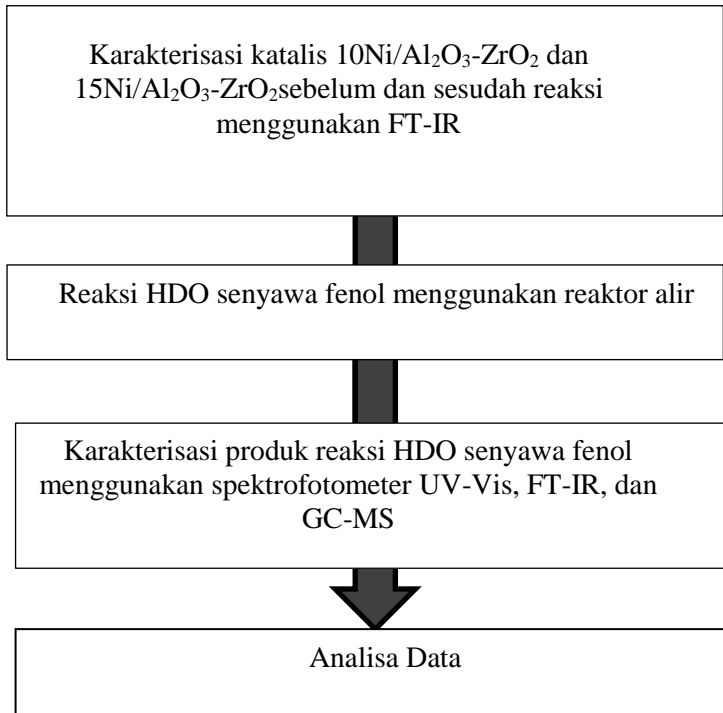


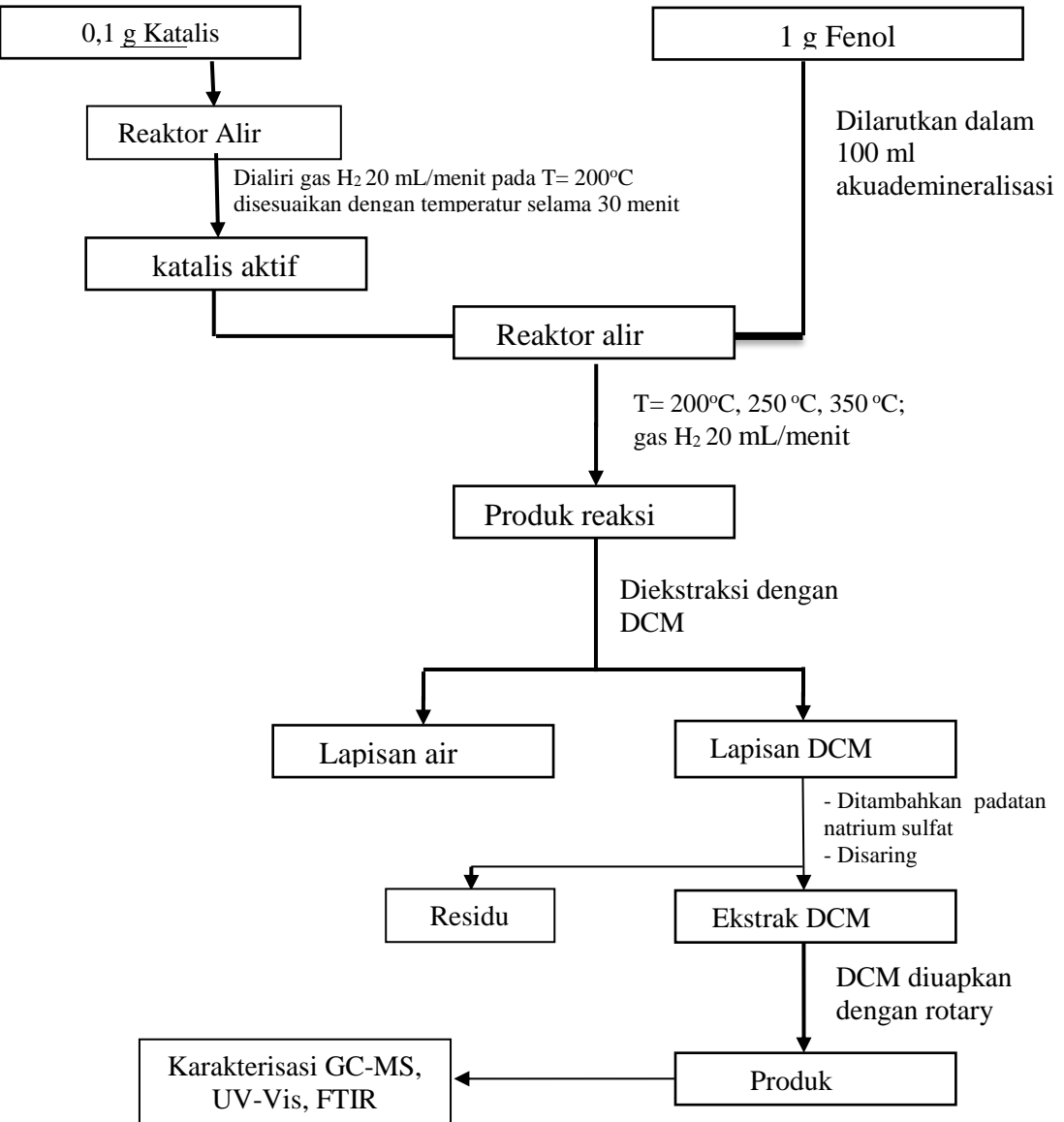
LAMPIRAN

Lampiran A. Diagram Kerja

A.1 Diagram Alir Penelitian



A.2 Uji Aktivitas Katalis Ni/Al₂O₃-ZrO₂ Terhadap Reaksi HDO Senyawa Fenol



Katalis yang digunakan adalah katalis 10%Ni/Al₂O₃-ZrO₂ dan 15%Ni/Al₂O₃-ZrO₂.

Lampiran B. Perhitungan

Diketahui :	% area produk A1	= 0,263%
	% area produk B1	= 1,634%
	% area produk C1	= 0,548%
	% area produk B2	= 1,198%
	% area produk A3	= 0,319%
	% area produk B3	= 1,279%
	% area produk C3	= 0,601%
	% area Fenol P2.1	= 97,366%
	% area Fenol P2.3	= 97,227%
	% area Fenol P1.3	= 98,802%

Konversi (%) = 100% - % area Fenol

$$\text{Konversi (\%)} \text{ Produk } \mathbf{P2.1} = 100\% - 97,366\% = 2,634\%$$

$$\text{Konversi (\%)} \text{ Produk } \mathbf{P2.3} = 100\% - 97,227\% = 2,773\%$$

$$\text{Konversi (\%)} \text{ Produk } \mathbf{P1.3} = 100\% - 98,802\% = 1,198\%$$

Selektivitas (%) = $\frac{\% \text{ areaprodukyangterbentuk}}{\% \text{ konversiproduktotal}} \times 100 \%$

$$\text{Produk A1} = \frac{0,263}{2,773} \times 100\% = 9,484\%$$

$$\text{Produk B1} = \frac{1,634}{2,773} \times 100\% = 58,925\%$$

$$\text{Produk C1} = \frac{0,548}{2,773} \times 100\% = 19,762\%$$

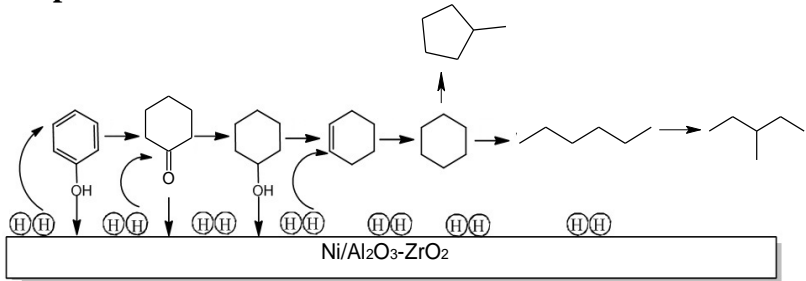
$$\text{Produk B2} = \frac{1,198}{1,198} \times 100\% = 100\%$$

$$\text{Produk A3} = \frac{0,319}{2,634} \times 100\% = 12,111\%$$

$$\text{Produk B3} = \frac{1,279}{2,634} \times 100\% = 48,557\%$$

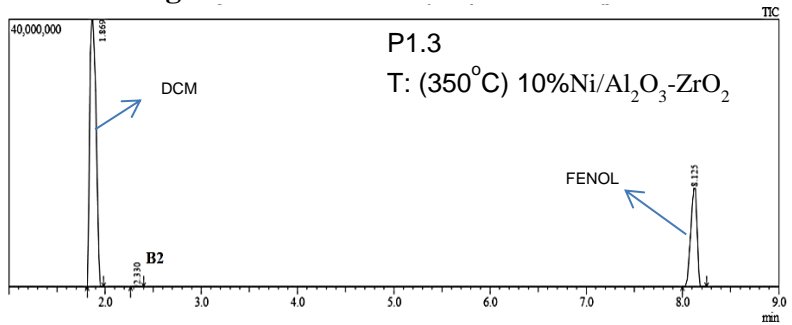
$$\text{Produk C3} = \frac{0,601}{2,634} \times 100\% = 22,817\%$$

Lampiran C. Mekanisme Reaksi

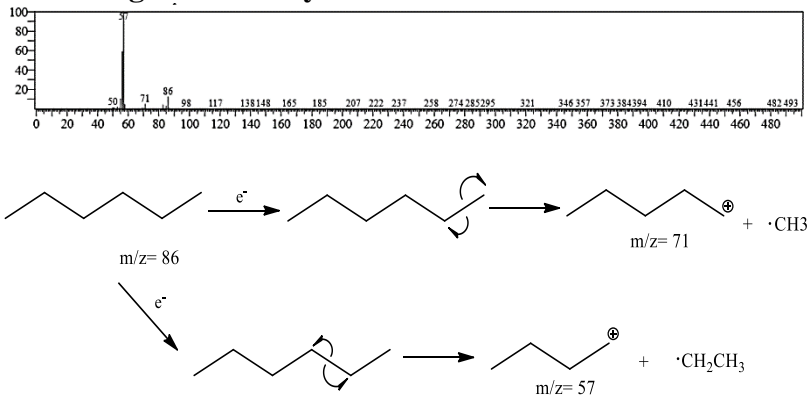


Lampiran D. Data Hasil Karakterisasi

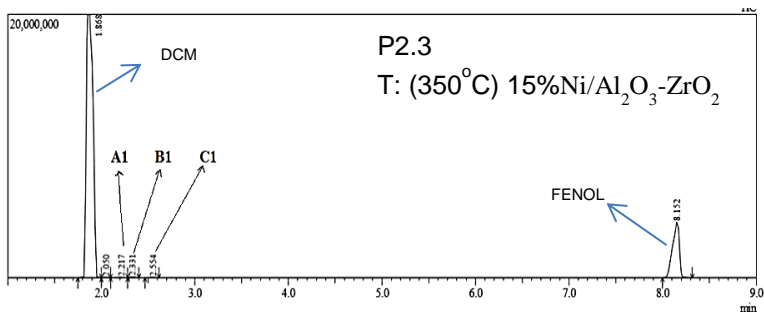
D.1 Kromatogram hasil reaksi HDO P1.3



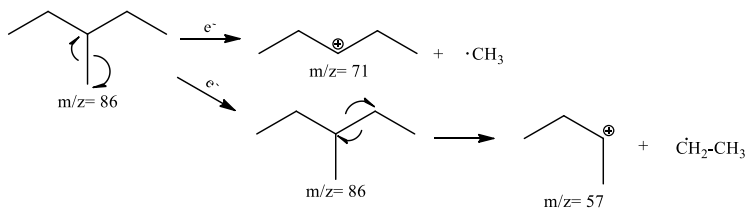
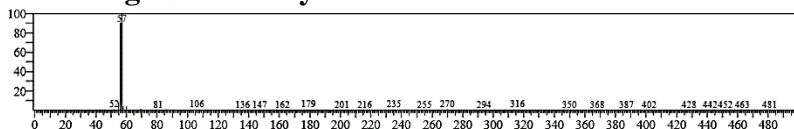
D.1.1 Fragmentasi senyawa B2



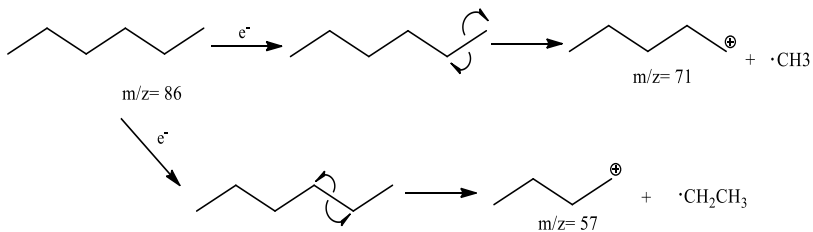
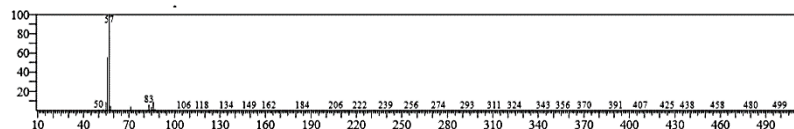
D.2 Kromatogram hasil reaksi HDO P2.3



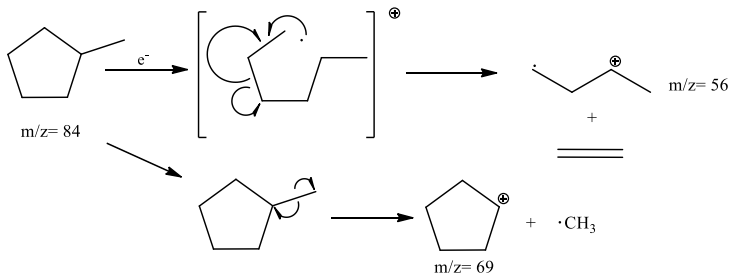
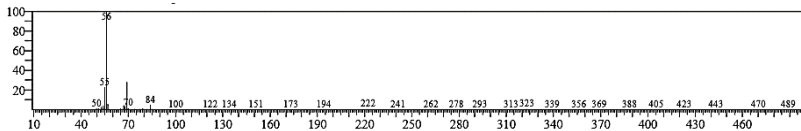
D.2.1 Fragmentasi senyawa A1



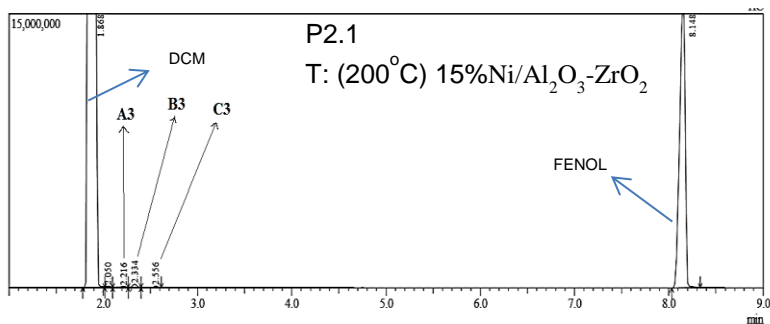
D.2.2 Fragmentasi senyawa B1



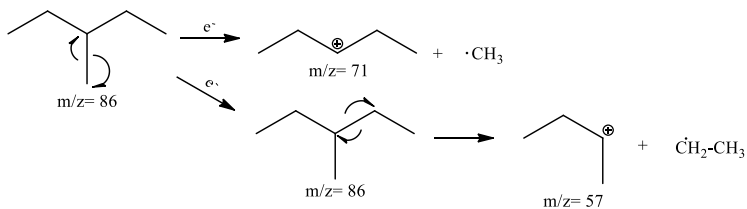
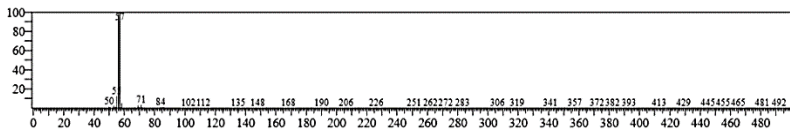
D.2.3 Fragmentasi senyawa C1



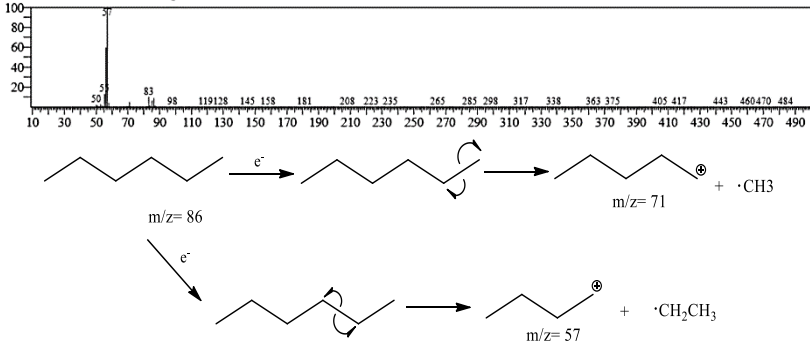
D.3 Kromatogram hasil reaksi HDO P2.1



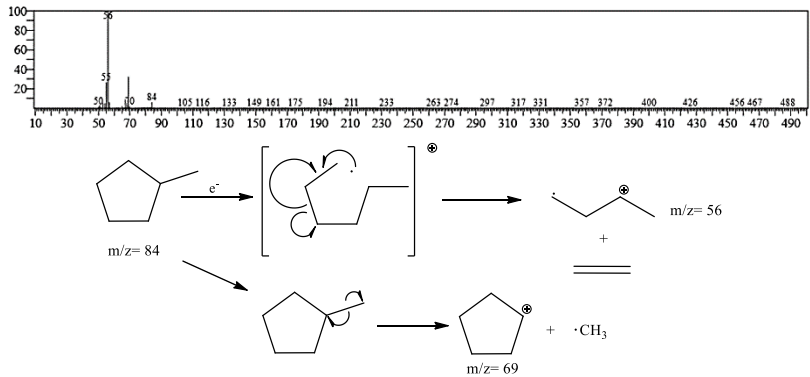
D.3.1 Fragmentasi senyawa A3



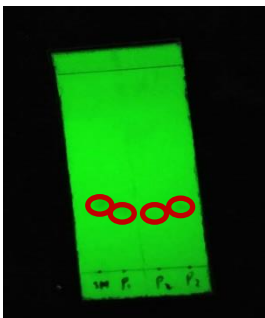
D.3.2 Fragmentasi senyawa B3



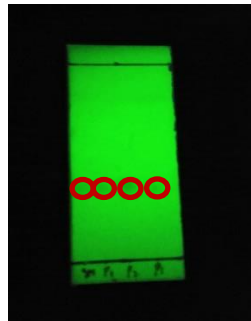
D.3.3 Fragmentasi senyawa C3



D.4 Hasil KLT hasil reaksi HDO



(a) Hasil KLT hasil Reaksi HDO P1.1; P1.2; P1.3



(b) Hasil KLT hasil Reaksi HDO P2.1; P2.2; P2.3

Lampiran E. Dokumentasi Penelitian



(a) Reaksi HDO menggunakan reaktor alir modifikasi



(b) Ekstraksi dengan Diklorometana (DCM)



(c) Pemisahan pelarut pada hasil ekstraksi



(d) Produk hasil reaksi HDO