

## Interpretation of Ethanol Analysis in Postmortem Specimens

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### ABSTRACT

Since alcohol is a general central nervous system depressant, it affects the motor and cognitive performance. Alcohol abuse is a major cause of medical and social problems. Additionally, to determine cause of death in legal medicine centers, alcohol analysis is the most frequently performed test in forensic toxicology laboratories. Accurate interpretation of ethanol concentration at the time of death is a difficult task since the origin of detected ethanol in postmortem samples may vary. Interpretation of postmortem ethanol findings are often confounded by postmortem ethanol production and/or consumption. Many species of bacteria, yeast and molds are capable of producing ethanol from a variety of substrates in blood; therefore, Vitreous humor and urine is important biological specimen in forensic toxicology.

This review presents a discussion of criteria for the identification of postmortem ethanol synthesis and factors to consider during interpretation of postmortem ethanol findings. The criteria include case history, condition of the specimen, type of bacteria present, atypical fluid and tissue distribution of ethanol and detection of other alcohols and volatiles.

With careful consideration of all the information available, valid interpretation of the source of ethanol, whether it is from antemortem ingestion or postmortem production can be made.

**Key words:** Interpretation, Ethanol Analysis, Biological Specimen.

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