

ISSN 0972-3757

International Journal of

HUMAN GENETICS

© Kamla-Raj 2013

PRINT: ISSN 0972-3757 ONLINE: 2456-6360

Int J Hum Genet, 13(1): 21-25 (2013)

DOI: 10.31901/24566330.2013/13.01.04

Genotoxicity Testing of Two Anticaking Agents: Sodium and Potassium Ferrocyanide *in vitro*

Avishek Basu¹, Dhrubajyoti Biswas² and Anita Mukherjee^{1*}

¹*Department of Genetics, University of Calcutta, 35, Ballygunge Circular Road
Kolkata 700 019, West Bengal, India*

²*Ashok Laboratory, 308, Jodhpur Park, Kolkata 700 068, West Bengal, India*

KEYWORDS Cell Viability, Comet Assay, Cytotoxicity, DNA Damage, Human Lymphocyte

ABSTRACT Anticaking agents are mainly used in food to prevent agglomeration in certain solids, permitting a free-flowing condition. Sodium and potassium ferrocyanide are among the popular anticaking agents which are used in table salt. The present study focuses on the genotoxic effect of sodium and potassium ferrocyanide on human lymphocyte. Human lymphocytes were exposed to the sodium and potassium ferrocyanide at concentrations ranging from 0 to 10 mM for 3 h at 37°C. Cytotoxicity was evaluated by trypan blue dye exclusion test and resazurin test was carried for cell viability. To assess the extent of DNA damage comet assay was performed. The results show that potassium ferrocyanide was cytotoxic and genotoxic at the concentrations tested, whereas, sodium ferrocyanide was non genotoxic.