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P107. HAS THE SPECIMEN BEEN PRESERVED CORRECTLY FOR THE MEASUREMENT OF ETHANOL?

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Ethanol is the most frequently encountered toxic substance in both clinical and forensic analytical settings.Ethanol is used to treat methanol poisoning and prophylactically to prevent the occurrence of alcohol withdrawal symptoms.Clinical laboratories therefore need rapid and reliable methods for detection and quantitation of ethanol in biological fluids, usually plasma/serum and urine.

Specimens should be collected into fluoride oxalate to inhibit glycolysis and prevent generation of ethanol by certain bacteria or yeasts within the specimen.However fluoride oxalate is unsuitable for many clinical tests and preservation is considered unnecessary.Contamination by microorganisms may also result in false obvious increases in ethanol concentration. Specimens must be kept well stoppered and preferably refrigerated to prevent loss of ethanol.The use of alcohol-containing swabs to clean the venipuncture site has generally been discouraged, but in a study has been reported that alcohol swabs led to minimal interference as measured by GC.Specimens with increased lactate and lactate dehydrogenase concentrations can give falsely increased ethanol results with some enzymatic assays.Anticoagulants don’t interfere with the enzymatic or GC procedures.Some hospital regulations require that ethanol analysis be performed on unclotted samples.In a study has been reported that analysis following homogenization of the clot produced results comparable to those obtained with unclotted specimens.It has been shown that sealed samples of whole blood or whole blood plus fluoride can be stored at 0°C to 3°C or at room temperature (22°C to 29°C) without significant loss of ethanol content over a 14-day period.