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摘要：建立动物肝脏中常见的10种磺胺类药物(磺胺胍、磺胺嘧啶、磺胺二甲嘧啶、磺胺甲氧嘧啶、磺胺间甲氧嘧啶、磺胺-5-甲氧嘧啶、磺胺氯吡啶、磺胺甲恶唑、磺胺二甲氧嘧啶、磺胺喹恶啉)残留量液相色谱同时测定方法。样品通过溶剂提取净化、荧光胺柱前衍生化，用配有荧光检测器的高效液相色谱仪测定，外标法定量。其线性范围分别为2~200 $\mu\text{g/L}$ 、4~400 $\mu\text{g/L}$ 、10~1000 $\mu\text{g/L}$ ，线性相关系数 $r>0.999$ ；方法检出限(LOD)为2~10 $\mu\text{g/kg}$ ；其中9种磺胺，在5~100 $\mu\text{g/kg}$ 的3个添加水平范围内的平均回收率为70.6%~90.2%；相对标准偏差为4.1%~7.6%。

关键词：磺胺, 动物肝脏, 荧光胺, 衍生化, 高效液相色谱-荧光检测器

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[Fluorescamine derivatization determination of 10 sulfonamide residues in animal liver by HPLC with fluorescence detector](#)

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Abstract: A HPLC method has been established for determination of 10 sulfonamide drug residues in animal liver, including sulfaguandine monohydrate, sulfadiazine, sulfadimidine, sulfamethoxypridazine, sulfamonomethoxine, sulfamethoxydiazine, sulfachloropyridazine, sulfamethoxazole, sulfadimoxinum, sulfaquinoxaline. The sample was treated with solvent extraction and pre-column derivatization with fluorescamine, then detected by HPLC-fluorescence detector. The quantitative method was external standard method. The linear ranges of 10 sulfonamides are 2~200 $\mu\text{g/L}$, 4~400 $\mu\text{g/L}$, 10~1000 $\mu\text{g/L}$, and the linear correlation coefficient $r>0.999$. The limits of detection(LOD) for the method are 2-10 $\mu\text{g/kg}$. In the ranges of 5-100 $\mu\text{g/kg}$ for 9 sulfonamides, the average recoveries are 70.6%~90.2%, the relative standard deviations are 4.1%~7.6%.

Key words: Sulfonamides, Animal liver, Fluorescamine, Derivatization, HPLC-fluorescence detector

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