

原著

有機溶剤代謝産物を人工尿に添加した精度管理用試料の調製と保存

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Preparation and Preservation on Solvent Metabolites Spiked in Artificially Prepared Urines for Quality Controls

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Abstract

Artificial urines containing major components of human urine, as ingredients, were prepared as specimens for the survey of quality control. The hippuric acid, mmethylhippuric acid and mandelic acid of various concentrations were spiked into the artificial urines. Thereafter, the specimens were kept at 30°C, 1°C and -20°C for 1, 2 and 4 weeks, and change in concentrations during storage was examined by high performance liquid chromatography. The ratio of the concentrations of the three acids after storage to those before storage was about 99 per cent or above under the storage condition at 1 °C for 2 weeks and -20°C, for 4 weeks. Creatinine was

more unstable than the three acids under these storing condioion at 30°C and 1°C. The metebolites were more stable when they were kept in lower temperatures and the mandelic acid was most stable among three metabolites.

要約

外部精度管理用の試料として人の自然尿の主成分を含む人工尿を作製し、各種の濃度の溶剤代謝産物として、馬尿酸、*m*-メチル馬尿酸、マンデル酸を添加して試料とした。次いで、この試料を30°C、1°C及び-20°Cに、1,2,4週間保存して、保存前後におけるこれらの代謝産物濃度の変動を高速液体クロマトグラフで調べた。その結果、これらの代謝産物は、1°Cで2週間、-20°Cで4週間の保存では、保存前のほぼ99%以上の濃度を保つことができた。クレアチニンは、30°C、1°Cの保存に対して、尿中代謝産物より不安定である事が認められた。低濃度の保存条件で比較すると、保存温度が低い程、代謝産物は安定であり、かつマンデル酸が最も安定であった。
