

References

- Bhalodiya, M.B., and Jhala, M.K.(2002) *Indian Vet.J.***79**:1237.
- Erasmus, B.J.(1990) Bluetongue virus. In: Virus infection of ruminants. Elsevier, Amsterdam, pp.227-237.
- Martin, S.W., Meek, A.H. and Willeberg, P.(1994) Veterinary epidemiology: Principles and methods. 1st Edn. (Third Printing), Iowa State University Press, Ames, Iowa, U.S.A., pp.22.
- Ravishankar, C., Nair, G.K., Mini, M. and Jayaprakashan, V.(2005) *Rev.Sci.Tech.Off.Int.Epiz.*,**24**:953.
- Subramanian, K.S. and Piramanayagam,S.(2001) *Indian Vet.J.*,**78**:945.

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Assessment of the Genotoxic Effect of Penicillic Acid in the Broiler Chicken

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Penicillic acid (PA) mycotoxin, is α , β -unsaturated conjugated lactone produced by *Penicillium* and *Aspergillus* species and occurs in feeds and feedstuffs. The present study was conducted to detect the genotoxic effect of penicillic acid in the broiler chicken.

Materials and Methods

Eighteen, day old, Vencobb broiler chicken were reared up to 21 days of age by feeding the control diet and then divided into two groups (n=9) viz. control feed groups and penicillic acid toxin fed group (15 ppm) respectively. Three birds from each group were sacrificed at 24, 48 and 72h. The liver and spleen were collected in phosphate buffered saline (pH 7.2) and were subjected to genotoxicity study by comet assay.

Results and Discussion

Comet assay is a single gel electrophoresis used to identify DNA damage as genotoxicity detection (Singh et al., 1988). Single gel electrophoresis of hepatocytes and splenocytes in PA toxicity at the level of 15 ppm showed no formation of comet like appearance. This indicated that PA had no genotoxic effect at the level of 15 ppm.

References

- Pfohi-Leszkowicz, A. and Manderville, R.A.(2007) *Mol.Nutr. Food Res.*, **51**(1): 61
- Reddy, K.R.N., Sallah, B., Abbas, H.K., Abel, C.A., Shie,W.T.(2010) *Toxin Rev.*,**29**(1):3
- Singh, N.P., McCoy, M.T., Tice, R.R. and Schneider, E.L.(1988) *Exp. Cell. Res.*, **175**: 184.