



Model 5320 ELCD Troubleshooting Guide

The following lists the most common problems possible when using the ELCD, along with their most probable causes and corresponding corrective actions. Each symptom potentially may be caused by more than one problem. The probable causes of each symptom are listed in order of increasing severity. This manual discusses each corrective action in previous chapters.

Before using this guide, become thoroughly familiar with the operation and maintenance information contained in previous chapters. If a problem persist after reviewing the following chart or if a particular problem is not addressed, contact OI Analytical Technical Support at (800) 336-1911 or (979) 690-1711 for assistance.

Symptom	Probable Cause	Corrective Action
No response	No solvent flow	See Chapter 4, "Setting the Solvent Flow" on page 38. Correct any blockages.
	No carrier or reaction gas flow	See Chapter 3, "Installing the Column" on page 24. Correct any leaks.
	Electronic device not connected properly	See Chapter 3, "Installing the Detector Controller" on page 35. Correct any connection problems.
Low or tailing response	Transfer line to cell contaminated	See Chapter 5, "Rinsing the Transfer Line" on page 43.
	Reaction tube fouled	See Chapter 5, "Replacing the Reaction Tube" on page 47.
	GC injector system leaks	Check the injection septum for leaks. Inspect and tighten other components as needed.
	Contaminated cell	See Chapter 5, "Cleaning the Conductivity Cell" on page 50, or replace the cell.
	Incorrect reactor temperature	Reset to the specified temperature.
	Column degraded	Replace the column. See Chapter 3, "Installing the Column" on page 24.
	Reactor failed	Replace the reactor core.

Symptom	Probable Cause	Corrective Action
High baseline	Contaminated solvent	See Chapter 5, “Replacing the Solvent” on page 45 and Chapter 5, “Replacing the Resin Cartridge” on page 46.
	Conductivity cell wet or damaged	Dry the conductivity cell in oven at 60°C for one hour, then restart.
	Column bleed	Cool the column while monitoring the baseline.
Baseline spikes	Reaction tube not conditioned	Allow the reaction tube to condition at 1,000°C for 10 minutes, then retest.
	Reaction tube fouled	See Chapter 5, “Replacing the Reaction Tube” on page 47.
	Particle eluting from column	Filter the column effluent with a 5- μ m frit.
	Incorrect carrier to reaction gas ratio	Check gas flow rates separately at the solvent return line exit. See Chapter 4, “Setting Gas Flows” on page 37.
Noisy baseline	Incorrect solvent flow	Measure the solvent flow per Chapter 4, “Setting the Solvent Flow” on page 38.
	Electronic noise	Ensure the cell enclosure cover is in place.
Insufficient solvent flow	Clogged solvent filter	Replace the resin cartridge. See Chapter 5, “Replacing the Resin Cartridge” on page 46.
	Overtightened solvent lines	Check the solvent lines.
Noise on peaks	Pulsating pump flow	Check the pump and solvent flow rate. Replace the pump.
	Dirty cell	Clean the cell. See Chapter 5, “Cleaning the Conductivity Cell” on page 50.
	Defective cell	Replace the cell.
	Low solvent flow	Increase the solvent flow.