

### Separation of Natural Products by Flash Chromatography

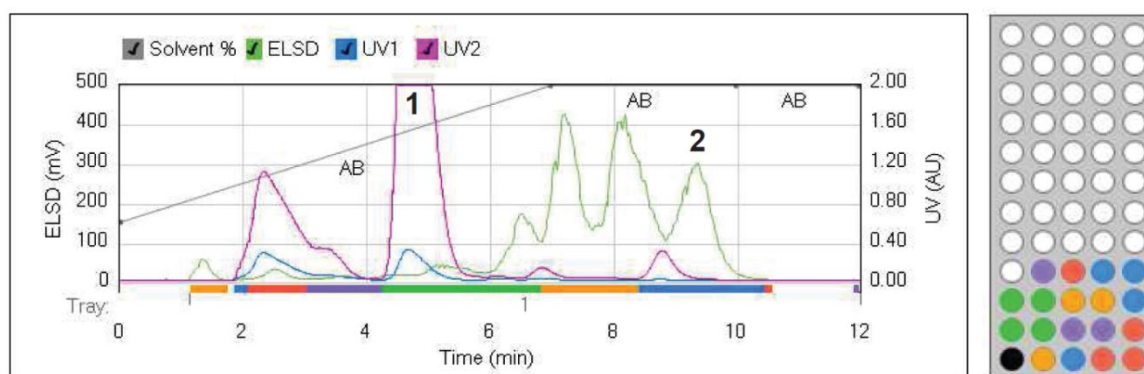
Natural products play a significant role in the drug discovery and development process. They get modified to develop novel agents linking mother nature to combinatorial synthetic techniques. Scientists investigate all possible routes to these novel agents from terrestrial to marine environments. Natural product extracts have been shown to be complex for purification as they contain many different compounds with similar separation behaviours as well as critical components that are both chromophoric and non-chromophoric.

The below example shows the isolation of eugenol and caryophyllene from a clove extract. Both compounds contain medicinal properties and are used for treating various health disorders such as indigestion, cough, headaches, and stress.

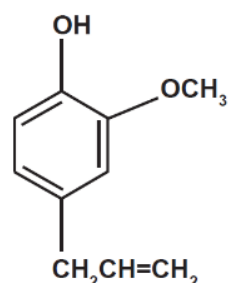
#### Experimental

Chromatography system	Pure C-815	Solvent A	0.5% Formic acid in water
Flash cartridge	FlashPure ID C18 12g	Solvent B	Methanol
Flow rate	30ml/min	Gradient	30-100%: 0-7min
Equilibration	3min	(Solvent B %)	100%: 7-12min
ESLD	Yes		
UV wavelenghts	254nm, 220nm		
Sample injection	liquid		

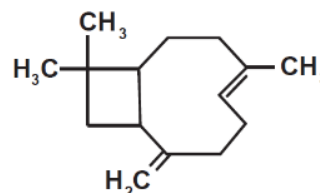
#### Results



Flash chromatogram of the Glove Oil extract. Using simultaneous ELSD & UV detection which allows monitoring of both chromophoric (Eugenol) and non-chromophoric peaks (Caryophyllene) in a single run



1. Eugenol



2. Caryophyllene