.; 2011.
5. Ehrsson H, Wallin I, Yachnin J. Pharmacokinetics of oxaliplatin in humans. Medical oncology (Northwood, London, England). 2002;19(4):261-5.
6. Luo FR, Wyrick SD, Chaney SG. Biotransformations of oxaliplatin in rat blood in vitro. Journal of biochemical and molecular toxicology. 1999;13(3-4):159-69.

Oxaliplatin is used to treat colorectal cancer as part of the FOLFOX treatment regimen. It is a platinating anti-neoplastic drug similar to Carboplatin and Cisplatin, with excretion kinetics similar to those of Cisplatin. The drug is rapidly hydrolyzed in the blood serum to its active form and binds to proteins and DNA. The major route of excretion of oxaliplatin and its metabolites is through the urine. Free Oxaliplatin and toxic metabolites may be excreted for several hours after treatment.

Oxaliplatin should be handled with respect because it is a potent compound capable of causing allergic sensitization and potentially cancer and damage to the unborn child. However, the user should not be alarmed by the large number of warning pictograms included in this particular CSPR. Hazards are not listed unless there is sufficient information to believe that they apply, the lack of a hazard listing does not mean that the hazard may not possibly exist. In this instance, the hazards of the drug are very well studied and therefore the list is much more complete than in other CSPRs which have been issued.