


ARKANSAS STATE UNIVERSITY EHS
LABORATORY CHEMICAL STANDARD OPERATING PROCEDURE

Chemical Name: Sodium cyanide **CAS #:** 143-33-9

Hazard Classification: Health Hazard

Location Used:	Principal Investigator:
Processes for Which Chemical Is Used:	

HAZARDS AND PROTECTION

<p>Hazard Information</p> <ul style="list-style-type: none"> Acute oral, dermal and inhalation toxicity Organ Toxicity Corrosive to metals 	
<p>Routes of Exposure</p> <ul style="list-style-type: none"> Ingestion Inhalation Eye absorption Skin Absorption 	<p>If exposed by:</p> <ul style="list-style-type: none"> Inhalation: Fatal if inhaled. Remove to fresh air. Do not use mouth to mouth; give artificial respiration through pocket mask, one-way valve or other respiratory medical device. Ingestion: Fatal if swallowed. Do not induce vomiting. Eye or skin: Fatal in contact with skin. Rinse with plenty of water for 15 minutes.
<p>Symptoms of Exposure</p> <ul style="list-style-type: none"> Exposure can be fatal. May cause tightness in chest, flushing, headaches, nausea, vomiting, respiratory depression, weakness, irregular heartbeat, abdominal pain, convulsions and shock. Cyanosis (blue skin) can occur. 	<p>If exposed by any route, seek immediate medical attention.</p>
<p>Exposure Limits</p> <p>All exposure limits are Time Weighted Averages (average exposure over an eight-hour day) unless otherwise indicated.</p>	<p>OSHA PEL: None indicated ACGIH TLV: 1.88 ppm (5 mg/m³) ceiling- skin NIOSH REL: 1.88 ppm (5 mg/m³) ceiling, 9.39 ppm (25 mg/m³) IDLH</p>
<p>Engineering Controls</p> <ul style="list-style-type: none"> Chemical Fume Hood 	<p>Never open sodium cyanide outside of a chemical fume hood.</p>

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<p>Administrative Controls</p> <ul style="list-style-type: none"> • Designated area sign • Particularly hazardous substance label 	<ul style="list-style-type: none"> • Post designated area sign before each use. • Label containers of sodium cyanide as a health hazard. • Use as small a quantity as possible. • Ensure no acid or water is in the area. Sodium cyanide reacts with acids to form hydrogen cyanide, which can reach toxic levels before it is ever detected by odor.
<p>Personal Protective Equipment</p> <ul style="list-style-type: none"> • Gloves • Safety glasses (for dry chemical) or splash goggles (for solutions) • Lab coat • Tyvek sleeves (for amounts exceeding 1 gram). 	<p>Two pairs of nitrile gloves must be worn when handling sodium cyanide. Wash hands immediately after use. Splash goggles must be worn when working with solutions of sodium cyanide greater than 1%.</p>

OTHER SAFETY INFORMATION

<p>Transportation</p>	<p>Follow guidance given in the laboratory safety manual for transport of chemicals.</p>
<p>Storage</p> <ul style="list-style-type: none"> • Avoid exposure to moisture. • Can be stored with other dry chemicals but in a dedicated section for toxic chemicals. • Keep away from heat and open flames. 	<p>Incompatible materials include:</p> <p>Acids, strong oxidizing agents, bases, powdered metal salts, aldehydes, peroxides, metals.</p>
<p>Spill/Accident Procedures</p> <p>For all spills:</p> <ul style="list-style-type: none"> • Wear two pairs of nitrile gloves, safety glasses and lab coat • Evacuate the immediate area <p>Exposure:</p> <ul style="list-style-type: none"> • If anyone exposed requires emergency medical attention, dial 911 (or 9-911 from landline). • Follow procedures outlined in laboratory safety manual. 	<p>Small spills (less than 1 g in a hood): Small spills may be cleaned by sweeping up dry powder and placing them in a container. If the spill is a liquid, cover with absorbent material and then place the absorbent material container. After the solid has been removed or the liquid has been absorbed, clean the area with pH 10 buffer and then rinse with dilute bleach.</p> <p>Large spills (greater than 1 g in a hood or any amount outside a fume hood): If the spill is in a chemical fume hood, contact the EHS director (864-710-2933). If he cannot be reached (does not answer phone, do not leave voicemail), then call 911, pull the fire alarm and exit the building. If the spill is outside of a hood, then call 911, pull the fire alarm and exit the building.</p>
<p>Waste Disposal</p>	<p>Waste sodium cyanide must be collected for disposal.</p> <p>Empty bottles of sodium cyanide must be collected by EHS. DO NOT rinse them! Do not throw them in the trash!</p>

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