

# Separation of Selected Components of the Allergens Contained in Balsam of Peru

The Essential Oil Balsam of Peru is commonly found in a multitude of products, including, but not limited to: perfumes, cosmetics, sunscreens, and flavored beverages. The fragrant liquid is harvested from trees grown in Central America and smells richly of cinnamon, vanilla, and clove. The oil has been used in three main areas: as a medicinal product pertaining to its anti-septic, anti-fungal and anti-parasitic natures, as a flavor enhancer for food and drinks, and as a fragrance in perfumes and toiletries. Despite the utility of the mixture, it has been shown that allergies can arise from some of the individual components. Common symptoms generally present in the form of contact dermatitis and eczema. Use of such components in the manufacturing of the above mentioned products requires quantification of the individual compounds. Therefore, we have developed an HPLC method that separates five components known to have allergenic properties. The method can be used with either the PRP-C18 (5  $\mu$ m) or the PRP-1 (5  $\mu$ m) column. The two chromatograms illustrate the versatility and selectivity of the PS-DVB backbone found in all of Hamilton Company columns.

## Column Information

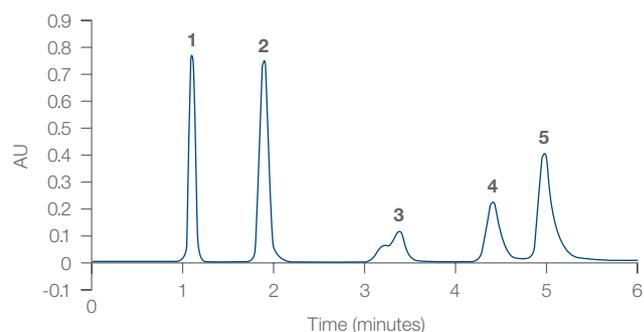
Packing Material	Dimensions	Part Number
PRP-1 (5 $\mu$ m)	150 x 4.6 mm	79641
PRP-C18 (5 $\mu$ m)	150 x 4.6 mm	79676

## Chromatographic Conditions

<b>Gradient</b>	0.00–2 min, 75% B
	2.01–5 min, 75–100% B
	5.01–8 min, 100% B
<b>Temperature</b>	Ambient
<b>Injection Volume</b>	10 $\mu$ L
<b>Detection</b>	UV at 214 nm
<b>Eluent A</b>	Water
<b>Eluent B</b>	Acetonitrile
<b>Flow Rate</b>	2.0 mL/min (PRP-1)
	2.5 mL/min (PRP-C18)

Author: Adam L. Moore, PhD, Hamilton Company

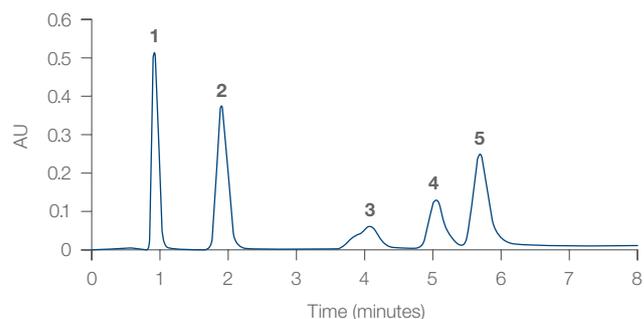
## PRP-1 Separation of Esters in Balsam of Peru



### Compounds:

- 1: Benzyl Alcohol      3: Farnesol      5: Benzyl Cinnamate  
2: Trans-Cinnamaldehyde      4: Benzyl Benzoate

## PRP-C18 Separation of Esters in Balsam of Peru



### Compounds:

- 1: Benzyl Alcohol      3: Farnesol      5: Benzyl Cinnamate  
2: Trans-Cinnamaldehyde      4: Benzyl Benzoate