

细胞浓度和作用时间对细胞毒性检查法影响的探讨

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作者	单位
李丽	北京市药品检验所, 北京 100035
周建平	北京市药品检验所, 北京 100035
胡宇驰	北京市药品检验所, 北京 100035

E-mail
lili800214@163.com

中文摘要:目的: 摸索浸提液法中能灵敏反映细胞毒性的最适宜培养时间;探讨细胞接种浓度对判断细胞毒性结果灵敏度的影响。方法: 采用MTT法测定7批不同受试样品浸提液与L-929细胞(细胞接种浓度分别为 1×10^4 个/mL和 1×10^5 个/mL)作用(1~7)d细胞毒性分级,从中寻找最适宜的培养天数。结果: 在样品浸提液与 1×10^4 个/mL L-929细胞相互作用(1~7)d中,随着作用时间的延长,细胞毒性作用越来越显著,从d3起,细胞毒性分级已经稳定;在样品浸提液与 1×10^5 个/mL L-929细胞相互作用的(1~7)d中,随着作用时间的延长,细胞毒性作用越来越显著,从d2起,细胞毒性分级已经稳定,从d5起细胞的吸光度值出现下降。结论: 细胞毒性作用具有时效性。在细胞接种浓度 1×10^4 个/mL条件下,能灵敏反映细胞毒性的最短的培养时间为72 h。在细胞接种浓度 1×10^5 个/mL条件下,能灵敏反映细胞毒性的最短的培养时间为48 h。增大细胞接种浓度能缩短细胞毒性出现的时间,增大判断细胞毒性敏感度。

中文关键词: [细胞毒性](#) [MTT法](#) [影响因素](#)

Study on Effect of Cell Concentration and Action Time to Cytotoxicity Tests

Abstract: Objective: To explore the most appropriate time reflecting cytotoxicity sensitively, to study the effect of cell inoculating concentration determining the sensitivity of cytotoxic results. Method: Seven test extracts interacted with L-929 cells (the inoculating concentration was $1 \times 10^4 \cdot \text{mL}^{-1}$ and $1 \times 10^5 \cdot \text{mL}^{-1}$) from 1 to 7 days in MTT method to determining the most appropriate day which reflected the cytotoxicity sensitively. Result: The extension of cytotoxicity increased with the extracts interacting with $1 \times 10^4 \cdot \text{mL}^{-1}$ cells from 1 to 7 days. It was 3rd day that the cytotoxicity classification became stabilized. The extension of cytotoxicity increased with the extracts interacting with $1 \times 10^5 \cdot \text{mL}^{-1}$ cells from 1 to 7 days. It was 2nd day that the cytotoxicity became stabilized, and from the 5th day the absorbance value of cells decreased. Conclusion: The effect of cytotoxicity has relationship with time. In $1 \times 10^4 \cdot \text{mL}^{-1}$ inoculating concentration condition, the shortest appropriate time reflecting cytotoxicity was 72 h. In $1 \times 10^5 \cdot \text{mL}^{-1}$ inoculating concentration condition, the shortest incubation time reflecting cytotoxicity was 48 h. Increased cell inoculating concentration could shorten the time of cytotoxicity, increase the sensitivity of cytotoxicity.

keywords: [cytotoxicity](#) [MTT method](#) [influencing factors](#)

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