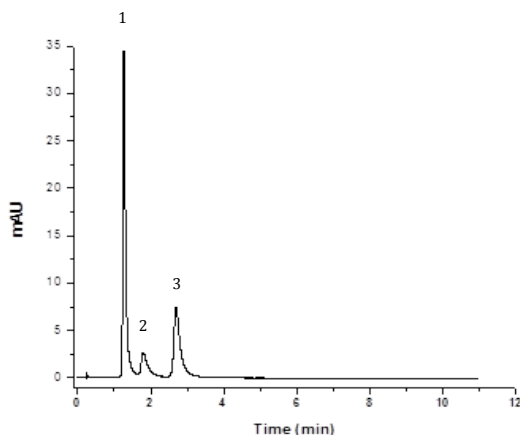


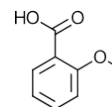
FLARE C18+ Column: Separation of Methoxybenzoic Acid Isomers

HPLC Conditions

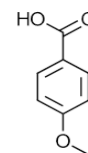
Column Name:	FLARE C18+
Column Dimensions:	4.6 x 33mm, 3.6 μ m, 180 \AA (FP1082-2)
HPLC System:	Agilent 1260
Injection Volume:	1.0 μ l
Detection:	UV at 280nm
Flow Rate:	2.0ml/min
Mobile Phase:	A: 1,000mL H ₂ O, 2g AmAc, 4mL HOAc B: ACN; A/B = 50/50
Temperature:	75 $^{\circ}$ C
Analytes:	1. 2-methoxybenzoic acid 2. 4-methoxybenzoic acid 3. 3-methoxybenzoic acid



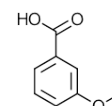
3. 2-methoxybenzoic acid



2. 4-methoxybenzoic acid



1. 3-methoxybenzoic acid



Notes

Positional isomers (ortho-, meta-, and p-methoxysubstituted benzene derivatives) are difficult to separate as they have very similar chemical properties. Using the FLARE C18+ column, under high temperature conditions, these methoxybenzoic acids are baseline separated in under 4 minutes. P-methoxybenzoic acid, also known as p-anisic acid, is a natural product with antiseptic properties. It is also a common starting material in many organic reactions. Methoxybenzoic acids are sometimes used as food additives.

References

1. www.wikipedia.org
2. Prasad et. al, Antibacterial Synergy between Quercetin and Polyphenolic Acids against Bacterial Pathogens of Fish, Asian Pac J Top Dis 2014; 4 (suppl 1): S326-329