

## **The study concludes that avoidance to wipe alcohol before venipuncture does not lead to sample haemolysis or sample dilution” Sarmah et al (2016).**

### Abstract:

**INTRODUCTION:** Sample haemolysis is often the leading cause of sample rejections in clinical laboratory. Isopropyl alcohol or ethyl alcohol, used as disinfectant during sample collection is often considered an important cause of sample haemolysis or sample dilution; although there is a paucity of scientific documentation verifying the same.

ReTweet if useful... Is venipuncture haemolysis influenced by the use of alcohol skin wipes  
[@ivteam #ivteam](http://ctt.ec/6ecVE+)

Click To Tweet

**AIM:** To verify whether avoidance to wipe out alcohol from the venipuncture site, before sample collection leads to sample haemolysis; or leads to sample dilution.

**MATERIALS AND METHODS:** This was a prospective randomized study, where every second patient coming to the phlebotomist during the study period, in the age group of 20 to 50 years, was considered for the study. A total of 60 patients were considered for the study. For unbiased comparison sample were collected from both left upper limb (alcohol dry) and right upper limb (alcohol wet) of all the patients. Visual inspection for haemolysis was done, and serum potassium (K), Calcium (Ca), Lactate Dehydrogenase (LDH), Aspartate transaminase (AST), Alanine transaminase (ALT), Alkaline phosphatase (ALKP) and Glucose were estimated in both the set. Also experiences of patients in both limb collections were considered.

**RESULTS:** On visual inspection none of the sample was haemolysed. 51.67% of the patients experienced same level of discomfort in both limbs (alcohol dry and alcohol wet) during venipuncture. While 28.3% experienced burning sensation in alcohol wet limb, another 20% experienced a more soothing sensation in the alcohol wet limb during venipuncture. There is no statistically significant difference in the measured value of serum K, LDH, Ca, AST, ALT and ALKP and Glucose between the two sets of sample - alcohol dry and alcohol wet.

**CONCLUSION:** The study concludes that avoidance to wipe alcohol before venipuncture

does not lead to sample haemolysis or sample dilution. Also most patient experienced same or more soothing sensation in alcohol wet limb. Therefore sample can be collected without a waiting period for alcohol to dry off, thereby preventing haemoconcentration and decreasing sample collection time.

Reference:

Sarmah, D., Sharma, B., Sharma, D. and Mathew, S. (2016) Alcohol Used as Disinfectant before Venipuncture does not Lead to Sample Haemolysis or Sample Dilution. Journal of Clinical and Diagnostic Research. 10(2), p.BC16-8.

doi: 10.7860/JCDR/2016/15967.7245.

**Thank you to our partners for supporting IVTEAM**