

论著

# 兰州市不同交通路口汽车尾气污染及颗粒提取物的DNA 损伤作用研究

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**摘要** 本文对兰州市盘旋路、民主西路和南关什字三种类型的交通路口的汽车尾气污染物进行监测,并采用体外淋巴细胞姐妹染色单体交换试验(SCE)检测各点颗粒提取物的DNA 损伤作用。结果表明,不同路口TSP、NO<sub>x</sub>、CH、SO<sub>2</sub>、CO 和Pb 的浓度与车流强度、道路状况及车辆行驶状况有明显关系,各点的颗粒提取物与对照点比较,均能引起姐妹染色单体交换频率升高,且具有显著统计学差异,并有一定的剂量——反应关系。以民主西路的增高最明显,其次为盘旋路,而南关什字最低。说明本市汽车尾气污染十分严重,并具有潜在的致癌危险性。

**关键词** [汽车尾气](#) [DNA 损伤作用](#) [SCE](#)

## AUTOMOBILE EMISSION POLLUTION AND DNA DAMAGE EFFECT OF PARTICLE EXTRACTS IN DIFFERENT STREETS

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**Abstract** In this paper , pollutions of automobile emission in three streets were monitored and DNA damage effects of particle extracts were studied with sister chromatid exchanges (SCE) test in peripheral blood lymphocytes. The result demonstrated that concentrations of TSP , NO<sub>x</sub> ,SO<sub>2</sub> , CO and Pb were interrelated with the density of motors and the situation of roads and driving status. The frequencies of SCE of particles at different street were increased markedly ( P < 0.05) with dose-response relationship. Min Zhu Xi Lu was the highest , then Pan Xuan Lu and Nan Guan Shizi the lowest . It also indicates that automobile emission pollution of this city has been very serious and may have potent carcinogen.

**Keywords** [Automobile emission](#) [Particle extracts](#) [SCE](#) [DNA damage](#)

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