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56 ℃ 30 min 灭活标本后对肿瘤标志物和激素相关指标检验结果及存储稳定性的影响

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摘 要:目的 探讨疑似新型冠状病毒或普通检验标本在 56 ℃ 30 min 灭活前后,肿瘤标志物和激素相关指标检验结果的变化及灭活标本的稳定性。方法 比较 30 例标本灭活前后肿瘤标志物和激素相关指标检验结果的变化,比较灭活后标本在保存期内稳定性的变化,并比较神经元特异性烯醇化酶(NSE)、胰岛素(INS)、细胞角蛋白 19 片段(CYFRA-211)在非溶血状态下灭活前后的变化水平。结果 NSE、INS、CYFRA-211 灭活前后检验结果差异有统计学意义($P < 0.05$);灭活后所有项目稳定性回收率均在 90%~110%,符合要求。在非溶血状态下,NSE、INS 灭活前后检验结果差异无统计学意义($P > 0.05$),CYFRA-211 差异有统计学意义($P < 0.05$)。结论 在 56 ℃ 30 min 条件下灭活新型冠状病毒或普通血清标本后,检验激素相关指标及肿瘤标志物仅 NSE、INS、CYFRA-211 出现明显变化。NSE、INS 是由于溶血导致结果显著改变,对 CYFRA-211 灭活前后结果显著差异的原因有待进一步研究。

关键词:新型冠状病毒; 灭活; 肿瘤标志物; 激素

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Effect of inactivation of samples at 56 ℃ for 30 min on test results of tumor markers and hormone related indexes and its storage stability

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Abstract: **Objective** To explore the changes in the detection results of tumor markers and hormones related indexes and the stability of the inactivated samples before and after inactivation of suspected SARS-CoV-2 or ordinary test samples at 56 ℃ for 30 min. **Methods** For 30 samples, the changes of tumor markers and hormone related indexes results before and after inactivation were compared, and the changes of stability during the storage period after inactivation were compared, the changes of neuron specific enolase (NSE), insulin (INS) and CYFRA-211 before and after inactivation were compared in non hemolytic state. **Results** The results of NSE, INS and CYFRA-211 were significantly different before and after inactivation ($P < 0.05$); the stability recovery rates of all items after inactivation were 90%—110%, which met the requirements. In non hemolytic state, there was no significant difference between NSE and INS inactivation ($P > 0.05$), but there was significant difference in CYFRA-211 ($P < 0.05$). **Conclusion** After inactivating the SARS-CoV-2 or ordinary serum specimens at 56 ℃ for 30 minutes, only NSE, INS, and CYFRA-211 showed significant changes in hormone related indexes and tumor markers. NSE and INS were caused by hemolysis to cause significant changes. The reasons for the significant difference in the results before and after CYFRA-211 inactivation need to be further studied.

Key words: SARS-CoV-2; inactivation; tumor markers; hormones

新型冠状病毒(SARS-CoV-2)为冠状病毒β属中的新成员,病毒传染性强,其导致的新型冠状病毒肺炎(COVID-19)已纳入《中华人民共和国传染病防治法》规定的乙类传染病,并按甲类传染病管理。在《新型冠状病毒肺炎诊疗方案》(试行第七版)^[1]中明确指出:“在相对封闭的环境中长时间暴露于高浓度气溶

胶情况下存在经气溶胶传播的可能”,在多人同时工作的大空间式实验室中,离心后开盖产生的气溶胶扩散范围更广,这有可能是导致实验室检验工作者暴露并感染的潜在原因之一。如何做好实验室生物安全防护是值得探讨的问题,诊疗方案中提出“基于对冠状病毒理化特性的认识研究,病毒对紫外线和热敏

