Applications of Liquid Chromatography

Name Course Section Date

1. **Procedure for Gel Permeation Separation of the Dye Mixture containing Brillant Blue R, Red #40, and Yellow #5**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Brillant Blue | Yellow #5 | Red #40 |
| Estimated Volume (mL) |  |  |  |
| Elution Order  *(1=first, 3=last)* |  |  |  |

Justification of Elution Order (2-3 sentences MAX):

1. **Procedure for TLC of the Dye Mixture containing Red #40, Yellow #5, and Blue #1**

|  |  |  |  |
| --- | --- | --- | --- |
|  | *50/50/0* | 50/30/20 | 10/10/80 |
|  | Rf | Rf | Rf |
| Blue #1 |  |  |  |
| Red #40 |  |  |  |
| Yellow #5 |  |  |  |

*X;Y;Z, where X=1-butanol, Y=acetone, and Z=water.*

Polarity Estimate (1 (most) – 3 (least)):

\_\_\_\_\_\_\_\_\_\_\_ Brillant Blue \_\_\_\_\_\_\_\_\_\_\_ Red #40 \_\_\_\_\_\_\_\_\_\_\_ Yellow #5

Justification of Elution Order (2-3 sentences MAX):

1. **Procedure for Reverse Phase Separation of the Dye Mixture containing Red #40, Yellow #5, and Blue #1**

Solvent Used to Separate Dyes: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Justification of Solvent Choice (2-3 sentences MAX):

Reminder to…

* Add photos to label manual (i.e., TLC (3x plates), gel permeation, & reversed phase)
* Include your developed (or modified) procedures (i.e., reversed-phase SPE)