

# LAMPIRAN

## Lampiran

Lampiran 1. Perhitungan angka *retardation factor* ( $R_f$ ) digunakan persamaan berikut

$$R_f = \frac{\text{Jarak Tempuh Senyawa}}{\text{Jarak Tempuh eluen}}$$

Nilai  $R_f$  vanillin :

$$R_f = \frac{6,8}{9} = \mathbf{0,75}$$

Nilai  $R_f$  GVT-0 :

$$R_f = \frac{4,5}{9} = \mathbf{0,5}$$

Lampiran 2. Daftar hasil ruahan yang didapatkan setelah proses isolasi

| <b>Daftar berat rendemen yang diperoleh setelah 2 kali isolasi</b> |             |             |
|--|-------------|-------------|
| 5,4408 gram  | 5,9222 gram | 6,0577 gram |
| 4,1580 gram  | 4,5847 gram | 7,1666 gram |
| 5,6829 gram  | 6,1777 gram | 6,1797 gram |
| 2,5709 gram  | 4,6600 gram | 7,2908 gram |
| 4,2160 gram  | 4,7198 gram | 6,7937 gram |
| 4,6726 gram  | 6,2707 gram | 6,6143 gram |
| 4,5253 gram  | 6,3879 gram | 5,7840 gram |
| 4,2024 gram  | 7,0595 gram | 7,6966 gram |
| 5,2121 gram  | 3,0634 gram | 6,9719 gram |
| 5,5483 gram  | 6,7668 gram | 5,9832 gram |
| 4,5910 gram  | 6,6163 gram | 6,4509 gram |
| 5,4005 gram  | 7,7517 gram | 5,9570 gram |
| 3,9299 gram  | 7,6435 gram | 5,6809 gram |
| 5,1595 gram  | 6,9070 gram | 6,1172 gram |
| 5,0998 gram  | 7,4460 gram |             |
| 3,7185 gram  | 7,5374 gram |             |
| 2,6595 gram  | 6,0036 gram |             |
| 7,2025 gram  | 6,1708 gram |             |
| 5,9585 gram  | 7,0918 gram |             |
| 4,4633 gram  | 6,5394 gram |             |

Lampiran 3. Perhitungan rendemen hasil pemisahan menggunakan kromatotron menggunakan persamaan berikut

$$\text{Rendemen (\%)} = \frac{\text{Berat hasil pemisahan kromatotron}}{\text{Berat sebelum pemisahan}} \times 100$$

Ruahan yang digunakan = 2,5 g = 2500 mg

Rendemen yang diperoleh setelah pemisahan = 14,5 mg

$$\text{Rendemen (\%)} = \frac{14,5 \text{ mg}}{2500 \text{ mg}} \times 100 = \mathbf{0,58 \%}$$

Lampiran 4. Perhitungan kadar vanillin dan aseton yang digunakan serta rendemen ruahan hasil sintesis GVT-0 menggunakan persamaan berikut

$$\rho \text{ Aseton} = 0,791 \text{ g/cm}^3$$

$$\rho \text{ Aseton} = 0,791 \text{ g/mL}$$

$$1 \text{ mL aseton} \times 0,791 \text{ g/mL} = 0,791 \text{ g} \dots\dots\dots \text{Kandungan aseton 1 mL}$$

$$\text{Mol} = \frac{\text{Massa}}{\text{Bobot molekul (BM)}}$$

$$\text{Mol} = \frac{0,791 \text{ g}}{58,08} = 0,01361 \text{ mol}$$

Jika perbandingan vanillin dan aseton yang digunakan adalah 4,4 : 1 maka,

$$4,4 \times 0,01361 \text{ mol} = 0,059884 \text{ mol}$$

$$\text{Massa vanillin yang digunakan} = \text{mol vanillin} \times \text{BM vanillin}$$

$$\text{Massa vanillin yang digunakan} = 0,059884 \text{ mol} \times 152,15 = 9,1114 \text{ gram}$$

Rendemen ruahan yang dihasilkan :

$$\text{Rendemen (\%)} \text{ ruahan} = \frac{\text{Berat ruahan hasil sintesis}}{\text{Berat vanillin dan aseton yang digunakan}} \times 100$$

$$\text{Rata-rata berat ruahan hasil sintesis} = 5,7495 \text{ gram}$$

$$\text{Berat vanillin yang digunakan} = 9,1114 \text{ gram}$$

$$\text{Berat aseton 1 ml} = 0,791 \text{ gram}$$

$$\text{Rendemen (\%)} \text{ ruahan} = \frac{5,7495 \text{ g}}{9,9024 \text{ g}} \times 100 = 0,58 = \mathbf{58 \%}$$

## Lampiran 5. Hasil uji turnitin

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### Alfan Fadhilah turnitin

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