



## DIGITALIS

### I. Protocol Overview

Digitalis is often used as a therapeutic heart drug and a traditional diuretic. It is derived from the Foxglove plant, not just the leaves and is considered a cardiac glycoside. Signs and symptoms of acute digitalis (digoxin or digitoxin) poisoning by ingestion include primarily gastrointestinal effects such as nausea and vomiting, hyperkalemia, and cardiovascular effects (bradydysrhythmias or tachydysrhythmias (ventricular tachycardia/ fibrillation or atrial tachycardia).

Therapeutic levels of digoxin are typically 0.5-2.0 ng/mL while therapeutic levels of digitoxin are 10-30 ng/mL. Because multiple determinants exist for digoxin poisoning and serum digoxin concentrations overlap between symptomatic and asymptomatic patients, use of the therapeutic range for diagnosis might be misleading. The therapeutic range should be correlated with the clinical findings. Serum levels might be low after an exposure to plant glycosides, which cross-react imperfectly. In addition, false-positives might be noted for pregnant women and for patients with liver and renal disease. Sheep-derived IgG antibodies to digoxin have been used successfully in patients with oleander toxicity as an antidote.

For all suspected chemical exposures, consult the Poison Control Center (800-222-1222) located at Children's Hospital of Philadelphia. Information and treatment advice is available to the public and healthcare professionals at no charge.

Digitalis and digoxin can be detected in plasma and some environmental samples using liquid chromatography tandem mass spectrometry techniques. Digitalis presence is detected in food samples through the Kedde reaction followed by colorimetric thin-layer chromatography (TLC).

The Delaware Public Health Laboratory does not perform this testing. Contact the CDC or the Poison Control Center.

### II. Contact Information

24/7 CDC Emergency Contact Number: 1-888-295-5156

Poison Control Center: 215-386-2100

### III. CDC Website

<http://emergency.cdc.gov/agent/digitalis/casedef.asp>

**24/7 Emergency Contact Number: 302-223-1520**

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