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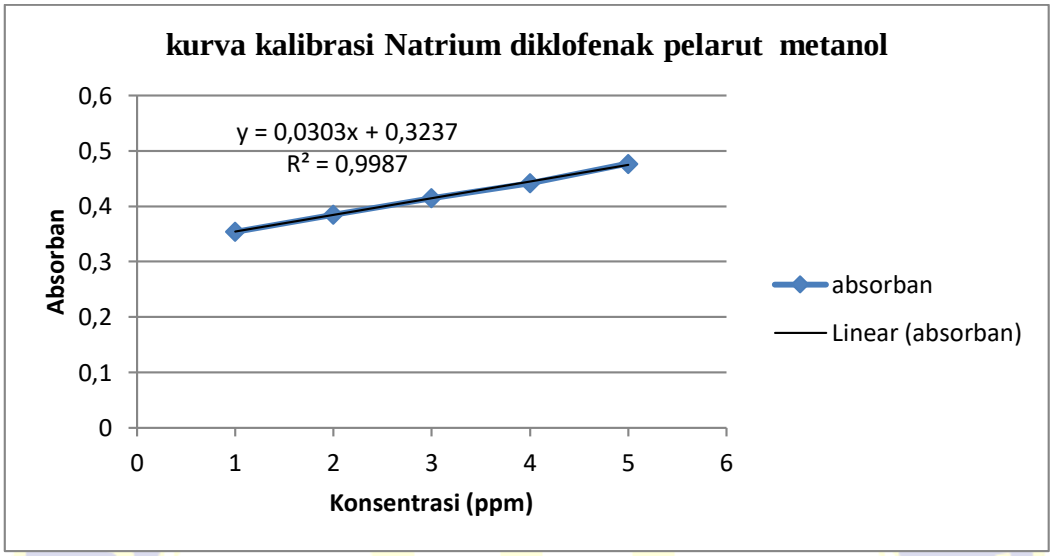
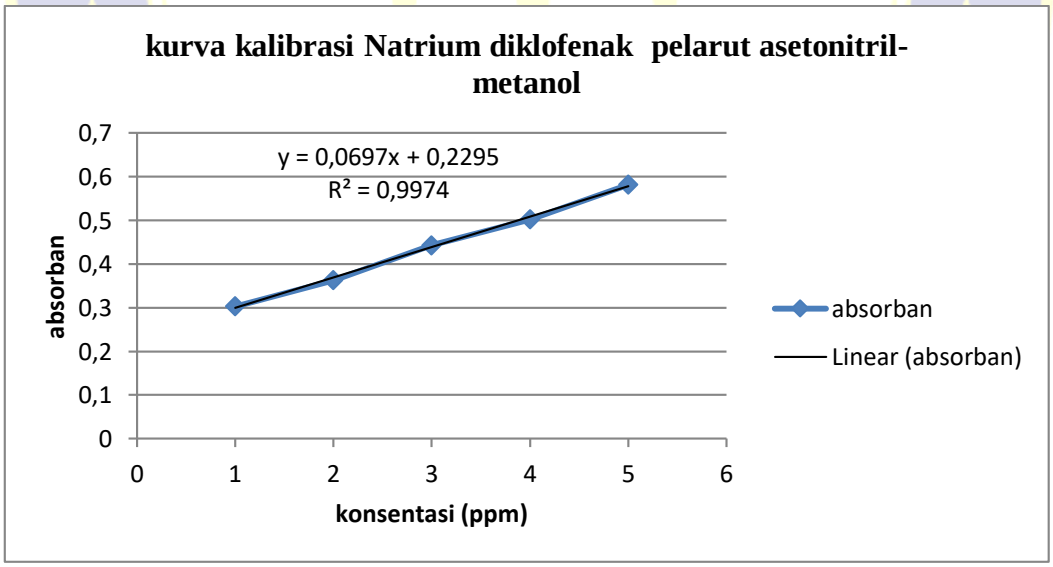
LAMPIRAN 1

KURVA KALIBRASI



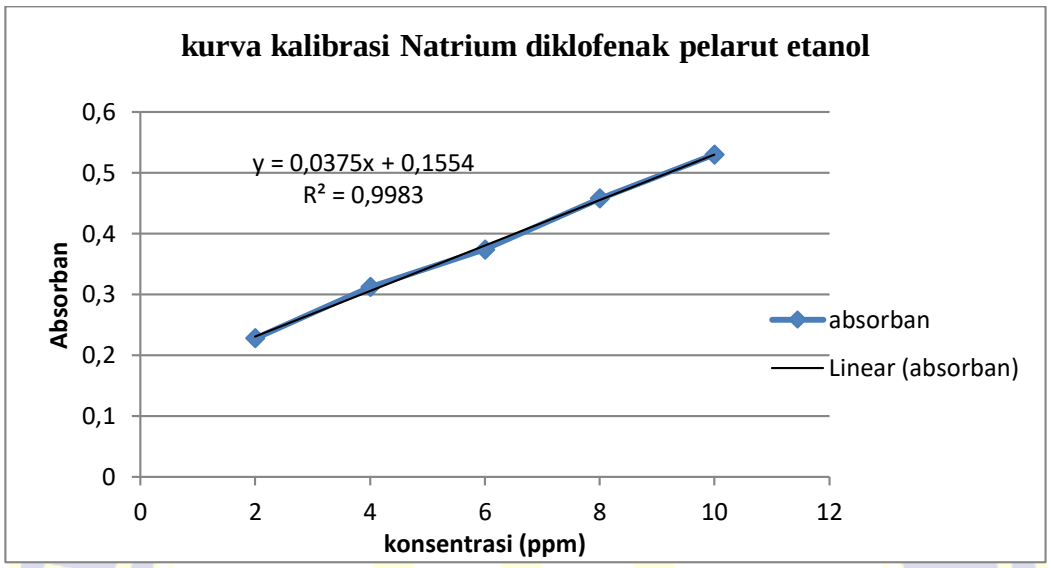
Gambar V.3 Kurva kalibrasi Natrium Diklofenak dalam pelarut Metanol



Gambar V.4 Kurva kalibrasi Natrium Diklofenak dalam pelarut Asetonitril-Metanol

LAMPIRAN 1

(LANJUTAN)



Gambar V.5 Kurva Kalibrasi Natrium Diklofenak dalam pelarut Etanol

LAMPIRAN 2

UJI PRESISI

Tabel V.5

Hasil uji presisi larutan standar Natrium Diklofenak dengan pelarut Asetonitril-Metanol

Konsentrasi (ppm)	Absorban	X (µg/mL)	X^2 (µg/mL)
4	0,342	1,6141	2,6053
4	0,345	1,6571	2,7460
4	0,352	1,7575	3,0888
4	0,354	1,7862	3,1905
4	0,338	1,5567	2,4233
Jumlah		8,3716	14,0539
Rata-rata		1,6743	

Diperoleh kurva kalibrasi $y = bx + a$

$y = 0{,}0697x - 0{,}2295$; R^2 =0,9974

$$SD = \frac{n.\Sigma x^2 - (\Sigma x)^2}{n(n-1)}$$

$$SD = \frac{5.14{,}0539 - (8{,}3716)^2}{5(5-1)} = 0{,}0093$$

$$\%RSD = \frac{SD}{x} x\ 100\%$$

$$\%RSD = \frac{0{,}0093}{1{,}6743} x\ 100\% = 0{,}5554\%$$

$$\%Ketelitian\ alat = 100\% - \frac{SD}{x}$$

$$\%Ketelitian\ alat = 100\% - 0{,}55\% = 99{,}45\ \%$$

LAMPIRAN 2

(LANJUTAN)

Tabel V.3

Hasil uji presisi larutan standar Natrium Diklofenak dengan pelarut metanol

Konsentrasi (ppm)	Absorban	X (µg/mL)	X^2 (µg/mL)
6	0,345	4,7030	22,1182
6	0,341	4,5709	20,8931
6	0,357	5,0990	25,9998
6	0,357	5,0990	25,9998
6	0,356	5,0660	25,6644
Jumlah		24,5379	120,6753
Rata-rata		4,9076	

Diperoleh kurva kalibrasi $y = bx + a$

$y = 0{,}0499x + 0{,}1445$; R^2 =0,9819

$$SD = \frac{n.\Sigma x^2 - (\Sigma x)^2}{n(n-1)}$$

$$SD = \frac{5.120{,}6753 - (24{,}5379)^2}{5(5-1)} = 0{,}0634$$

$$\%RSD = \frac{SD}{x}\, x\ 100\%$$

$$\%RSD = \frac{0{,}0634}{4{,}9076}\, x\ 100\% = 1{,}29\%$$

$$\%Ketelitian\ alat = 100\% - \frac{SD}{x}$$

$$\%Ketelitian\ alat = 100\% - 1{,}29\% = 99{,}99\ \%$$

LAMPIRAN 2

(LANJUTAN)

Tabel V.4

Hasil uji presisi larutan standar Natrium Diklofenak dengan pelarut Etanol

Konsentrasi (ppm)	Absorban	X (µg/mL)	X^2 (µg/mL)
6	0,370	5,7226	32,7482
6	0,383	6,0693	36,8364
6	0,367	5,6427	31,8401
6	0,369	5,6960	32,4444
6	0,377	5,9093	39,9198
	Jumlah	29,0399	168,7889
	Rata-rata	5,8080	

Diperoleh kurva kalibrasi $y = bx + a$

$y = 0{,}0375x + 0{,}1554$; R^2 =0,9983

$$SD = \frac{n.\Sigma x^2 - (\Sigma x)^2}{n(n-1)}$$

$$SD = \frac{5.168{,}7889 - (29{,}0399)^2}{5(5-1)} = 0{,}0314$$

$$\%RSD = \frac{SD}{x}\, x\ 100\%$$

$$\%RSD = \frac{0{,}0314}{5{,}8080}\, x\ 100\% = 0{,}541\%$$

$$\%Ketelitian\ alat = 100\% - \frac{SD}{x}$$

$$\%Ketelitian\ alat = 100\% - 0{,}541\% = 99{,}46\ \%$$

LAMPIRAN 3

UJI AKURASI

Tabel V.5
Hasil uji akurasi pada larutan standar Natrium Diklofenak dengan pelarut Asetonitril-Metanol

Konsentrasi (ppm)	%	Absorban	X (µg/mL)	%Recovery
3,2	80%	0,443	3,0631	95,72%
4	100%	0,510	4,0244	100,61%
4,8	120%	0,566	4,8278	100,58%

Diperoleh kurva kalibrasi $y = bx + a$

$$y = 0{,}0697x - 0{,}2295 \text{ ; } R^2 = 0{,}9974$$

Sehingga diperoleh,

80%

$$x = \frac{0{,}443 - 0{,}2295}{0{,}0697} = 3{,}0631$$

$$\%Recovery = \frac{4{,}0244}{3{,}2} x100\% = 95{,}72\%$$

100%

$$x = \frac{0{,}510 - 0{,}2295}{0{,}0697} = 4{,}0244$$

$$\%Recovery = \frac{4{,}0244}{4} x100\% = 100{,}61\%$$

120%

$$x = \frac{0{,}566 - 0{,}2295}{0{,}0697} = 4{,}8278$$

$$\%Recovery = \frac{4{,}8278}{4{,}8} x100\% = 100{,}58\%$$

LAMPIRAN 3

(LANJUTAN)

Tabel V.6
Hasil uji akurasi pada larutan standar Natrium Diklofenak dengan pelarut metanol

Konsentrasi (ppm)	%	Absorban	X (µg/mL)	%Recovery
4,8	80%	0,345	4,7030	97,98%
6	100%	0,393	6,2871	104,79%
7,2	120%	0,426	7,3762	102,45%

Tabel V.7
Hasil uji akurasi pada larutan standar Natrium Diklofenak dengan pelarut etanol

Konsentrasi (ppm)	%	Absorban	X (µg/mL)	%Recovery
4,8	80%	0,344	5,0293	104,77%
6	100%	0,387	6,176	102,93%
7,2	120%	0,437	7,5093	104,29%

LAMPIRAN 4

NILAI LoD dan LoQ

Tabel V.8
Hasil penentuan nilai LoD dan LoQ larutan Natrium Diklofenak dalam pelarut Asetonitril-Metanol

X (ppm)	Y	Yi	Y-Yi	$(Y-Yi)^2$
2	0.303	0.3689	-0.0659	$4{,}34 \times 10^{-3}$
4	0,363	0.5083	-0.1453	0,0211
6	0,443	0.6477	-0,2047	0,0419
8	0,502	0.7871	-0,2851	0,0812
10	0,582	0.9265	-0,3445	0.1186
			∑	0,26714

$$SB = \sqrt{\frac{\sum(Y-Yi)^2}{n-2}} =$$

$$SB = \sqrt{\frac{0{,}26714}{3}}$$

$$SB = 0{,}2984$$

$$LoD = \frac{3\ x\ SB}{b}$$

$$LoD = \frac{3\ x\ 0{,}2984}{0{,}0697} = 12{,}8\ \mu g/mL$$

$$LoQ = \frac{10\ x\ 0{,}2984}{0{,}0697} = 42{,}81\ \mu g/mL$$

LAMPIRAN 4

(LANJUTAN)

Tabel V.9
Hasil penentuan nilai LoD dan LoQ larutan Natrium Diklofenak dalam pelarut metanol

X (ppm)	Y	Yi	Y-Yi	$(Y-Yi)^2$
5	0,354	0,475	-0,121	0,014
6	0,385	0,505	-0,21	0,044
7	0,415	0,538	-0,123	0,015
8	0,442	0,566	-0,124	0,015
9	0,477	0,596	-0,119	0,014
			∑	0,102

$$SB = \sqrt{\frac{\sum(Y-Yi)^2}{n-2}} =$$

$$SB = \sqrt{\frac{0,102}{3}}$$

$$SB = 0,1843$$

$$LoD = \frac{3\ x\ SB}{b}$$

$$LoD = \frac{3\ x\ 0,1843}{0,0303} = 18,24\ \mu g/mL$$

$$LoQ = \frac{10\ x\ 0,1843}{0,0303} = 60,82\ \mu g/mL$$

LAMPIRAN 4
(LANJUTAN)

Tabel V.10
Hasil penentuan nilai LoD dan LoQ larutan Natrium Diklofenak dalam pelarut Etanol

X (ppm)	Y	Yi	Y-Yi	$(Y-Yi)^2$
2	0,228	0,230	$-2x10^{-3}$	4×10^{-6}
4	0,312	0,305	$7x10^{-3}$	$4,9 \times 10^{-5}$
6	0,374	0,380	-6×10^{-3}	$3,6 \times 10^{-5}$
8	0,458	0,455	3×10^{-3}	9×10^{-6}
10	0,53	0,530	0	0
			$\sum$	$9,8 \times 10^{-5}$

$$SB = \sqrt{\frac{\sum(Y-Yi)^2}{n-2}} =$$

$$SB = \sqrt{\frac{9,8x\ 10^{-5}}{3}}$$

$$SB = 3,266\ X\ 10^{-5}$$

$$LoD = \frac{3\ x\ SB}{b}$$

$$LoD = \frac{3\ x\ 3,266\ X\ 10^{-5}}{0,0375} = 0,0026\ \mu g/mL$$

$$LoQ = \frac{10\ x\ 3,266\ X\ 10^{-5}}{0,0375} = 0,0087\ \mu g/mL$$

LAMPIRAN 5

PEMBUATAN POLIMER

Gambar V. 6 Proses Pembuatan Polimer

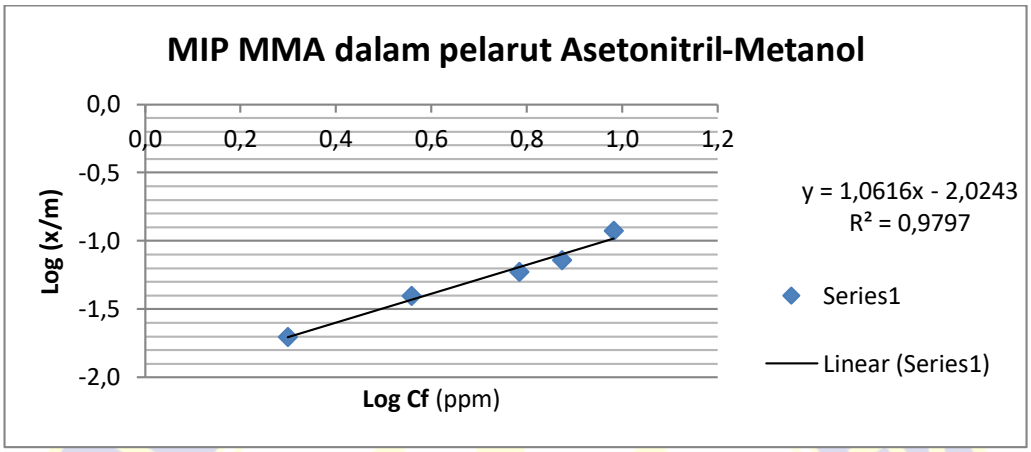
LAMPIRAN 6

EKSTRAKSI POLIMER METODE SOXHLETASI

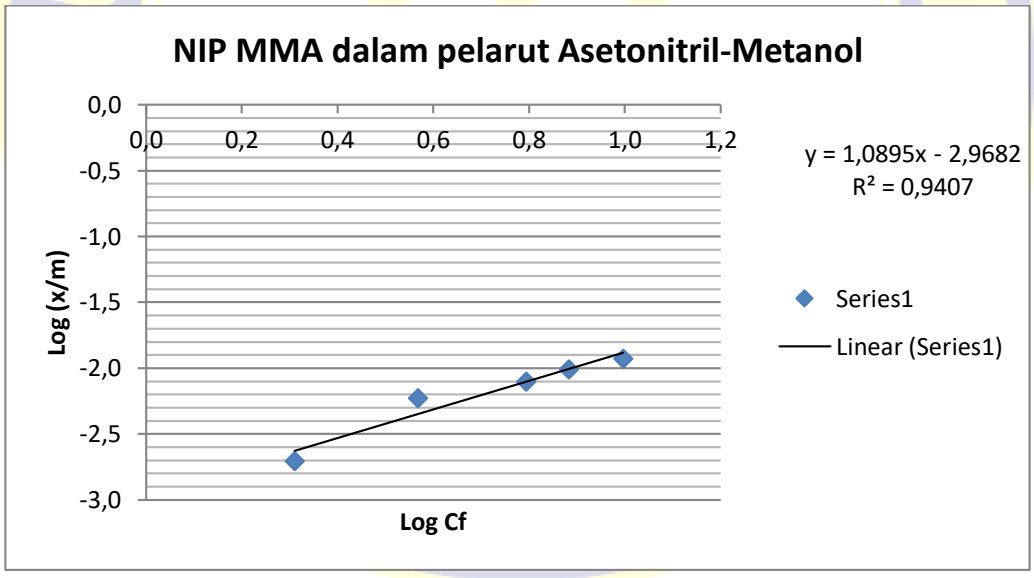
Gambar V.7 Alat Soxhletasi

LAMPIRAN 7

KURVA ADSORPSI ISOTERM FREUNDLICH SORBEN MIP DAN NIP

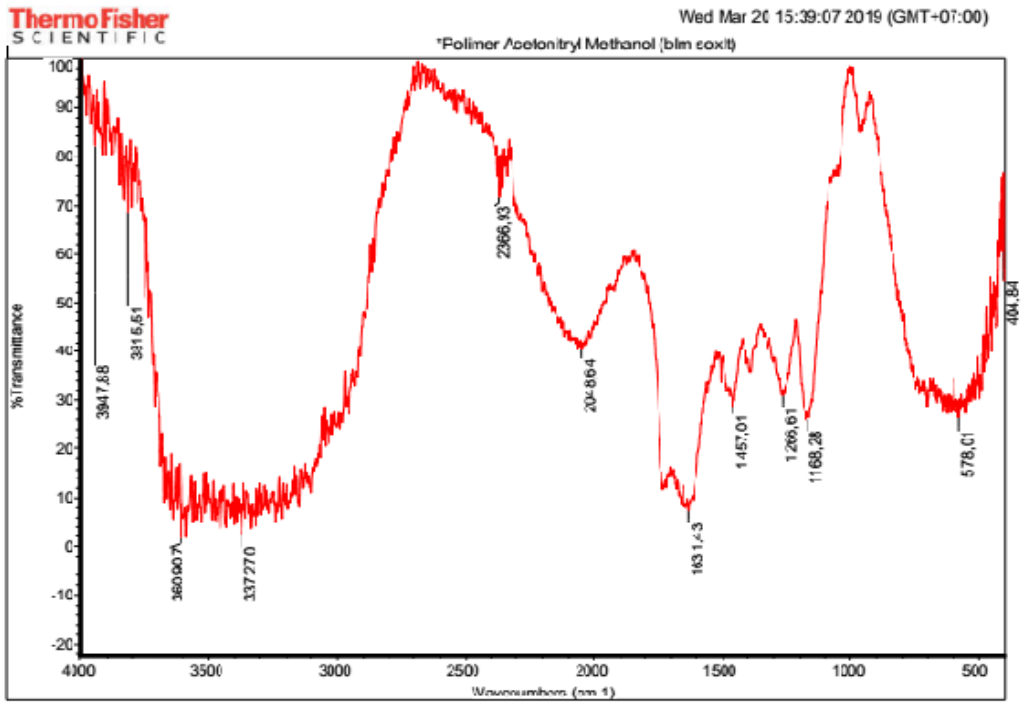


Gambar V. 8 Kurva adsorpsi isoterm Freundlich sorben MIP

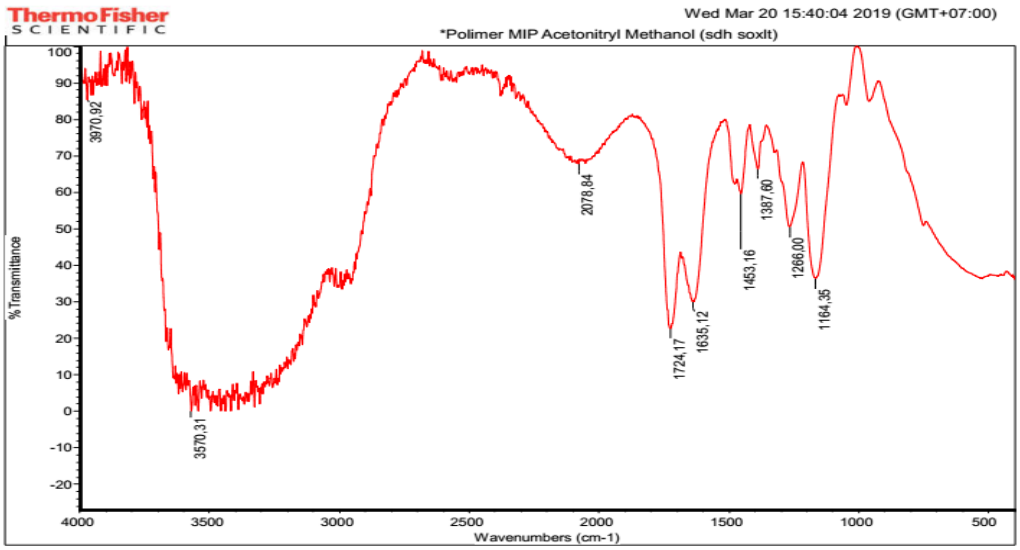


Gambar V.9 Kurva adsorpsi isoterm Freundlich sorben NIP

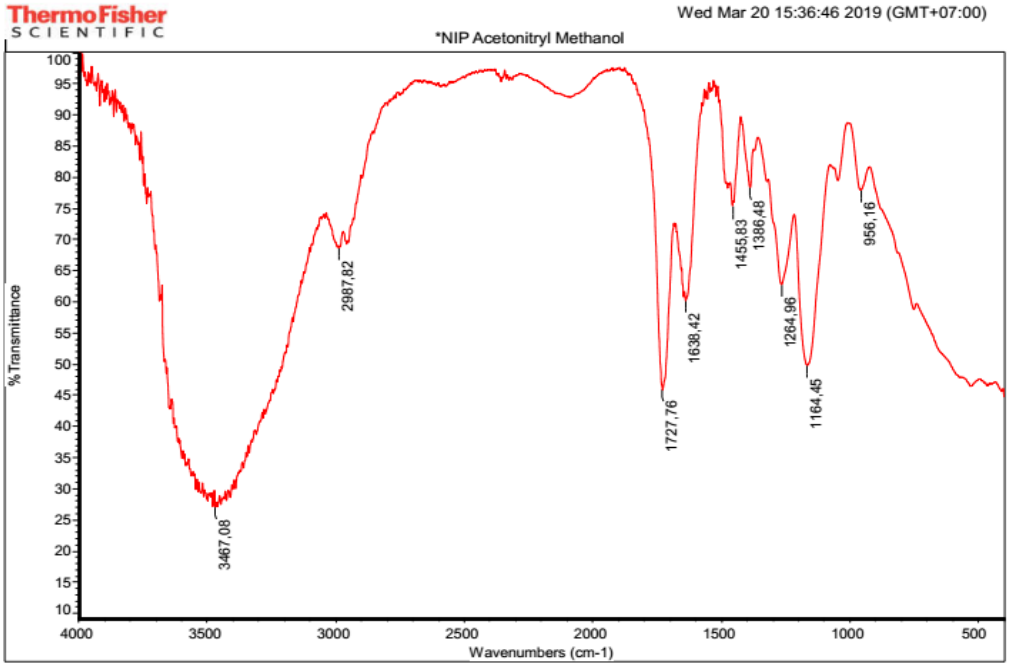
LAMPIRAN 8
HASIL ANALISIS GUGUS FUNGSI DENGAN INSTRUMEN FTIR



Gambar V.10 Spektrum FTIR Sorben MIP sebelum ekstrasi



Gambar V.11 Spektrum FTIR sorben MIP setelah ekstraksi



Gambar V.12 Spektrum FTIR sorben NIP