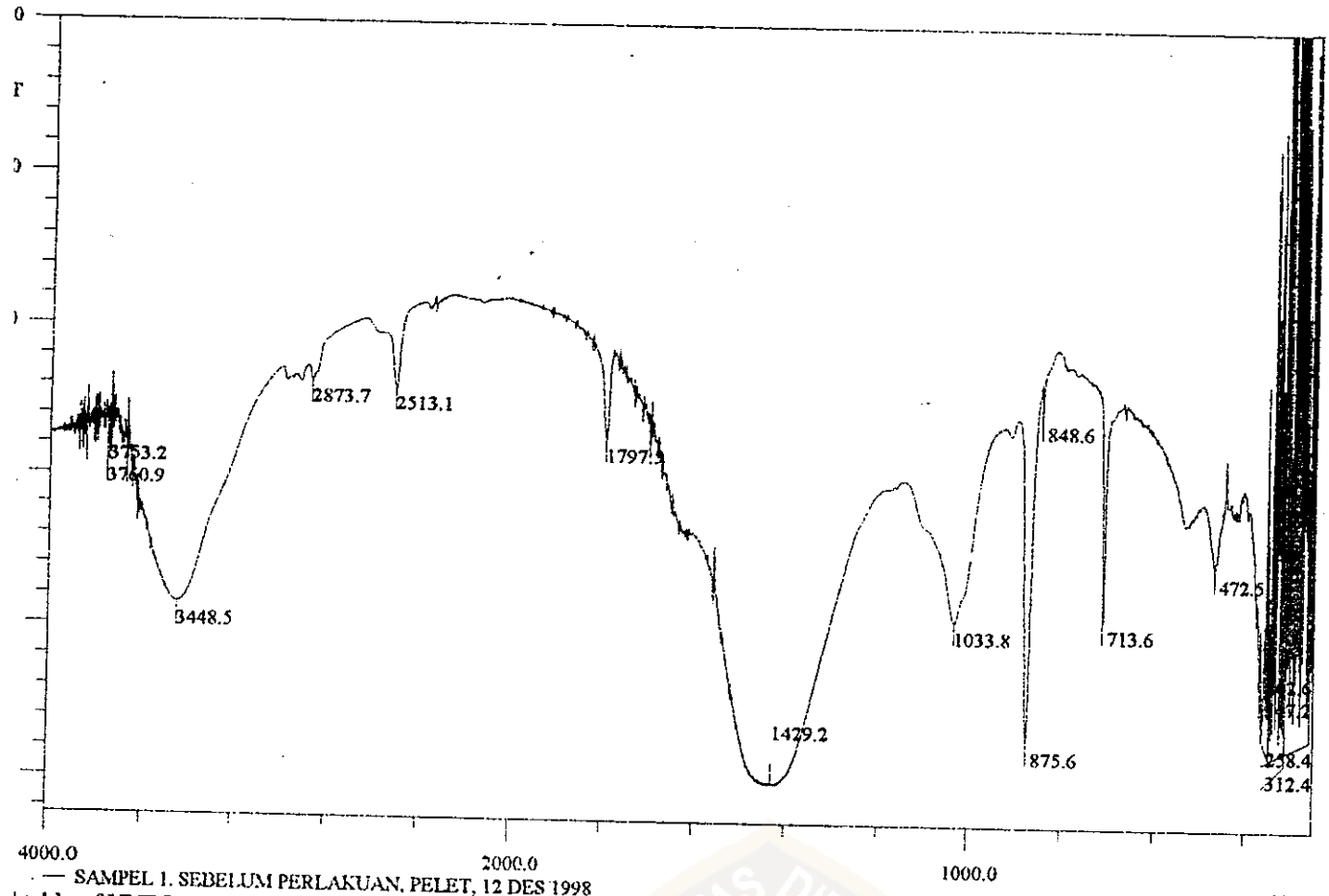
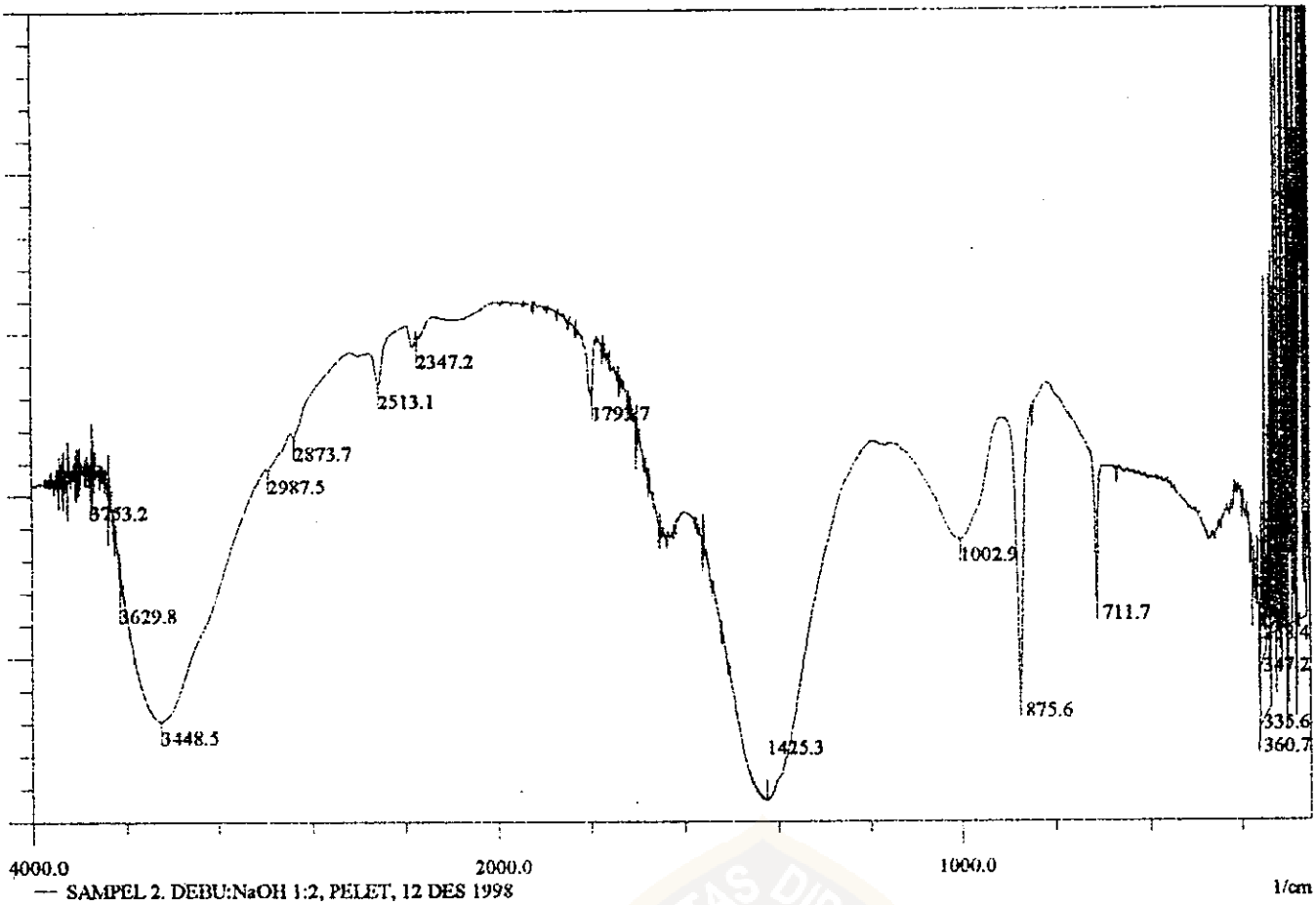


— SAMPEL 1. SEBELUM PERLAKUAN, PELET, 12 DES 1998

ktable of UNDI5.IRS, 16 Peaks

eshhold: 80, Noise: 3, No Range Selection

Pos. (1/cm)	Inten. (%T)
258.4	6.869
312.4	3.770
347.2	4.428
362.6	7.309
472.5	29.307
713.6	22.319
848.6	49.317
875.6	6.156
1033.8	21.816
1429.2	0.062
1797.5	45.291
2513.1	51.893
2873.7	52.637
3448.5	22.726
3753.2	44.521
3760.9	45.436

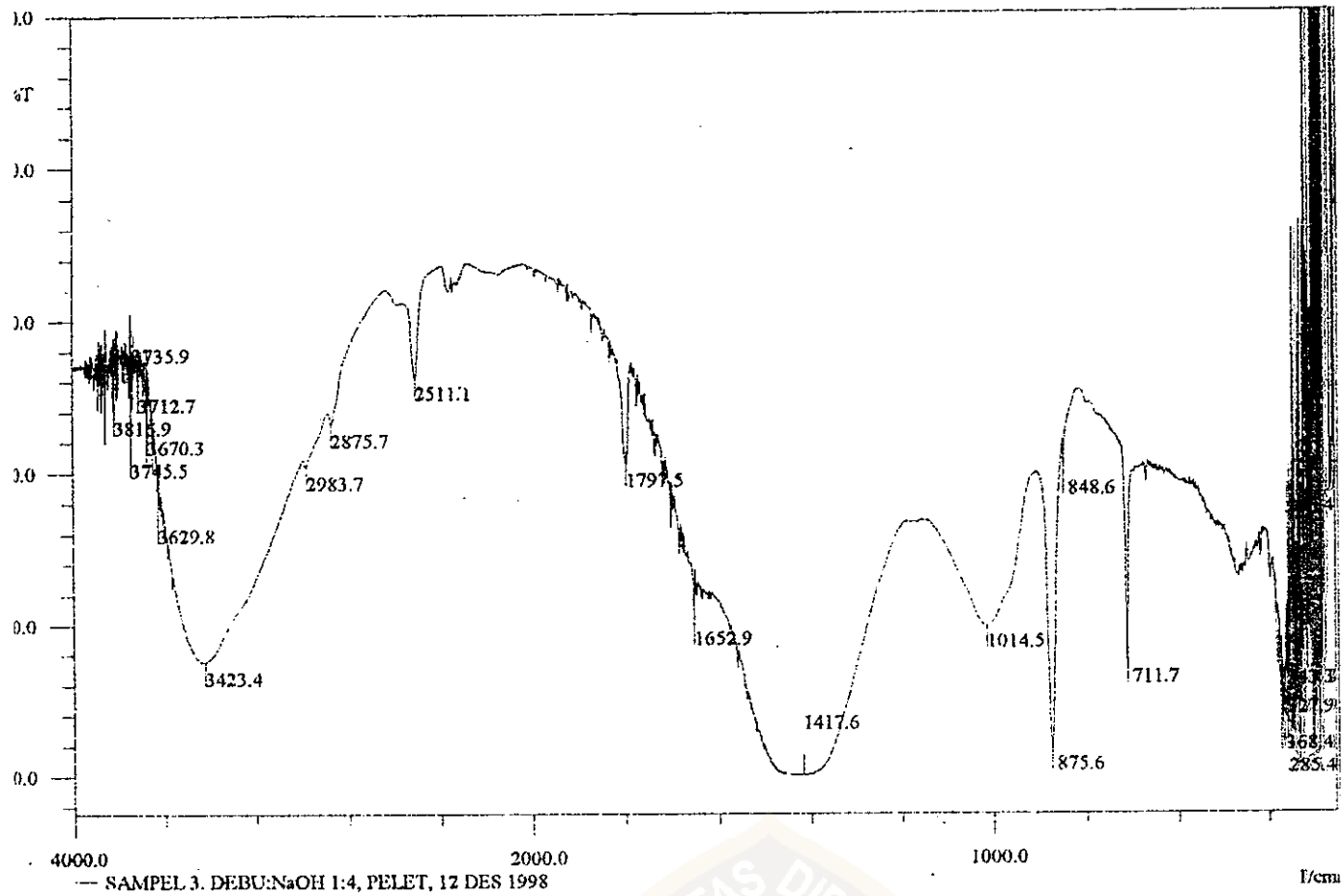


— SAMPEL 2. DEBU:NaOH 1:2, PELET, 12 DES 1998

ktable of UNDIP5.IRS, 17 Peaks

eshhold: 80, Noise: 3, No Range Selection

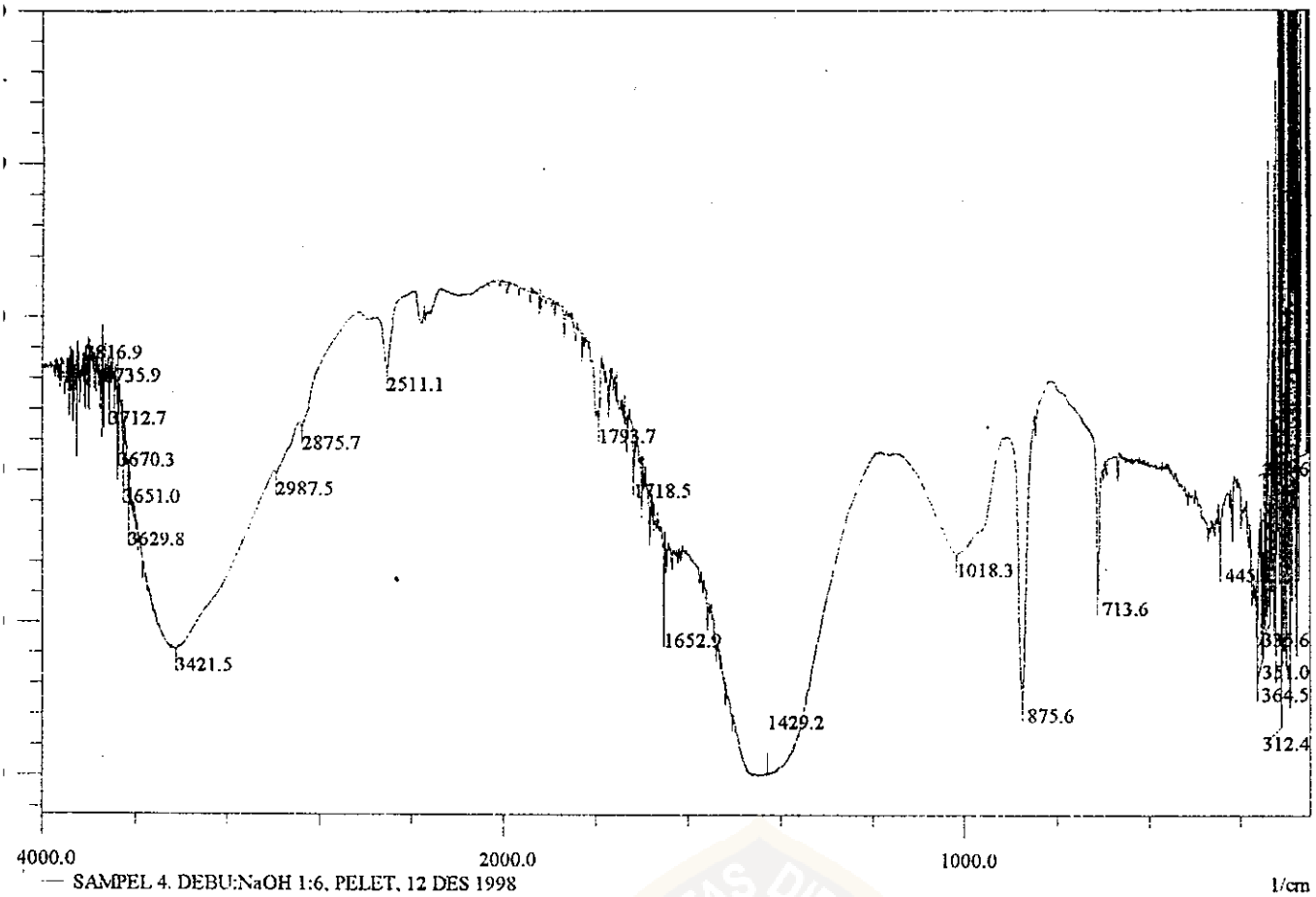
Pos. (1/cm)	Inten. (%T)
258.4	24.735
335.6	13.903
347.2	20.829
360.7	14.135
376.1	26.282
711.7	27.357
875.6	15.515
1002.9	34.506
1425.3	2.427
1793.7	52.113
2347.2	58.580
2513.1	53.624
2873.7	47.234
2987.5	43.108
3448.5	12.318
3629.8	27.288
3753.2	39.907



— SAMPEL 3. DEBU:NaOH 1:4, PELET, 12 DES 1998

Peaktable of UNDIP6.IRS, 22 Peaks
Threshhold: 80, Noise: 4, No Range Selection

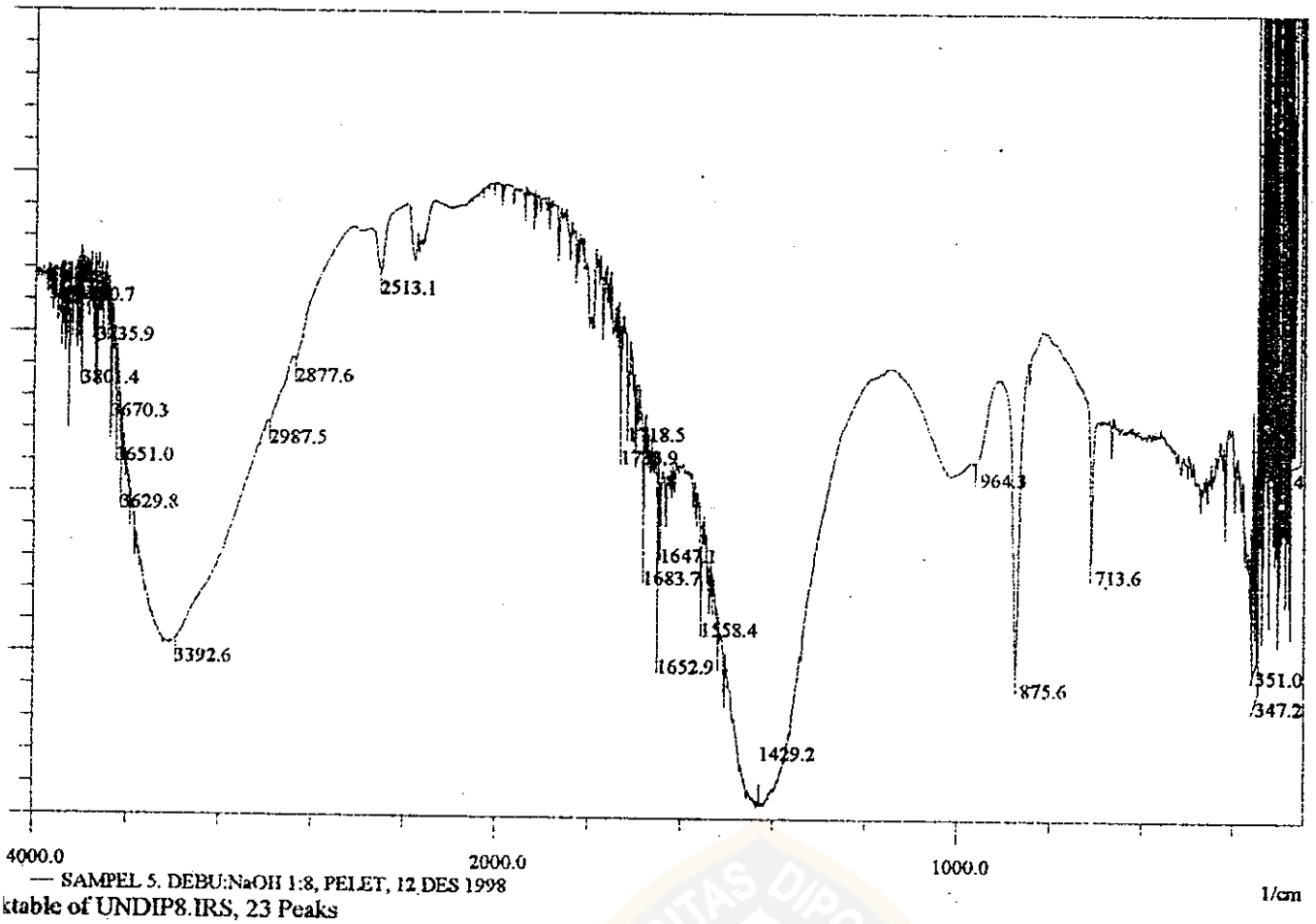
Nr.	Pos. (1/cm)	Inten. (%T)
1	260.4	37.220
2	285.4	3.109
3	327.9	1.883
4	343.3	5.650
5	368.4	6.061
6	711.7	15.009
7	848.6	39.776
8	875.6	3.542
9	1014.5	19.736
10	1417.6	0.072
11	1652.9	20.223
12	1797.5	40.993
13	2511.1	52.509
14	2875.7	46.297
15	2983.7	40.719
16	3423.4	15.010
17	3629.8	33.876
18	3670.3	45.452
19	3712.7	51.059
20	3735.9	48.633
21	3745.5	46.847
22	3816.9	49.586



— SAMPEL 4. DEBU:NaOH 1:6. PELET. 12 DES 1998

aktable of UNDIP7.IRS, 23 Peaks
reshhold: 80, Noise: 5. No Range Selection

Pos. (1/cm)	Inten. (%T)
254.6	42.505
312.4	6.478
335.6	20.015
351.0	15.814
364.5	15.822
445.5	28.509
713.6	24.038
875.6	10.043
1018.3	29.140
1429.2	0.163
1652.9	19.834
1718.5	39.534
1793.7	46.661
2511.1	53.443
2875.7	45.695
2987.5	39.697
3421.5	16.464
3629.8	32.990
3651.0	38.658
3670.3	43.455
3712.7	48.914
3735.9	45.502
3816.9	47.881

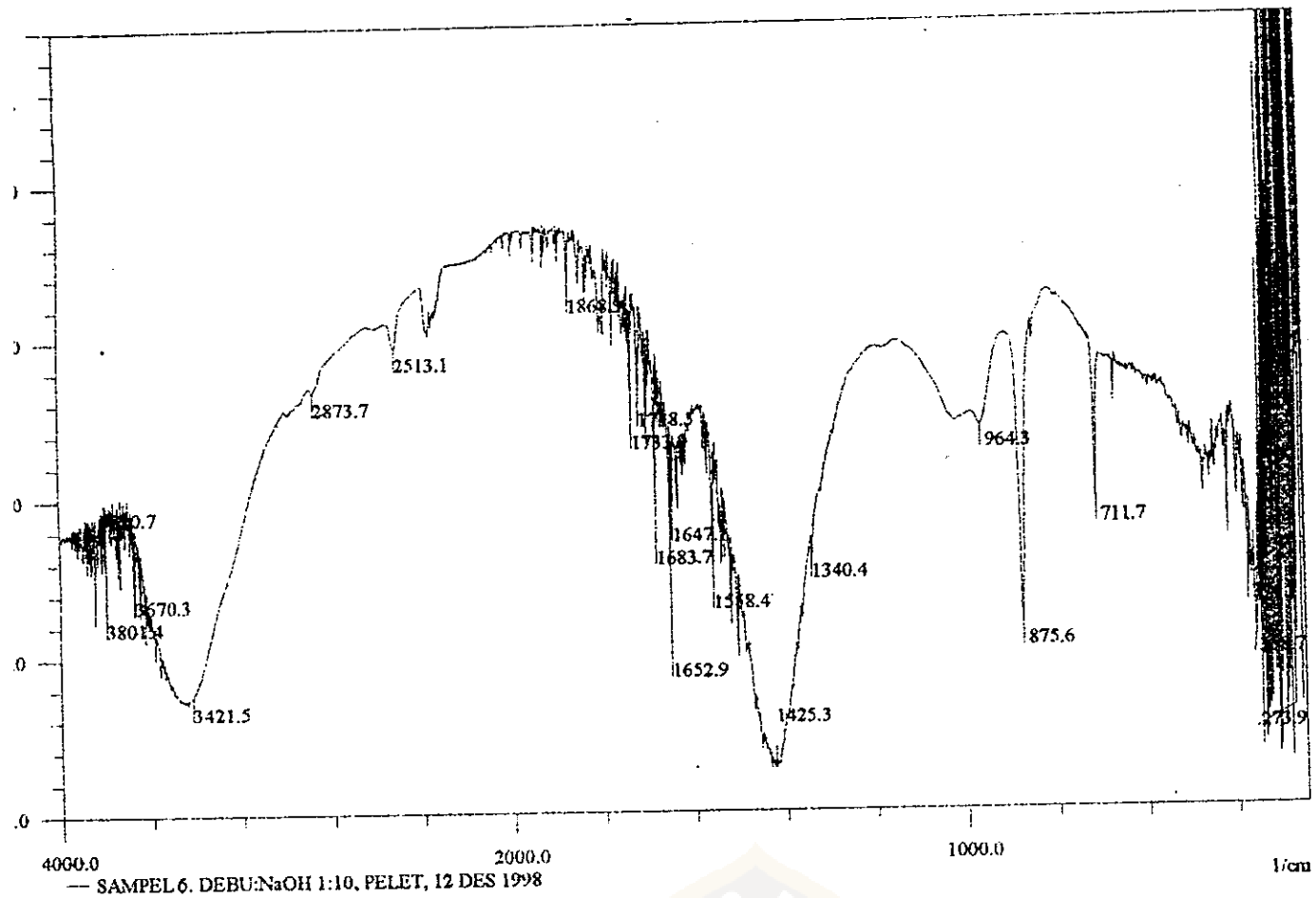


— SAMPEL 5. DEBU:NaOH 1:8, PELET, 12 DES 1998

ktable of UNDIP8.IRS, 23 Peaks

eshhold: 80, Noise: 8, No Range Selection

Pos. (1/cm)	Inten. (%T)
258.4	44.616
347.2	16.140
351.0	19.784
713.6	32.286
875.6	18.059
964.3	44.338
1429.2	1.528
1558.4	25.280
1647.1	34.623
1652.9	20.675
1683.7	34.923
1718.5	49.659
1733.9	50.551
2513.1	67.755
2877.6	56.686
2987.5	48.887
3392.6	21.383
3629.8	40.629
3651.0	46.520
3670.3	52.003
3735.9	53.008
3801.4	56.178
3820.7	57.929



— SAMPEL 6. DEBU:NaOH 1:10, PELET, 12 DES 1998

eaktable of UNDIP9.IRS, 21 Peaks

hreshhold: 80, Noise: 7, No Range Selection

lr.	Pos. (1/cm)	Inten. (%T)
	273.9	12.438
	358.7	21.898
	376.1	28.545
	711.7	38.704
	875.6	23.393
	964.3	48.207
	1340.4	32.220
	1425.3	5.425
	1558.4	28.530
10	1647.1	36.980
11	1652.9	19.924
12	1683.7	37.341
13	1718.5	51.465
14	1733.9	50.827
15	1868.9	66.140
16	2513.1	58.860
17	2873.7	53.235
18	3421.5	15.060
19	3670.3	28.682
20	3801.4	30.376
21	3820.7	31.174

1.DI 28-May-1999 13:2

PC-APD, Diffraction softwar

Sample identification: 1
Data measured at: 28-May-1999 13:16:00

Diffractometer type: PW3710 BASED
Tube anode: Cu
Generator tension [kV]: 40
Generator current [mA]: 30
Wavelength Alpha1 [Å]: 1.54056
Wavelength Alpha2 [Å]: 1.54439
Intensity ratio (alpha2/alpha1): 0.500
Divergence slit: 1°
Receiving slit: 0.2
Monochromator used: NO

Start angle [°2θ]: 4.010
End angle [°2θ]: 79.950
Step size [°2θ]: 0.020
Maximum intensity: 1004.890
Time per step [s]: 0.100
Type of scan: CONTINUOUS

Minimum peak tip width: 0.00
Maximum peak tip width: 1.00
Peak base width: 2.00
Minimum significance: 0.75
Number of peaks: 23

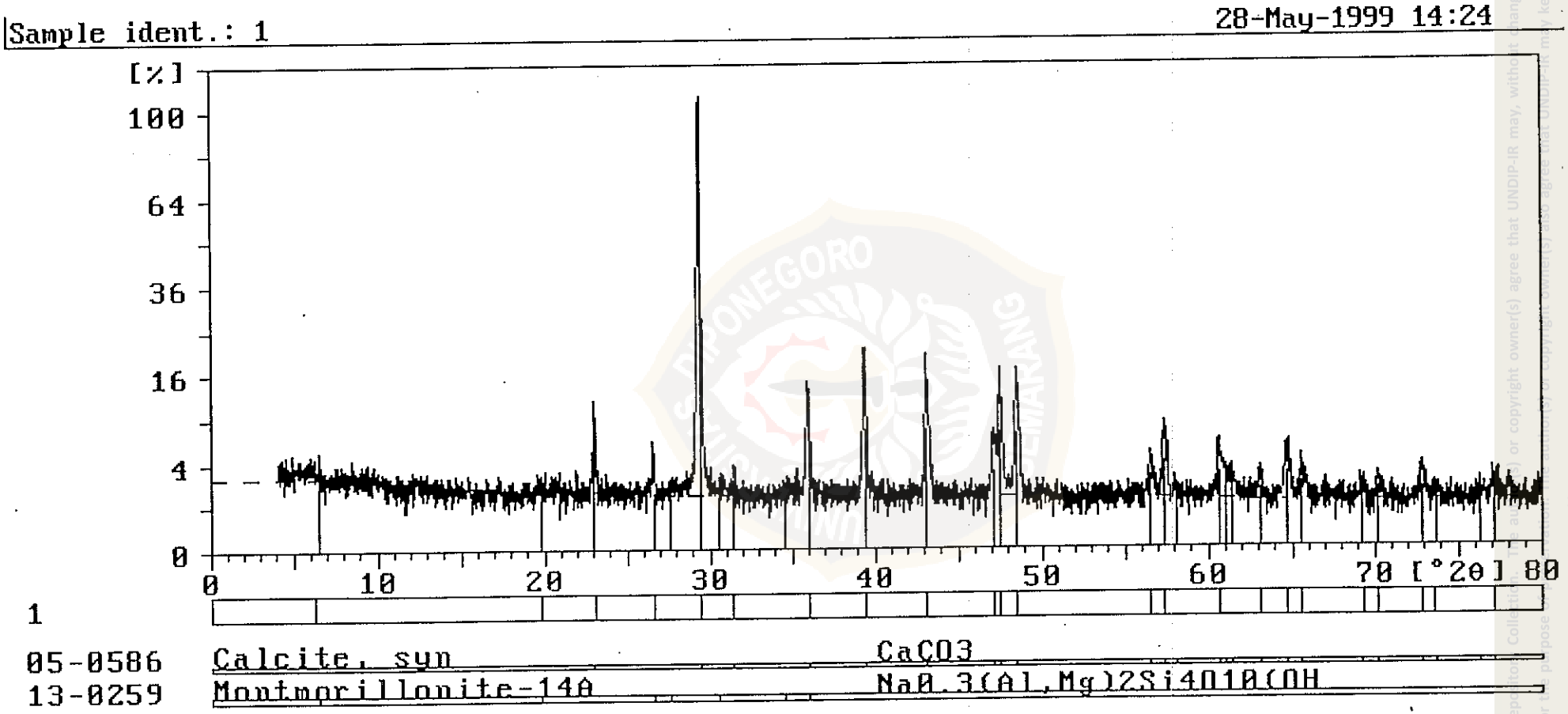
le θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif
55	14.1186	14.1536	0.800	7	27	0.7	1.1
50	4.4915	4.5026	0.480	4	18	0.4	0.7
70	3.8521	3.8616	0.140	67	18	6.7	2.7
80	3.3508	3.3591	0.200	27	16	2.7	2.4
90	3.0365	3.0441	0.140	1005	15	100.0	12.6
40	2.8430	2.8501	0.160	18	15	1.8	0.8
65	2.4950	2.5012	0.140	135	16	13.4	2.9
00	2.2851	2.2907	0.100	199	15	19.8	2.3
30	2.0957	2.1009	0.120	164	14	16.3	3.4
90	1.9283	1.9331	0.160	56	14	5.6	1.4
90	1.9129	1.9177	0.240	137	14	13.6	6.4
80	1.8762	1.8808	0.080	151	14	15.1	0.9
60	1.6258	1.6299	0.160	34	13	3.3	1.2
70	1.6048	1.6088	0.080	67	13	6.7	0.9
30	1.5261	1.5298	0.080	50	12	5.0	0.9
50	1.4732	1.4768	0.240	18	12	1.8	1.5
50	1.4405	1.4441	0.140	45	12	4.5	1.2
45	1.4230	1.4265	0.160	17	12	1.7	0.7
05	1.3547	1.3581	0.240	10	12	1.0	1.0
35	1.3390	1.3424	0.320	12	11	1.2	1.3
70	1.2970	1.3002	0.160	20	11	2.0	0.8
40	1.2853	1.2885	0.400	7	11	0.7	0.8

..DI 28-May-1999 13:24

PC-APD, Diffraction software

e	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif.
)	1.2361	1.2392	0.320	12	12	1.2	1.05

Debu mula - mula



PC-APD, Diffraction softwar

Sample identification: 2
Data measured at: 28-May-1999 13:24:00

Diffractometer type: PW3710 BASED
Tube anode: Cu
Generator tension [kV]: 40
Generator current [mA]: 30
Wavelength Alpha1 [Å]: 1.54056
Wavelength Alpha2 [Å]: 1.54439
Intensity ratio (alpha2/alpha1): 0.500
Divergence slit: 1°
Receiving slit: 0.2
Monochromator used: NO

Start angle [°2θ]: 4.010
End angle [°2θ]: 79.950
Step size [°2θ]: 0.020
Maximum intensity: 817.9600
Time per step [s]: 0.100
Type of scan: CONTINUOUS

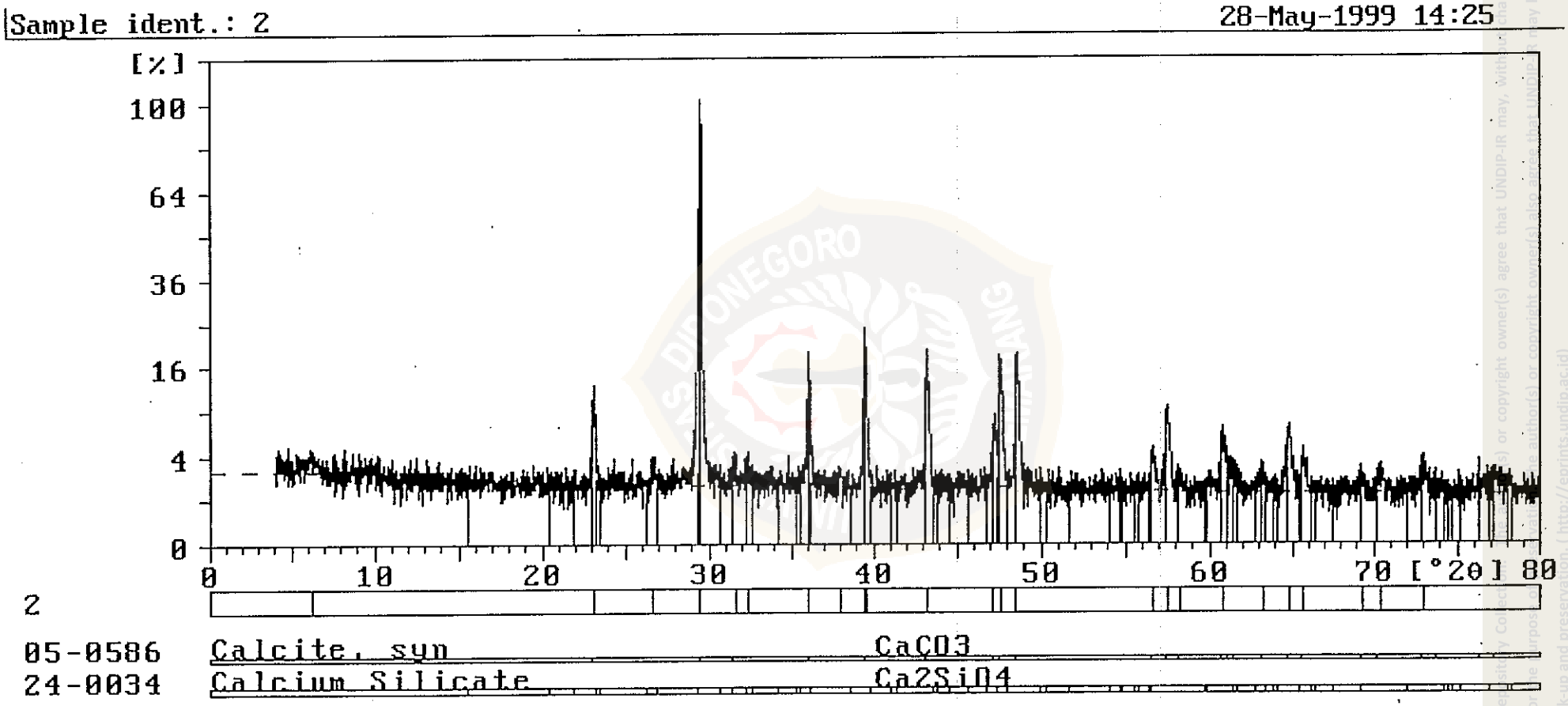
Minimum peak tip width: 0.00
Maximum peak tip width: 1.00
Peak base width: 2.00
Minimum significance: 0.75
Number of peaks: 24

gle 2θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signi
230	14.1752	14.2104	0.640	9	23	1.1	1.
125	3.8430	3.8526	0.140	90	15	11.0	3.
600	3.3483	3.3566	0.160	18	15	2.2	0.
470	3.0284	3.0360	0.180	818	14	100.0	19.
590	2.8299	2.8369	0.240	14	14	1.8	1.
345	2.7655	2.7724	0.480	9	14	1.1	0.
045	2.4897	2.4959	0.080	135	14	16.5	0.
965	2.3681	2.3739	0.240	7	14	0.9	0.
480	2.2806	2.2863	0.080	182	14	22.3	1.
615	2.2731	2.2788	0.060	90	13	11.0	0.
230	2.0911	2.0963	0.080	139	13	17.0	1.
180	1.9248	1.9296	0.160	41	14	5.0	1.
565	1.9101	1.9149	0.180	130	14	15.9	4.
525	1.8745	1.8792	0.100	132	13	16.2	1.
645	1.6236	1.6276	0.200	23	12	2.8	1.
465	1.6023	1.6063	0.120	66	12	8.0	1.
210	1.5836	1.5875	0.320	7	12	0.9	0.
730	1.5238	1.5276	0.160	37	11	4.5	1.
180	1.4705	1.4741	0.240	8	11	1.0	0.
845	1.4367	1.4402	0.280	44	11	5.3	3.
685	1.4203	1.4238	0.120	20	11	2.5	0.
285	1.3550	1.3584	0.240	7	11	0.9	0.

PC-APD, Diffraction softwa

le θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif
60	1.3353	1.3386	0.400	9	11	1.1	1.4
50	1.2957	1.2990	0.400	16	10	2.0	1.9

Debu : NaOH = 1 : 2



PC-APD, Diffraction softwar

Sample identification: 3
Data measured at: 28-May-1999 13:32:00

Diffractometer type: PW3710 BASED
Tube anode: Cu
Generator tension [kV]: 40
Generator current [mA]: 30
Wavelength Alpha1 [Å]: 1.54056
Wavelength Alpha2 [Å]: 1.54439
Intensity ratio (alpha2/alpha1): 0.500
Divergence slit: 1°
Receiving slit: 0.2
Monochromator used: NO

Start angle [°2θ]: 4.010
End angle [°2θ]: 79.950
Step size [°2θ]: 0.020
Maximum intensity: 1062.760
Time per step [s]: 0.100
Type of scan: CONTINUOUS

Minimum peak tip width: 0.00
Maximum peak tip width: 1.00
Peak base width: 2.00
Minimum significance: 0.75
Number of peaks: 30

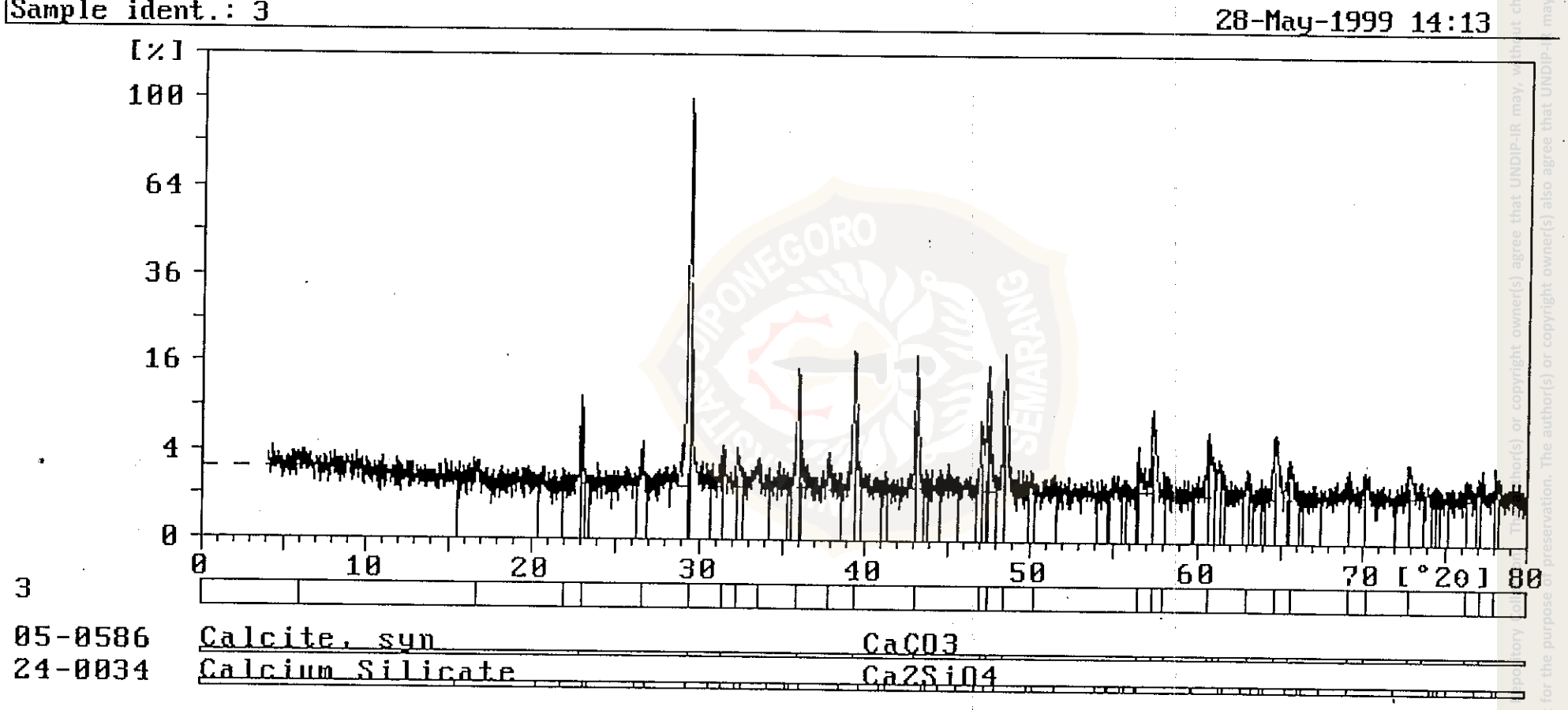
gle 2θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signi:
045	14.6085	14.6448	0.960	5	28	0.5	0.
785	5.2776	5.2907	0.240	10	18	0.9	0.
975	4.0415	4.0515	0.200	4	16	0.3	0.
040	3.8570	3.8666	0.160	86	16	8.1	2.
600	3.3483	3.3566	0.060	36	15	3.4	0.
380	3.0375	3.0451	0.120	1063	15	100.0	9.
445	2.8426	2.8497	0.200	31	15	3.0	1.
265	2.7722	2.7791	0.240	18	15	1.7	1.
530	2.6704	2.6771	0.120	15	15	1.4	0.
955	2.4957	2.5019	0.140	142	15	13.3	4.
840	2.3756	2.3815	0.160	23	14	2.2	1.
385	2.2859	2.2916	0.100	169	14	15.9	2.
135	2.0954	2.1007	0.200	154	15	14.5	6.
055	1.9296	1.9344	0.160	48	15	4.5	1.
460	1.9141	1.9188	0.100	119	14	11.2	0.
460	1.8769	1.8816	0.120	151	14	14.2	2.
235	1.8147	1.8192	0.280	7	14	0.7	0.
530	1.6266	1.6307	0.100	35	14	3.3	0.
350	1.6053	1.6093	0.100	67	14	6.3	1.
040	1.5878	1.5918	0.120	10	13	1.0	0.
650	1.5256	1.5294	0.100	53	12	5.0	1.
010	1.4740	1.4777	0.480	11	12	1.0	1

3.DI 28-May-1999 13:3

PC-APD, Diffraction softwar

.e)]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif.
10	1.4407	1.4443	0.100	50	11	4.7	0.95
15	1.4211	1.4246	0.160	22	11	2.1	0.77
90	1.3567	1.3600	0.480	7	12	0.6	0.94
55	1.3385	1.3419	0.320	13	12	1.2	1.21
10	1.2974	1.3006	0.160	20	12	1.9	0.87
25	1.2466	1.2497	0.320	8	11	0.7	1.48
00	1.2360	1.2391	0.320	8	12	0.8	1.10
35	1.2235	1.2266	0.120	16	12	1.5	1.15

Debu : NaOH = 1 : 4



PC-APD, Diffraction softwa

Sample identification: 4
Data measured at: 28-May-1999 13:40:00

Diffractometer type: PW3710 BASED
Tube anode: Cu
Generator tension [kV]: 40
Generator current [mA]: 30
Wavelength Alpha1 [Å]: 1.54056
Wavelength Alpha2 [Å]: 1.54439
Intensity ratio (alpha2/alpha1): 0.500
Divergence slit: 1°
Receiving slit: 0.2
Monochromator used: NO

Start angle [°2θ]: 4.010
End angle [°2θ]: 79.950
Step size [°2θ]: 0.020
Maximum intensity: 1062.760
Time per step [s]: 0.100
Type of scan: CONTINUOUS

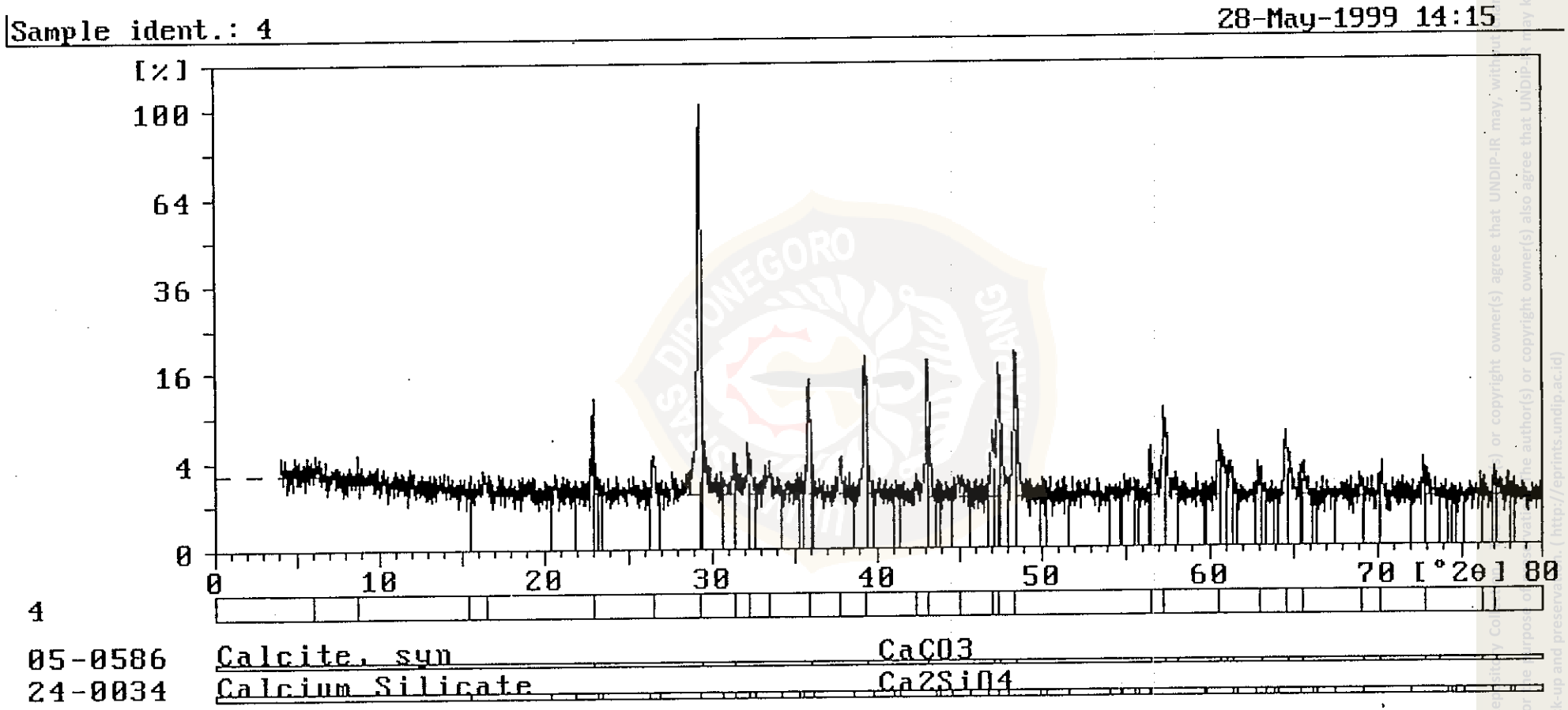
Minimum peak tip width: 0.00
Maximum peak tip width: 1.00
Peak base width: 2.00
Minimum significance: 0.75
Number of peaks: 30

gle 2θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signi
965	14.8043	14.8411	0.960	5	30	0.5	0.
725	10.1264	10.1516	0.060	24	27	2.3	1.
450	5.7305	5.7447	0.120	4	18	0.3	0.
480	5.3746	5.3879	0.480	5	18	0.5	0.
950	3.8719	3.8815	0.140	106	18	10.0	4.
495	3.3614	3.3697	0.200	29	18	2.7	2.
305	3.0451	3.0527	0.160	1063	17	100.0	18.
355	2.8505	2.8576	0.160	28	17	2.6	0.
265	2.7722	2.7791	0.320	24	17	2.3	1.
490	2.6735	2.6802	0.120	18	16	1.7	0.
895	2.4997	2.5059	0.140	139	16	13.1	4.
780	2.3792	2.3851	0.160	23	16	2.2	0.
305	2.2904	2.2960	0.140	174	16	16.4	4.
335	2.1332	2.1385	0.120	12	14	1.1	0.
050	2.0994	2.1046	0.080	177	14	16.6	1.
065	2.0101	2.0151	0.480	7	14	0.6	1.
040	1.9302	1.9350	0.160	52	14	4.9	1.
400	1.9164	1.9211	0.100	154	14	14.5	1.
395	1.8793	1.8839	0.140	169	14	15.9	4.
470	1.6282	1.6322	0.080	34	14	3.2	1.
300	1.6066	1.6106	0.060	88	14	8.3	1.
560	1.5276	1.5314	0.060	53	14	5.0	0.

PC-APD, Diffraction softwa

gle 2θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif
005	1.4741	1.4778	0.400	13	14	1.2	1.6
560	1.4423	1.4459	0.120	50	14	4.7	0.7
570	1.4225	1.4261	0.240	19	14	1.8	0.8
065	1.3588	1.3622	0.480	7	13	0.7	0.9
200	1.3396	1.3429	0.320	10	13	1.0	1.3
360	1.2971	1.3003	0.320	14	13	1.3	1.2
280	1.2472	1.2503	0.400	6	12	0.6	1.0
050	1.2367	1.2398	0.240	12	13	1.1	1.1

Debu : NaOH = .1 : 6



5.DI 28-May-1999 14:0

PC-APD, Diffraction softwar

Sample identification: 5
Data measured at: 28-May-1999 13:47:00

Diffractometer type: PW3710 BASED
Tube anode: Cu
Generator tension [kV]: 40
Generator current [mA]: 30
Wavelength Alpha1 [Å]: 1.54056
Wavelength Alpha2 [Å]: 1.54439
Intensity ratio (alpha2/alpha1): 0.500
Divergence slit: 1°
Receiving slit: 0.2
Monochromator used: NO

Start angle [°2θ]: 4.010
End angle [°2θ]: 79.950
Step size [°2θ]: 0.020
Maximum intensity: 1043.290
Time per step [s]: 0.100
Type of scan: CONTINUOUS

Minimum peak tip width: 0.00
Maximum peak tip width: 1.00
Peak base width: 2.00
Minimum significance: 0.75
Number of peaks: 29

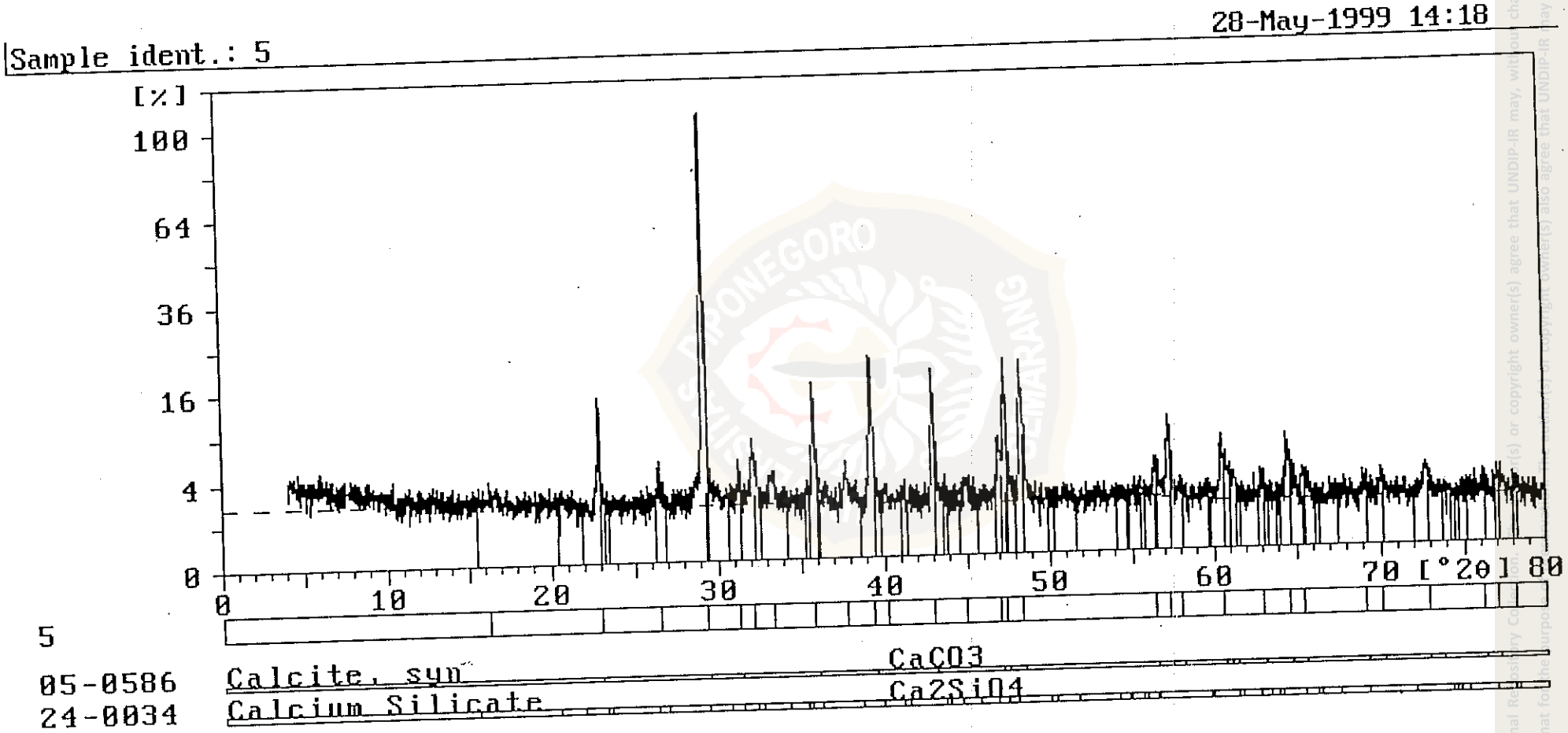
le θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif
15	5.4285	5.4420	0.960	4	21	0.4	0.8
10	3.8786	3.8882	0.120	135	18	12.9	4.0
80	3.3632	3.3716	0.120	34	18	3.2	2.5
65	3.0492	3.0568	0.140	1043	18	100.0	15.2
15	2.8541	2.8612	0.240	21	18	2.0	0.8
20	2.7844	2.7913	0.160	46	17	4.4	1.4
20	2.6868	2.6935	0.400	20	17	1.9	2.4
35	2.5038	2.5100	0.100	146	17	14.0	1.9
40	2.3817	2.3876	0.160	30	17	2.9	1.1
60	2.2929	2.2986	0.100	190	16	18.3	2.1
10	2.2462	2.2518	0.240	8	16	0.8	0.8
95	2.1019	2.1072	0.100	151	16	14.5	2.3
05	2.0169	2.0219	0.200	13	15	1.2	0.8
65	1.9331	1.9379	0.160	53	15	5.1	1.1
65	1.9177	1.9225	0.080	154	15	14.7	1.0
65	1.8804	1.8850	0.120	185	15	17.7	3.0
95	1.6302	1.6342	0.120	25	16	2.4	1.1
45	1.6080	1.6120	0.200	67	15	6.4	2.3
30	1.5881	1.5920	0.320	7	14	0.7	0.8
25	1.5284	1.5322	0.080	56	13	5.4	0.9
45	1.4754	1.4790	0.480	12	13	1.2	2.1
30	1.4429	1.4465	0.160	45	13	4.3	1.3

5.DI 28-May-1999 14:

PC-APD, Diffraction softwa

ple 2θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signif
10	1.4256	1.4292	0.200	15	13	1.5	0.8
85	1.3585	1.3619	0.320	7	13	0.6	0.7
95	1.3414	1.3447	0.240	14	13	1.4	0.9
05	1.2980	1.3012	0.320	17	14	1.6	1.3
95	1.2484	1.2515	0.320	6	13	0.6	0.8
60	1.2366	1.2396	0.400	12	12	1.1	1.2
55	1.2219	1.2250	0.400	3	12	0.3	0.8

Debu : NaOH = 1 : 8



PC-APD, Diffraction softv

Sample identification: 6
Data measured at: 28-May-1999 13:54:00

Diffractometer type: PW3710 BASED
Tube anode: Cu
Generator tension [kV]: 40
Generator current [mA]: 30
Wavelength Alpha1 [Å]: 1.54056
Wavelength Alpha2 [Å]: 1.54439
Intensity ratio (alpha2/alpha1): 0.500
Divergence slit: 1°
Receiving slit: 0.2
Monochromator used: NO

Start angle [°2θ]: 4.010
End angle [°2θ]: 79.950
Step size [°2θ]: 0.020
Maximum intensity: 1108.890
Time per step [s]: 0.100
Type of scan: CONTINUOUS

Minimum peak tip width: 0.00
Maximum peak tip width: 1.00
Peak base width: 2.00
Minimum significance: 0.75
Number of peaks: 28

gle 2θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signi
315	5.1172	5.1299	0.480	5	18	0.5	0.
180	4.3967	4.4076	0.960	5	17	0.4	1.
940	3.8736	3.8832	0.100	119	17	10.7	2.
540	3.3558	3.3641	0.240	17	17	1.5	1.
280	3.0477	3.0552	0.120	1109	16	100.0	11.
320	2.8537	2.8607	0.160	22	15	2.0	1.
220	2.7760	2.7829	0.240	16	15	1.4	1.
860	2.5021	2.5083	0.080	164	16	14.8	1.
275	2.2920	2.2977	0.100	222	16	20.0	3.
015	2.1010	2.1062	0.120	161	14	14.5	3.
955	2.0148	2.0198	0.640	5	14	0.5	0.
975	1.9327	1.9375	0.080	55	15	4.9	0.
375	1.9173	1.9221	0.080	159	15	14.3	1.
385	1.8796	1.8843	0.120	180	16	16.2	3.
250	1.7188	1.7231	0.480	4	13	0.4	0.
410	1.6568	1.6609	0.480	8	13	0.7	1.
435	1.6291	1.6332	0.080	34	12	3.0	0.
295	1.6067	1.6107	0.080	72	12	6.5	0.
535	1.5282	1.5320	0.080	45	12	4.0	0.
350	1.5099	1.5136	0.240	17	12	1.5	1.
960	1.4751	1.4787	0.240	15	12	1.4	2.
520	1.4431	1.4467	0.080	48	12	4.3	0.

: 6.DI

28-May-1999 14

PC-APD, Diffraction softw

gle 2θ]	d-value α1 [Å]	d-value α2 [Å]	Peak width [°2θ]	Peak int [counts]	Back. int [counts]	Rel. int [%]	Signi
650	1.4210	1.4245	0.240	22	12	2.0	1.
115	1.3580	1.3613	0.240	8	12	0.8	0.
115	1.3410	1.3444	0.200	18	11	1.6	1.
785	1.2983	1.3015	0.160	25	11	2.3	0.
245	1.2477	1.2508	0.400	8	12	0.7	1.
010	1.2372	1.2403	0.320	11	13	1.0	0.

Debu : NaOH = 1 : 10

Sample ident.: 6 28-May-1999 14:20