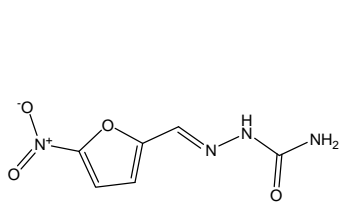
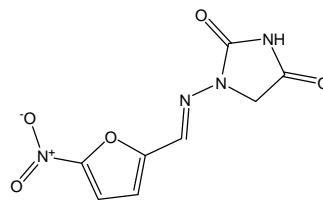


フラン剤は細菌の炭水化物代謝に影響を及ぼすことが知られており、水産物の中で細菌の発育や増殖を抑制する目的で広く使用されてきました。しかし、現在それらは人体に与える影響が危惧され、ほとんどの国で使用が禁止されています。CAPCELL PAK C₁₈ MGIIを用いて、UVとMSで測定した例を示します。3種類のフラン剤は良好なピーク形状で溶出されました。

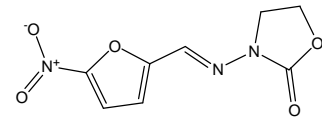
Furan drugs are known to influence bacteria's carbohydrate metabolism, and had been widely used as a bacteriostatic in aquatic products. However, they are now banned in most countries because of their side effects. Using CAPCELL PAK C₁₈ MGII, three kinds of furan compounds were simultaneously analyzed with a good peak resolution among them.



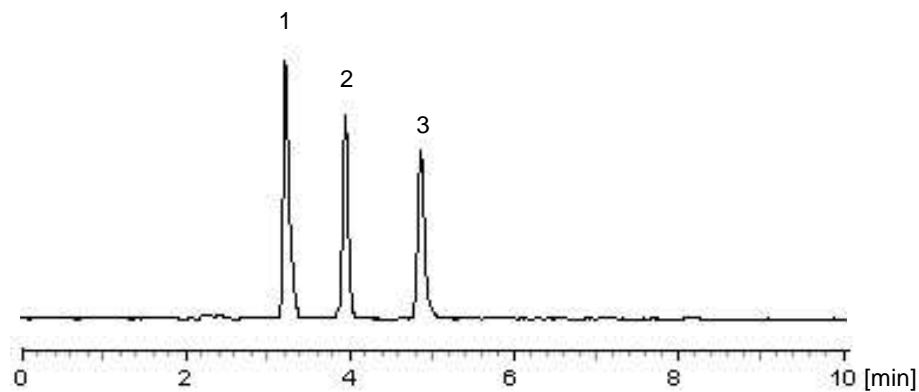
1. フラシリン
Furacilin (M.W. 198.1)



2. ニトロフラントイン
Nitrofurantoin (M.W. 238.2)

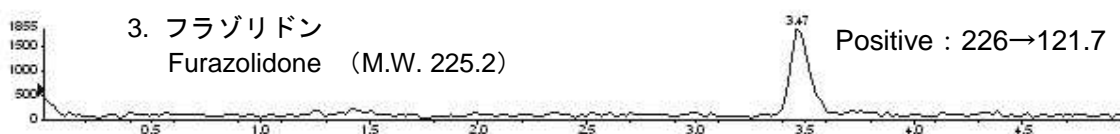
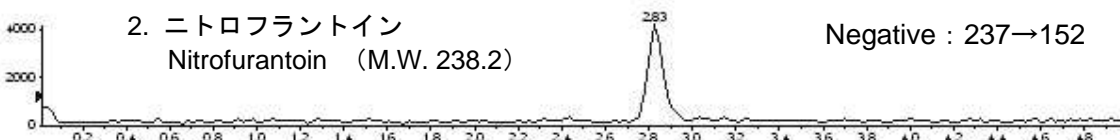
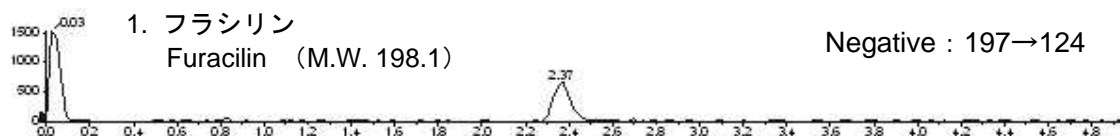
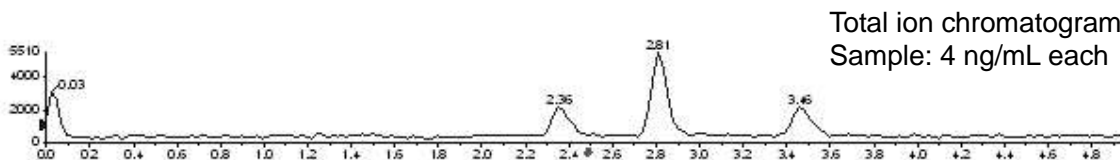


3. フラゾリドン
Furazolidone (M.W. 225.2)

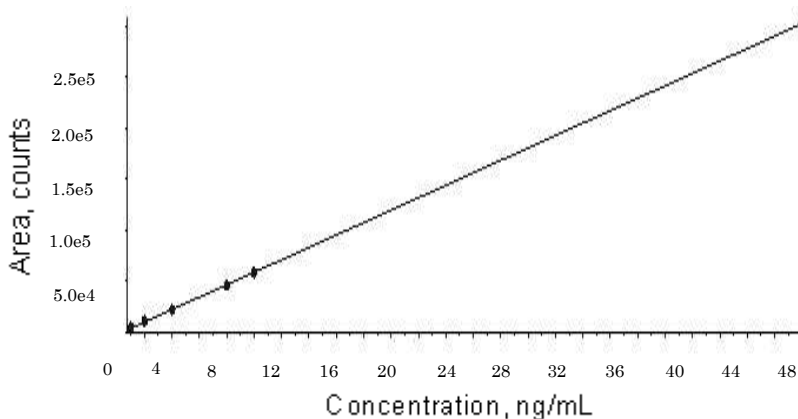


【HPLC Conditions】

Column : CAPCELL PAK C₁₈ MGII S5 ; 4.6 mm i.d. x 150 mm
 Mobile phase : 0.1 vol% H₃PO₄, H₂O / CH₃CN = 60 / 40
 Flow rate : 1 mL/min
 Temperature : 25 °C
 Detection : UV 365 nm
 Inj. vol. : 20 μL
 Sample : 1 μg/mL
 Sample dissolved in : mobile phase
 ※1 μg/mL = 1 ppm



Calibration curve of Nitrofurantoin



【LC-MS Conditions】

Column : CAPCELL PAK C₁₈ MGII S3 ; 2.0 mm i.d. x 150 mm
 Mobile phase : 0.1 vol% H₃PO₄, H₂O / CH₃CN = 60 / 40
 Flow rate : 200 μL/min
 Temperature : 25 °C
 Detection : MS/MS (SRM ; Selected Reaction Monitoring)
 Ionization : ESI Positive: furazolidone, ESI Negative: furacilin, nitrofurantoin
 Inj. vol. : 5 μL
 Ionization : 4 ng/mL each (Chromatograms, upper)
 1, 2, 4, 8, 10, and 50 ng/mL (Calibration curve, lower)
 Sample dissolved in : mobile phase
 ※1 μg/mL = 1 ppm