

**FORENSIC TOXICOLOGY LABORATORY
OFFICE OF CHIEF MEDICAL EXAMINER
CITY OF NEW YORK**

HPLC TROUBLESHOOTING

There are many potential problems that can occur with the instruments, varying from software to hardware problems. This troubleshooting section describes the more common problems. Contact the supervisor if the problems extend beyond the ones listed below.

Symptoms	Probable cause	Suggested action
Retention time not reproducible	Unstable flow Gas bubbles in pump Impurities on column.	Check flow system to improve flow stability. Degas thoroughly and prime pump. Flush column with solvent of high eluting strength.
Areas not repeatable	Leaks	Disconnect detector and check pressure tightness of other modules.
Baseline noise	a) Gas bubbles in pump. b) Unstable column temperature.	a) Degas thoroughly and prime pump. b) Check stability of column temperature.
Baseline drift	Non-conditioned or new column. Sample impurities that elute slowly.	Flush column with solvent of high elution strength.
Tailing peaks	Column degradation	a) Check column performance. b) Check front of column for voids. c) Replace if necessary.
Asymmetrical peaks	Column overloaded.	Reduce sample concentration of injection volume.