



## EMS System for Metropolitan Oklahoma City and Tulsa 2024 Medical Control Board Treatment Protocols



Approved 11/08/23, Effective 1/15/24, replaces all prior versions

### 16W – HYDROXOCOBALAMIN (CYANOKIT®)

ADVANCED EMT

PARAMEDIC

**Class:** Cyanide Antidote

**Actions/Pharmacodynamics:** Hydroxocobalamin binds cyanide, forming cyanocobalamin for urinary excretion.

**Indications:** Cyanide (12E)

**Contraindications:** None in the setting of suspected cyanide toxicity.

**Pharmacokinetics:** Near immediate onset of action following IVPB initiation. Effect is seen for hours, with duration of action seen predominantly in the first 24 hours following administration, but measurable for days.

**Side Effects:** Redness of skin and mucous membranes may be prominently noted. Additional side effects include headache, dizziness, restlessness, eye irritation, throat irritation, dyspnea, pulmonary edema, chest tightness, hypertension, tachycardia, palpitations, nausea, vomiting, diarrhea, abdominal pain, dysphagia, red urine, and hives.

**Dosage:**       **Cyanide - Adult (12E)**  
5 grams IVPB in 15 minutes

**Cyanide - Pediatric (12E)**  
The pediatric dose is 70 mg/kg IVPB administered over 15 minutes. Safe use of CYANOKIT® has not been well established in children. However, if clinically indicated the benefits likely outweigh the risk.

**How Supplied:**       CYANOKIT® preparations include either one glass vial containing 5 grams of hydroxocobalamin as a dark red crystalline powder for reconstitution with 200 mL normal saline or a set of two glass vials, each containing 2.5 grams of hydroxocobalamin as a dark red crystalline powder for reconstitution with 100 mL normal saline per vial. Follow full instructions accompanying CYANOKIT® for preparation and administration, including use of transfer spike for normal saline addition to the vial(s), rocking, but not shaking the vial for 60 seconds prior to administration, and administering the infusion from the vial(s). (Always check concentration and dose per container at time of patient medication administration)

**Special Comment:** Multiple drug-drug incompatibilities exist with hydroxocobalamin. Use a separate IV line for the administration of hydroxocobalamin.