

**EFFECT OF PROTEIN CONTENT OF CENTRIFUGED
NATURAL RUBBER LATEX ON FINAL GLOVE
PROTEIN CONTENT**

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ABSTRACT

Natural rubber latex consist rubber particle, water, lipid, resin, fatty acid, sterol, sterol esters, carbohydrates and mineral matters. The total protein content of fresh latex is approximately 1–1.5%. Since, field latex provides a nutrient rich environment for the microbes, and hence, volatile fatty acids (VFA's) are formed due to the bacterial fermentation. Natural rubber latex has consistently been the most satisfactory raw material for the manufacture of gloves. So VFA number required to be checked frequently and protein content required to be controlled during the process operation. Certain latex proteins, that are carried over into the finished products can cause problems to the consumers.

There is no previous research work to find out how protein content of centrifuged natural rubber latex will effect on final glove protein level (household and examination) and the relation in between VFA number variation of centrifuged NR latex with latex protein levels. This research was focused on those study areas.

Fifteen numbers of Latex lots (high ammonia) were selected accordance with VFA No. differences and two latex films were prepared for each latex lot. Eight samples each from both house hold and examination gloves were prepared for each latex lot, under the laboratory conditions. Three samples of both house hold and examination gloves were selected from each latex lot for protein testing. Average protein contents of above latex films and gloves were measured as per the Modified Lowry method (i.e. ASTM D5712 standard).

Weak negative Correlation was obtained in correlation analysis of the results for all three relationships. The regression analysis was conducted to find out the definite relationship, and according to that, at 5% significant level, all three relationships were insignificant.

This study shows that there is no linear relationship in-between VFA No of latex and average protein content of latex, there is no linear relationship in-between average protein content of latex with average protein content for household gloves and examination gloves.

Key Words: Latex, Protein, Gloves, VFA No.