LAMPIRAN

Lampiran 1

Penentuan Panjang Gelombang Maksimum Minyak Kelapa Sawit.

Tabel VI.1. Data Panjang Gelombang Maksimum Minyak Kelapa Sawit.

Panjang Gelombang (nm)	Absorbansi
435	0,362
440	0,369
441	0,384
442	0,386
443	0,388
444	0,390
445	0,392
446	0,394
447	0,392
448	0,390
449	0,388
450	0,368
455	0,360
460	0,348

Lampiran 2

Analisa Kandungan Air pada Aktivasi Pemanasan Lempung.

Berat lempung sebelum aktivasi (awal) adalah 1,5000 gram.

Jumlah air yang hilang = Berat lempung awal - Berat lempung setelah aktivasi.

Tabel VI.2. Data Analisa Kandungan Air.

Kode Sampel	Berat lempung setelah aktivasi (gram)				Jumlah air yang hilang (gram)
	Uji I	Uji II	Uji III	Rata-rata	
B1	1,4261	1,4404	1,4637	1,4434	0,0566
B2	1,4093	1,4452	1,4541	1,4362	0,0638
B3	1,3939	1,4367	1,4162	1,4156	0,0844
B4	1,4155	1,4088	1,4171	1,4138	0,0862
B5	1,4080	1,4024	1,4055	1,4053	0,0947
K1	1,4792	1,4514	1,4959	1,4755	0,0245
K2	1,4673	1,4711	1,4797	1,4727	0,0273
K3	1,4939	1,4156	1,4888	1,4661	0,0339
K4	1,4591	1,4623	1,4613	1,4609	0,0391
K5	1,4217	1,4500	1,4882	1,4609	0,0467
B3a	1,4155	1,4093	1,3794	1,4014	0,0986
B3b	1,4156	1,3690	1,3917	1,3921	0,1079
B3c	1,3880	1,3993	1,3815	1,3896	0,1104
B3d	1,3916	1,3851	1,3762	1,3843	0,1157
B3e	1,3743	1,3880	1,3534	1,3719	0,1281
K4a	1,4546	1,4481	1,4527	1,4518	0,0482
K4b	1,4277	1,4603	1,4599	1,4493	0,0507
K4c	1,4450	1,4700	1,4143	1,4431	0,0569
K4d	1,4419	1,4070	1,4738	1,4409	0,0591
K4e	1,4811	1,4366	1,3882	1,4353	0,0647

Lampiran 3

Analisa Warna Minyak.

Absorbansi (A) minyak kelapa sawit sebelum adsorpsi adalah 0,6159.

$$\% \text{ Zat warna minyak teradsorpsi} = \frac{(\text{A awal} - \text{A setelah adsorpsi})}{\text{A awal}} \times 100\ \%$$

Tabel VI .3. Kandungan zat warna dalam minyak kelapa sawit.

Kode Sampel	Absorbansi minyak setelah adsorpsi				Prosentase zat warna minyak terserap (%)
	Uji I	Uji II	Uji III	Rata-rata	
B0	0,3939	0,2557	0,3620	0,3372	45,2508
B1	0,2090	0,2715	0,3221	0,2676	56,5514
B2	0,2216	0,2540	0,2096	0,2284	62,9161
B3	0,3045	0,2090	0,0967	0,2034	66,9752
B4	0,2634	0,2259	0,2544	0,2479	59,7499
B5	0,2614	0,2974	0,2683	0,2757	55,2362
K0	0,4632	0,6514	0,6983	0,6043	1,8834
K1	0,6742	0,5514	0,5507	0,5921	3,8642
K2	0,5183	0,6214	0,5280	0,5559	9,7418
K3	0,4408	0,5772	0,5171	0,5117	16,9183
K4	0,5705	0,4452	0,4362	0,4840	21.4158
K5	0,6124	0,5078	0,5892	0,5698	7,4849
B3a	0,1223	0,2771	0,1965	0,1993	67,6408
B3b	0,2007	0,2410	0,1295	0,1904	69,0859
B3c	0,3010	0,1764	0,0503	0,1759	71,4402
B3d	0,1728	0,1535	0,2241	0,1668	72,9177
B3e	0,1127	0,1292	0,3053	0,1824	70,3848
K4a	0,4907	0,4005	0,4783	0,4565	25,8808
K4b	0,4554	0,4221	0,4314	0,4363	29,1606

Kode Sampel	Absorbansi minyak setelah adsorpsi				Prosentase zat warna minyak terserap (%)
	Uji I	Uji II	Uji III	Rata-rata	
K4c	0,5082	0,5146	0,2228	0,4152	32,5864
K4d	0, 5457	0,5557	0,4022	0,5012	18,6231
K4e	0,5208	0,5792	0,6211	0,5737	6,8517
Bv	0,2514	0,2633	0,1249	0,2132	65,3839
Bw	0,1188	0,1619	0,1747	0,1518	75,3531
Bx	0,0942	0,1744	0,0434	0,1040	83,1141
By	0,1874	0,1606	0,1278	0,1586	74,2491
Bz	0,2045	0,1788	0,2125	0,1986	67,7545
Kv	0,4615	0,4799	0,5331	0,4915	20,1981
Kw	0,4381	0,4096	0,4780	0.4419	28,2513
Kx	0,3592	0,5001	0,3647	0,4080	33,7555
Ky	0,4920	0,4176	0,3825	0,4307	30,0698
Kz	0,5792	0,3618	0,4345	0,4585	25,5561
LP	0,1818	0,1074	0,2891	0,1261	79,5259
KA	0,0141	0,0963	0,0372	0,0492	92,0117

Keterangan : LP = Lempung Pasaran. KA = Karbon Aktif.

Lampiran 4.

Analisa Volume Rongga Lempung.

Rumus yang digunakan : $V = \frac{(a + b) - c}{\rho}$

Dengan : V = volume rongga.

a = berat botol piknometer + aquabides = 54,5541 gram.

b = berat sampel

c = berat botol piknometer + aquabides + sampel.

ρ = berat jenis aquabides. Pada suhu 25 °C, ρ = 0,99708 g/cm^3.

Berat sampel adalah 0,5000 gram.

Tabel VI.4. Data Analisa Volume Rongga.

Kode Sampel	b (gram)				Volume Rongga (cm^3)
	Uji I	Uji II	Uji III	Rata-rata	
B0	54,8566	54,8490	54,8315	54,8457	0,2090
Bx	54,7277	54,8089	54,8136	54,7834	0,1956
K0	54,8347	54,8578	54,8848	54,8591	0,2715
Kx	54,8339	54,8362	54,8292	54,8331	0,2216
Lempung Pasaran	54,7943	54,8111	54,7970	54,8008	0,2540
Karbon Aktif	54,7514	54,7633	54,7368	54,7505	0,3045

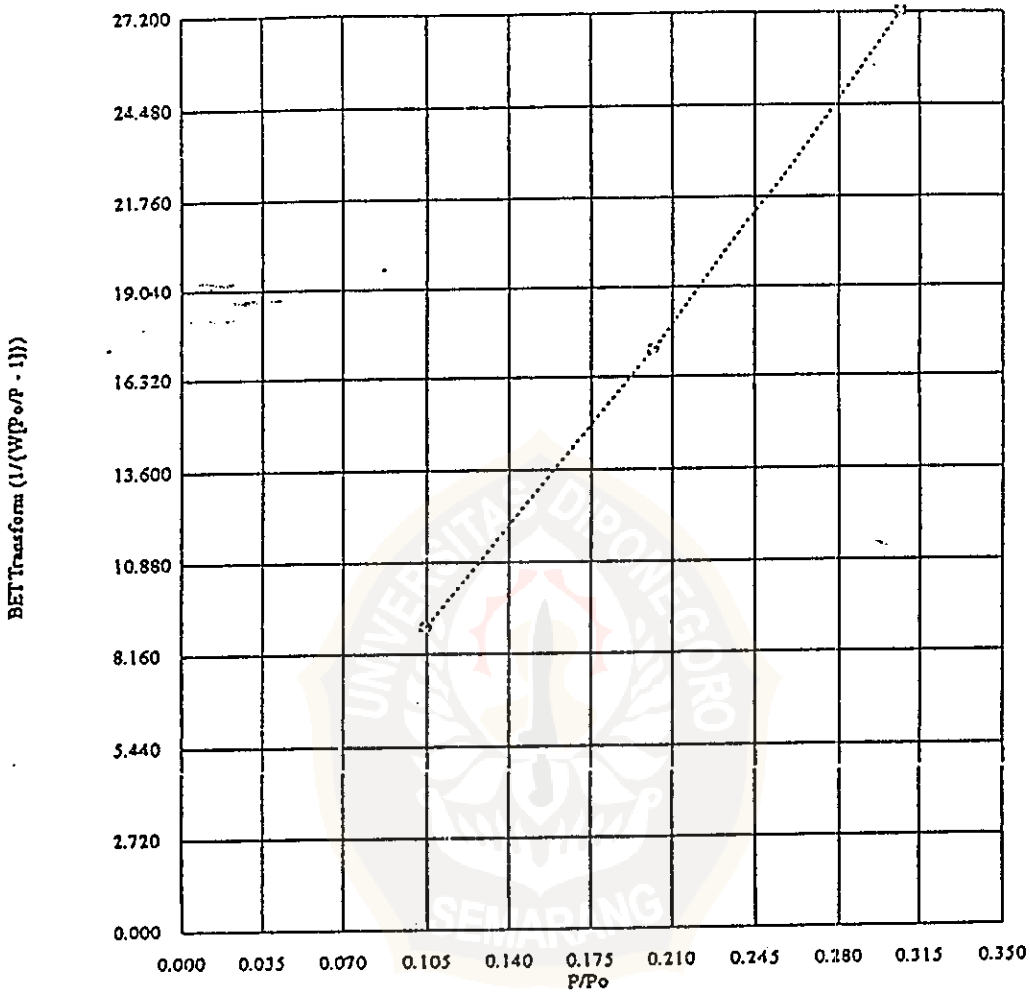
Contoh perhitungan :

Sampel B0 : $V = \frac{(54,5541 - 0,5000)\ \text{gram} - 54,8457\ \text{gram}}{0,99708\ \text{gram/cm}^3} = 0,2090\ \text{cm}^3.$

Lampiran 5

Analisa Luas Permukaan Spesifik.

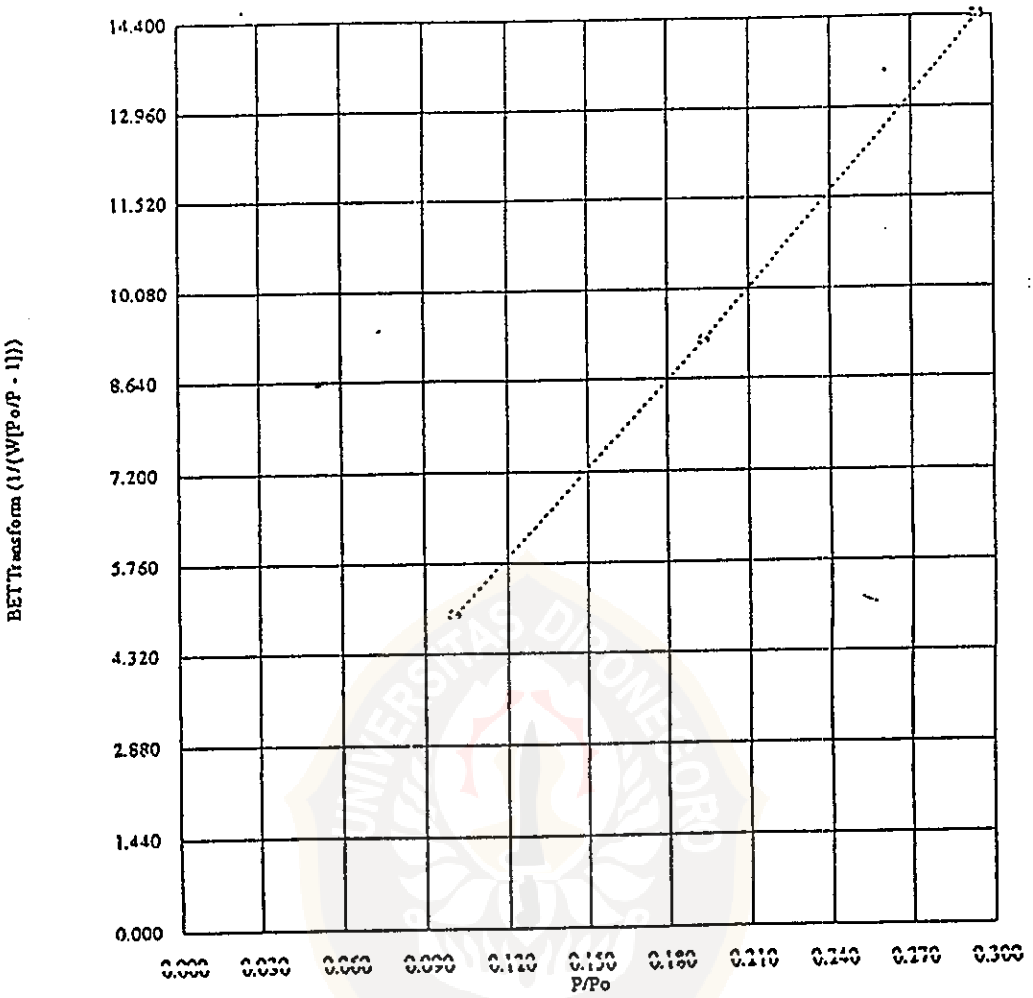
1. Luas permukaan spesifik lempung awal desa Banyusri (B0).



Multi BET (Adsorption)

P/Po		BET Transform (1/{W[Po/P - 1]})
0.104744		8.941855
0.201343		17.138005
0.307001		27.192639
Slope	=	90.312398
Intercept	=	-0.699018
Correlation Coefficient	=	0.999460
BET C	=	-128.199023
Surface Area	=	24.638235 sq m
Specific Surface Area	=	38.861569 sq m/g

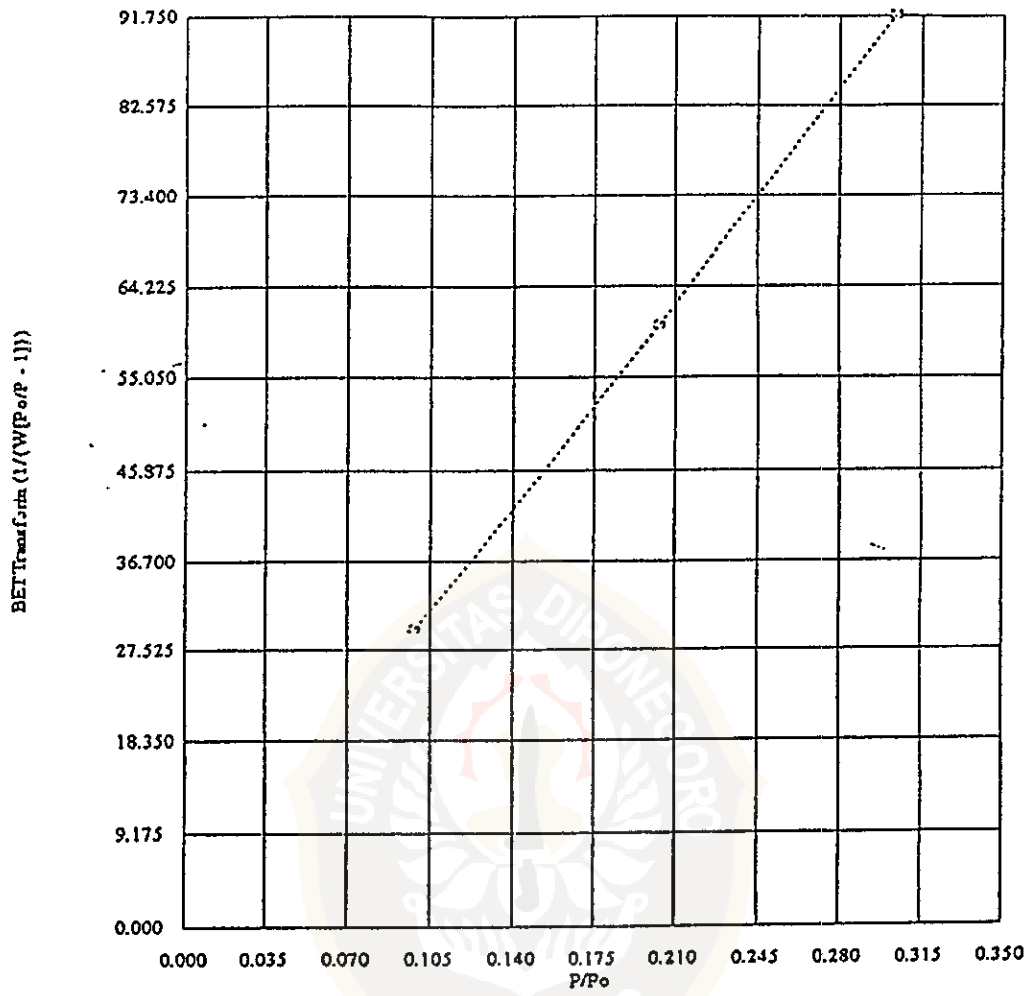
2. Luas permukaan spesifik lempung optimum desa Banyusri (Bx).



Multi BET (Adsorption)

P/Po		BET Transform (1/{W[Po/P - 1]})
0.100688		4.943006
0.193653		9.249844
0.294959		14.390001
Slope	=	48.656858
Intercept	=	-0.030368
Correlation Coefficient	=	0.999660
BET C	=	-1601.226032
Surface Area	=	36.432632 sq m
Specific Surface Area	=	71.617683 sq m/g

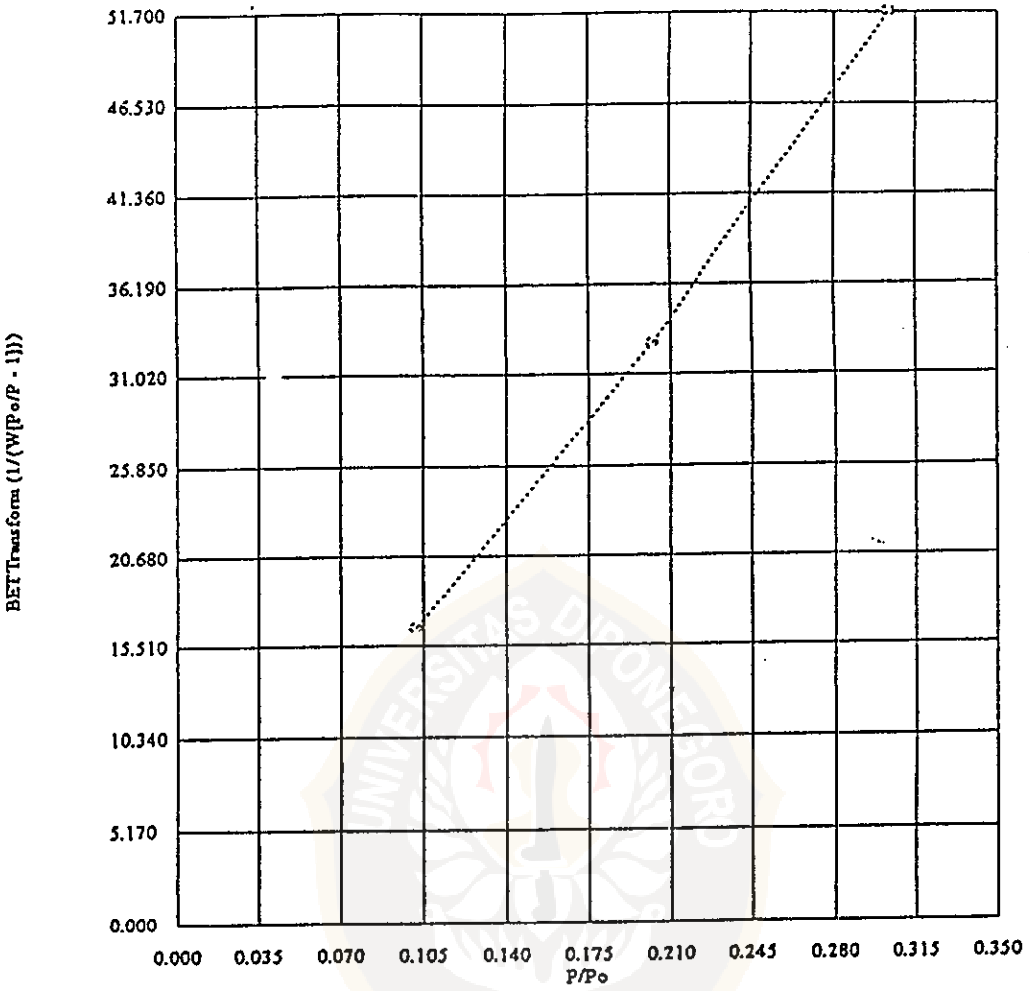
3. Luas permukaan spesifik lempung awal desa Pucangan (K0).



Multi BET (Adsorption)

P/Po		BET Transform (1/{W[Po/P - 1]})
0.098455		29.628332
0.203145		60.252164
0.303962		91.714718
Slope	=	302.051258
Intercept	=	-0.438490
Correlation Coefficient	=	0.999826
BET C	=	-687.843390
Surface Area	=	5.428270 sq m
Specific Surface Area	=	11.546317 sq m/g

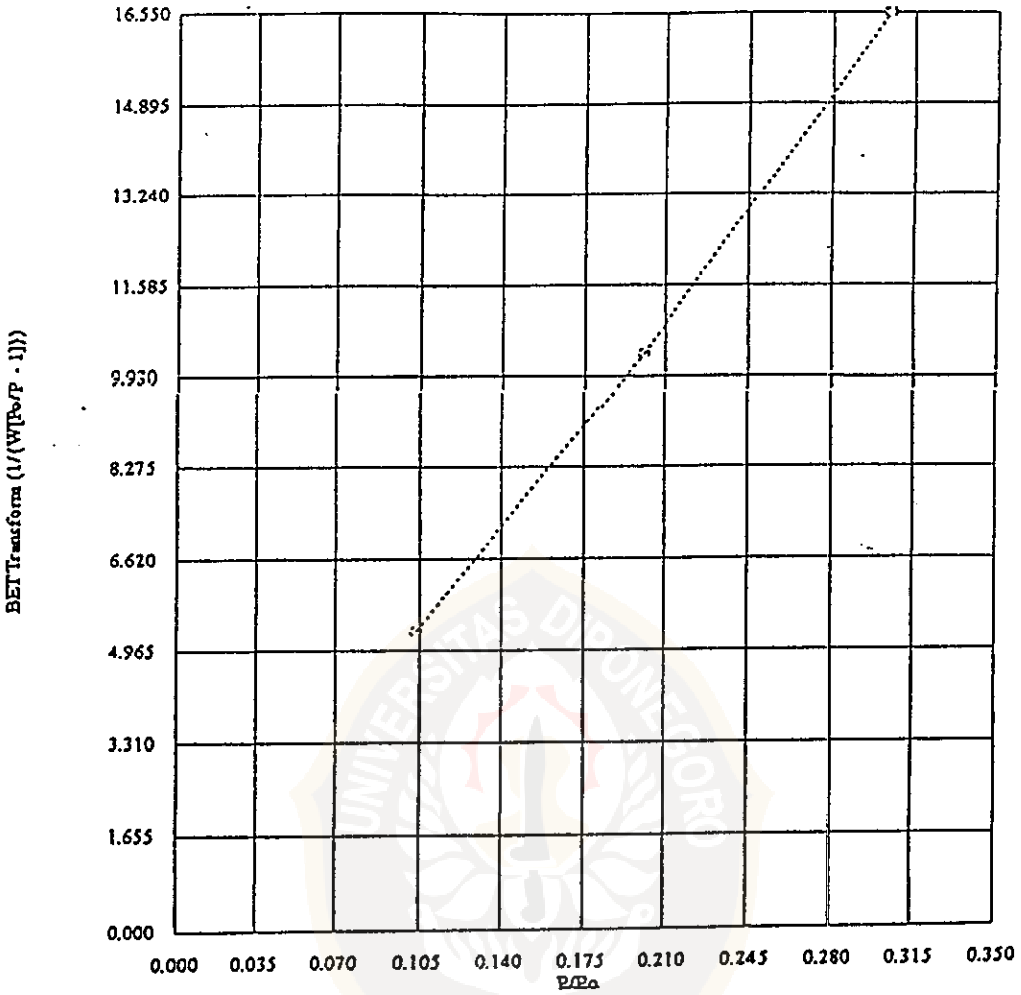
4. Luas permukaan spesifik lempung optimum desa Pucangan (Kx).



Multi BET (Adsorption)

P/Po		BET Transform (1/(W[Po/P - 1]))
0.102110		16.544485
0.202242		32.827547
0.303323		51.659038
Slope	=	174.532616
Intercept	=	-1.676005
Correlation Coefficient	=	0.999234
BET C	=	-103.136102
Surface Area	=	6.680293 sq m
Specific Surface Area	=	20.146852 sq m/g

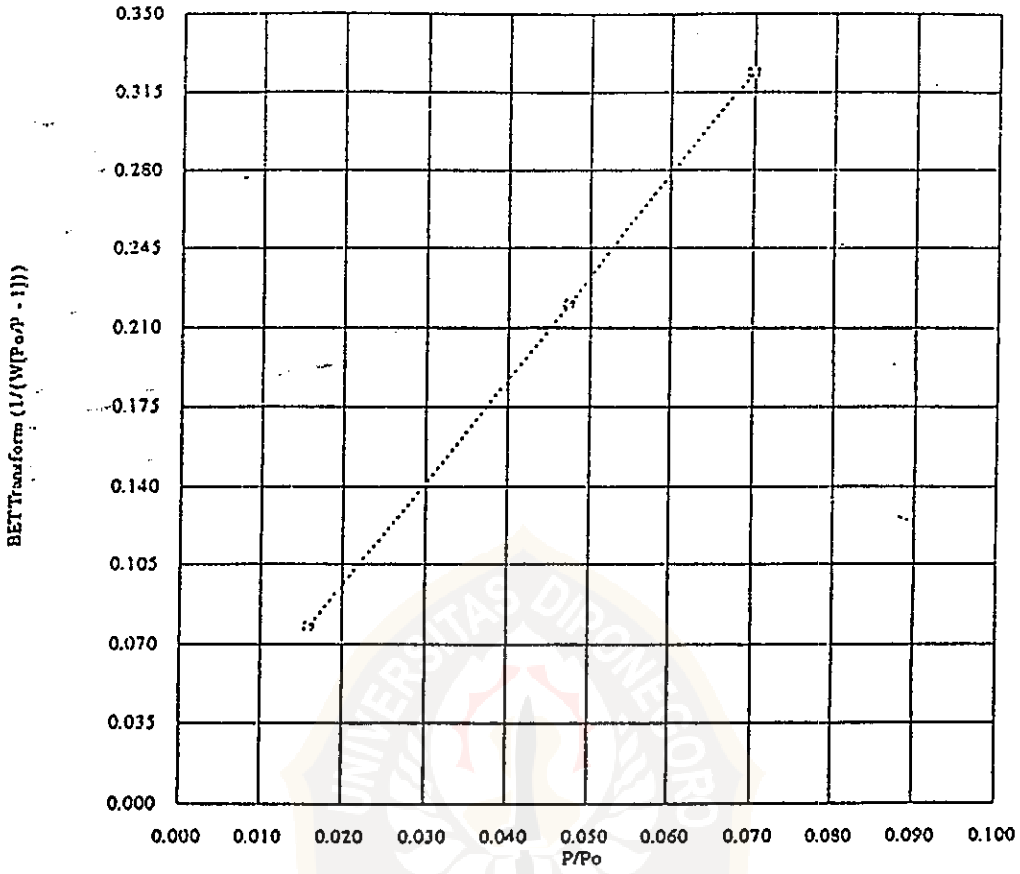
5. Luas permukaan spesifik lempung aktif pasaran.



Multi BET (Adsorption)

P/Po		BET Transform (1/(W[Po/P - 1]))
0.103716		5.318725
0.200468		10.327758
0.304986		16.520019
Slope	=	55.700889
Intercept	=	-0.588270
Correlation Coefficient	=	0.999254
BET C	=	-93.685926
Surface Area	=	29.715936 sq m
Specific Surface Area	=	63.189096 sq m/g

6. Luas permukaan spesifik karbon aktif (merck).



Multi BET (Adsorption)

P/Po		BET Transform (1/{W[Po/P - 1]})
0.015822		0.077146
0.047372		0.220060
0.069843		0.323486
Slope	=	4.558111
Intercept	=	0.004764
Correlation Coefficient	=	0.999990
BET C	=	957.734991
Surface Area	=	64.569139 sq m
Specific Surface Area	=	763.228591 sq m/g