



**Water-based basic lubricant
In Vitro Cytotoxicity Test
STUDY REPORT**

Client: InnoveMed Bio-tech Co., Ltd

Testing Institution: Master Laboratory Co., Ltd.

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RESULTS

To evaluate the cytotoxicity of the test article 「Water-based basic lubricant」 extract, the test article extract were tested towards the cell growth, morphology and viability. After cell exposure to the extract for 24h, the following items were evaluated:

A. Qualitative determination (Appendix 1, Figure 1)

The morphology of B, NC, PC, and S treated L929 cells stained with NR were observed after 3h under inverted microscope (100X). The morphology of B and NC cells showed long spindle shape with obvious lamellipodia and filopodia instead of lysed, rounded shape, and inhibited growth. However, PC showed nearly complete rounded cells lysed morphology; cell layers almost completely destroyed, and growth inhibition was observed. The result of test sample showed the same long spindle shape as B and NC. According to the results of microscopic assay, the percentages of rounded or lysed cells of B, NC, PC, and S were evaluated at 0%, 1%, 100%, and 5% respectively. Therefore, the cytotoxicity of B, NC, PC, and S was graded at 0, 0, 4, and 0 (Table 1).

B. Quantitative determination (Table 2)

The cell viability was evaluated after L929 cells treated with B, NC, PC, and S for 24h through MTT cell proliferation/viability assay. The absorbance of B, NC, PC, and S at 570 nm were 0.828 ± 0.023 , 0.808 ± 0.077 , 0.205 ± 0.034 and 0.819 ± 0.054 respectively; the cell viability represented 100%, 98%, 25%, and 99%; the mortality showed 0%, 2%, 75%, and 1%.

CONCLUSION

According to the results of qualitative and quantitative assays, the results (Table 1 and Table 2) showed “zero” reactivity. Therefore, none *in vitro* cytotoxicity could be considered in the extract solution of the test article 「Water-based basic lubricant」.