



## *In Vitro* Genotoxic Potential of D-002 on the Blood Lymphocytes Chromosomal Aberration Test

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**SUMMARY.** D-002 is a mixture of 6 high molecular weight primary alcohols purified from beeswax with anti-inflammatory and antioxidant effects. This study investigated the *in vitro* genotoxic potential of D-002 to produce chromosomal aberrations (CA) in peripheral blood lymphocytes. Fresh suspensions of BWA were added (500; 750, 1000, 2500 and 5000  $\mu\text{g}/\text{mL}$ ) to cultures with (microsomal liver fraction S9 mix) or without metabolic activation. Concurrent negative (Tween/water vehicle) and positive controls (cyclophosphamide 15  $\mu\text{g}/\text{mL}$  and mitomycin C (0.3  $\mu\text{g}/\text{mL}$  in the tests with and without metabolic activation, respectively) were included. Two hundred (200) metaphases by group were examined and the numbers and frequencies of cells with aberrations and the mitotic index were quantified. D-002 added up to 5 mg/mL of culture did not induce chromosomal aberrations in presence or not of S9 mix compared with negative controls and no trends with the doses were observed. Positive controls evidenced increases on the numbers and frequencies of CA. Mitotic indexes were unchanged with the treatment, which indicates that D-002 does not affect cell proliferation. In conclusion, BWA added *in vitro* (0.5-5 mg/mL) to peripheral blood lymphocyte cultures did not show evidences of cytotoxic or genotoxic potential in the CA test.

**KEY WORDS:** Anti-inflammatory, Antioxidant, Chromosomal aberrations test, D-002, Higher aliphatic primary alcohols, Lymphocyte cultures.

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