

Lampiran A. Perhitungan bahan yang digunakan

KPK montmorillonit 80-150 meq/100 gram (Rabo, 1973)

Diasumsikan KPK lempung Purwodadi 50 meq/100 gram (Rabo, 1973)

Kation pengusir harus lebih banyak dari kation yang diusir sehingga dapat dibuat perbandingan Si:(Al dan Fe):KPK = 20 mmol : 12,5 mmol : 5mmol

A.1 Perhitungan Volume TEOS

ρ TEOS = 0,94 gram/mL

BM = 208,33 gram/mol

Berat TEOS = 20 mmol x 208,33

= 4166,6 mg

= 4,166 gram

Volume TEOS = $\frac{4,166 \text{ gram}}{0,94 \text{ gram / mL}} = 4,432 \text{ mL}$

A.2 Perhitungan berat Al dan Fe

Bila 100% campuran Al dan Fe = 12,5 mmol

Maka (Al₇₅Fe₂₅) dapat ditulis

Al 75% = 9,375 mmol AlCl₃.6H₂O

Fe 25% = 3,125 mmol FeCl₃.6H₂O

Dengan cara yang sama dapat dibuat tabel:

$Al_{x\%}Fe_{y\%}$	$AlCl_3 \cdot 6H_2O$ (mmol)	$FeCl_3 \cdot 6H_2O$ (mmol)
$Al_{75}Fe_{25}$	9,375	3,125
$Al_{50}Fe_{50}$	6,25	6,25
$Al_{25}Fe_{75}$	3,125	9,375

$$BM FeCl_3 \cdot 6H_2O = 270,29804 \text{ gram/mol}$$

$$\begin{aligned} \text{Berat 25\% Fe atau } (Fe_{25}) &= \text{mol } FeCl_3 \cdot 6H_2O \times BM FeCl_3 \cdot 6H_2O \\ &= 3,125 \text{ mmol} \times 270,29804 \\ &= 844,681375 \text{ mgram} \\ &= 0,8447 \text{ gram} \end{aligned}$$

$$BM AlCl_3 \cdot 6H_2O = 241,43254 \text{ gram/mol}$$

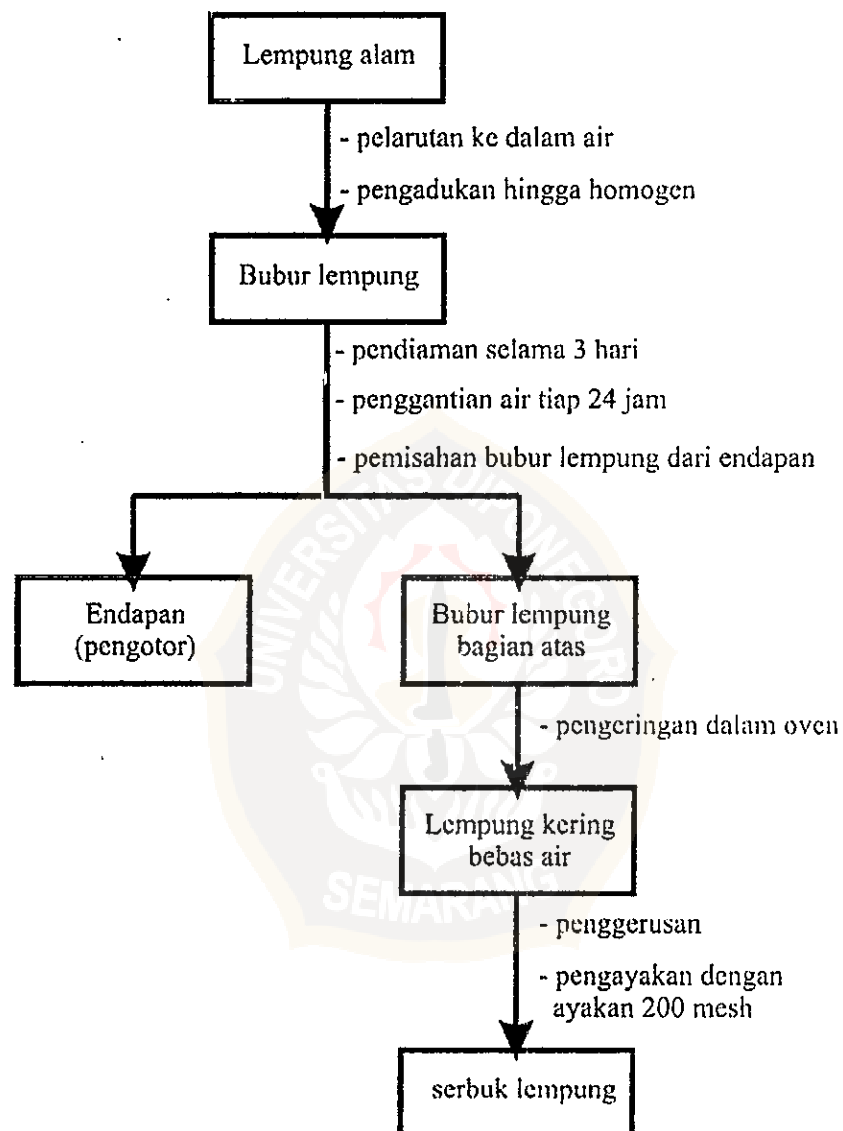
$$\begin{aligned} \text{Berat 75\% Al atau } (Al_{75}) &= \text{mol } AlCl_3 \cdot 6H_2O \times BM AlCl_3 \cdot 6H_2O \\ &= 9,375 \text{ mmol} \times 241,43254 \\ &= 2263,430063 \text{ mgram} \\ &= 2,2634 \text{ gram} \end{aligned}$$

Dengan cara yang sama dapat dibuat tabel Al/Fe:

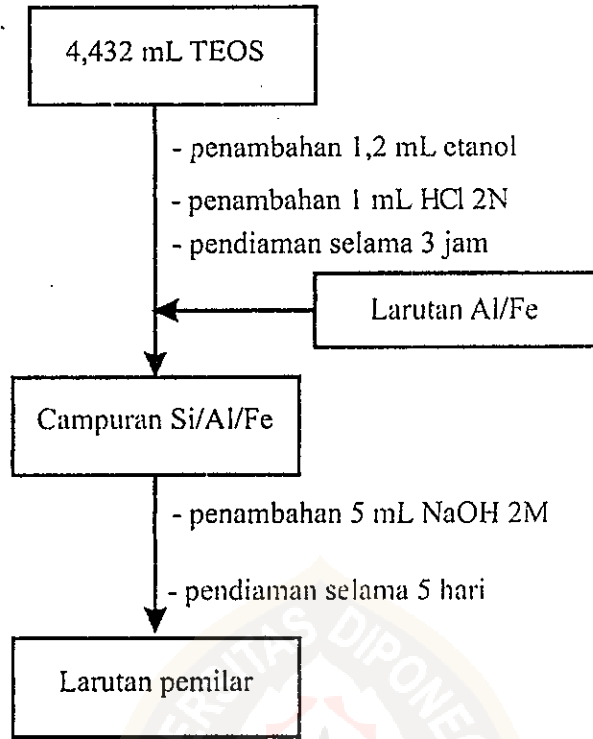
Larutan	$AlCl_3 \cdot 6H_2O$ (gram)	$FeCl_3 \cdot 6H_2O$ (gram)
$Al_{75}Fe_{25}$	2,2634	0,8447
$Al_{50}Fe_{50}$	1,5090	1,6890
$Al_{25}Fe_{75}$	0,7545	2,5340

Lampiran B. Skema kerja penelitian

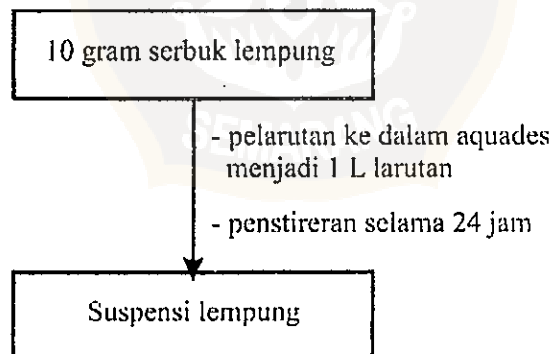
B.1 Preparasi serbuk lempung 200 mesh



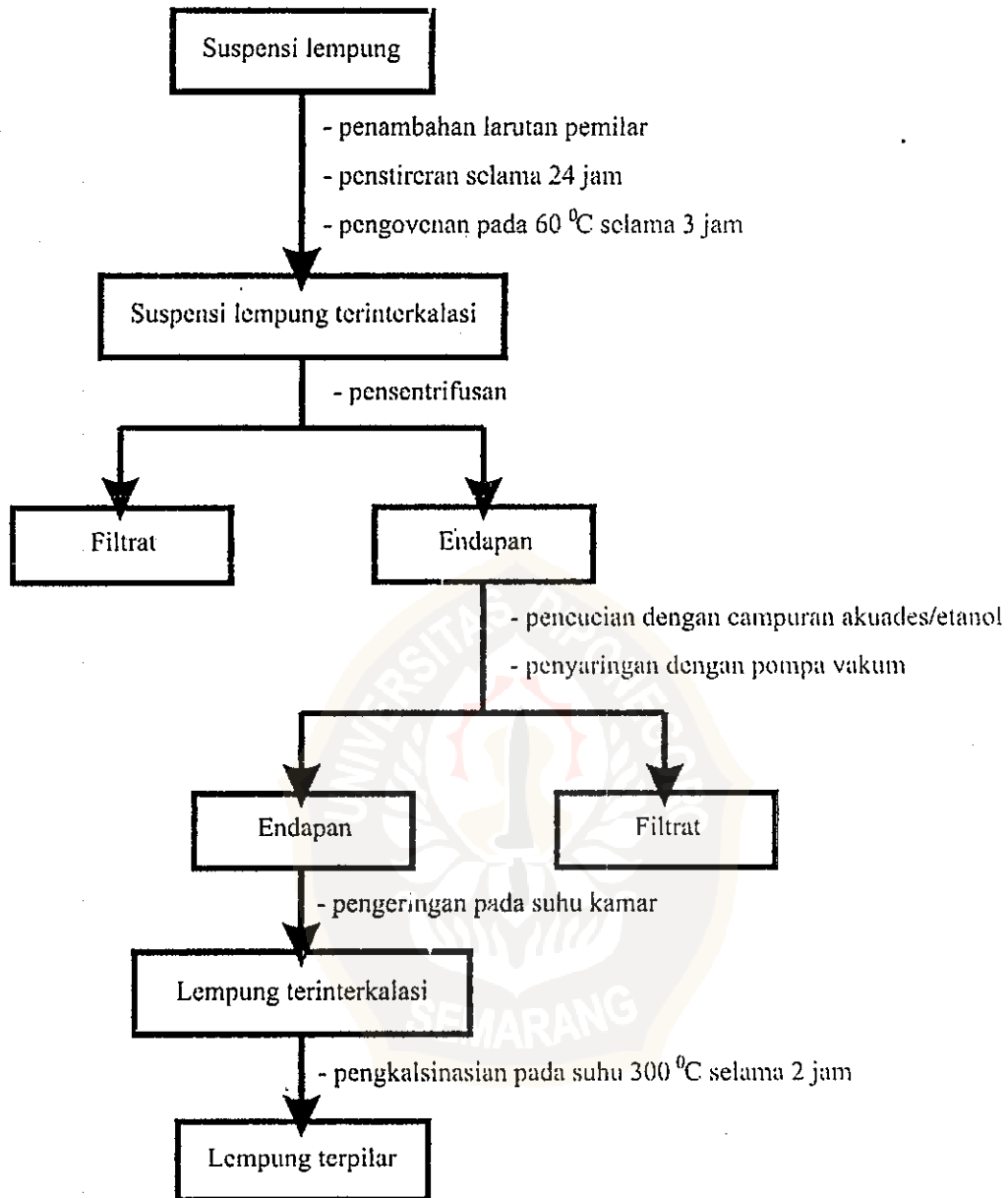
B.2 Preparasi larutan pemilar



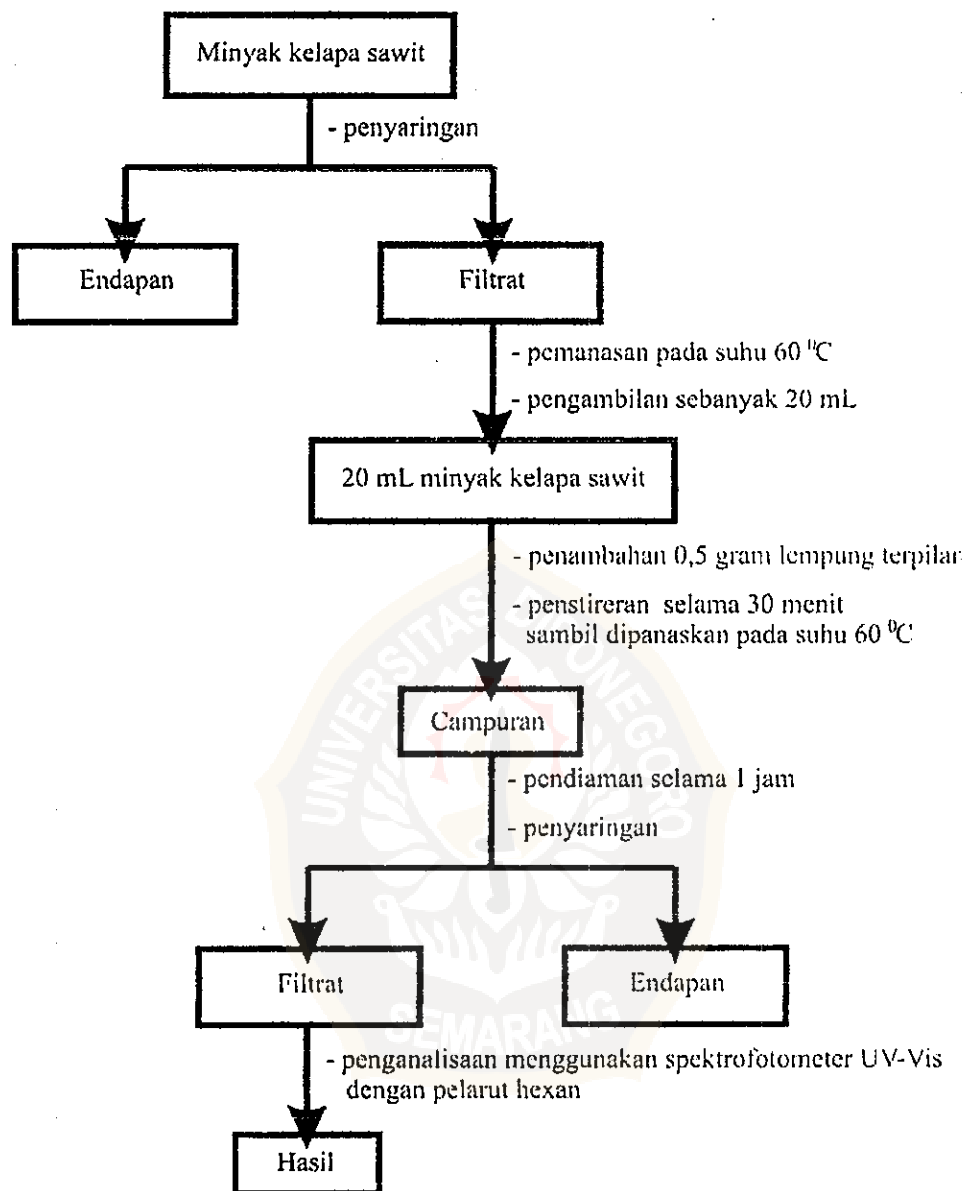
B.3 Preparasi suspensi lempung



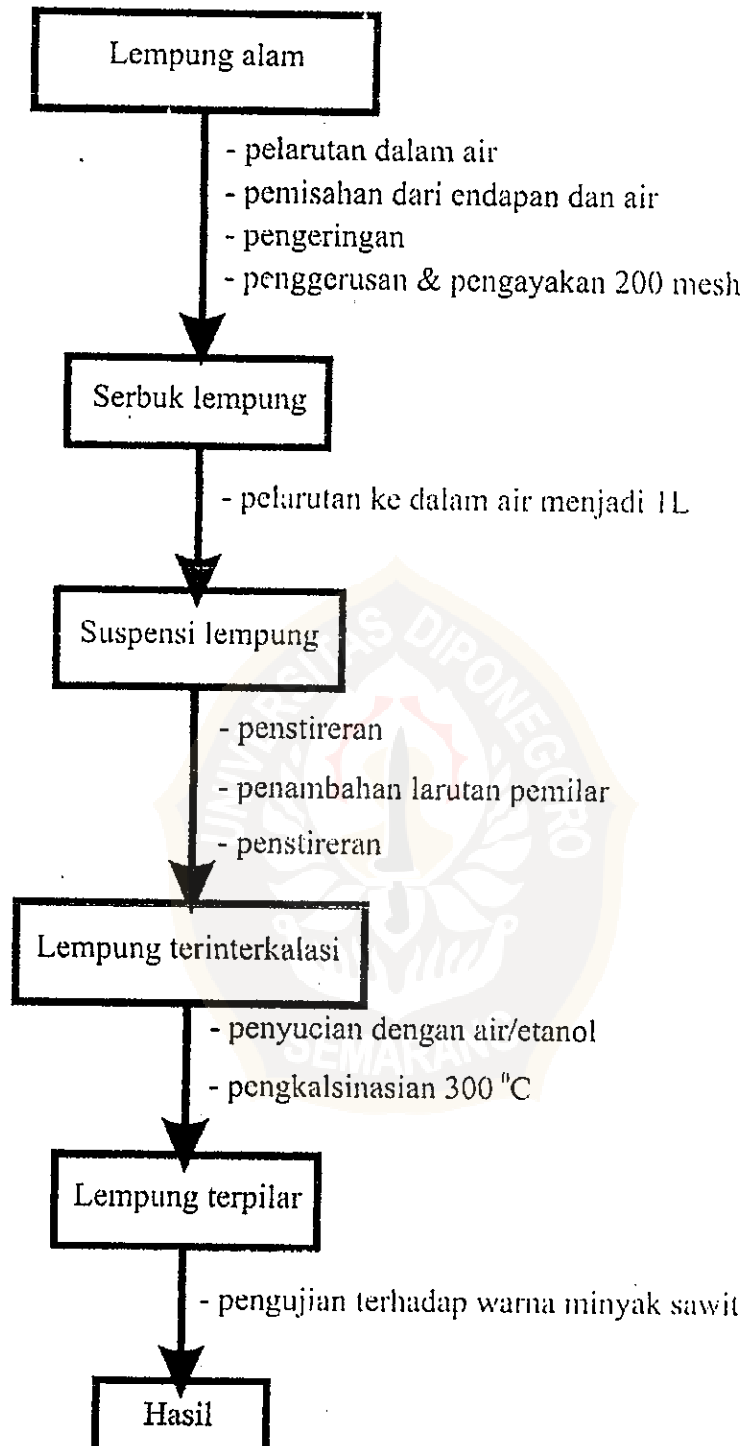
B.4 Pembuatan lempung terpillar



B.5 Uji adsorpsi lempung terhadap warna minyak kelapa sawit

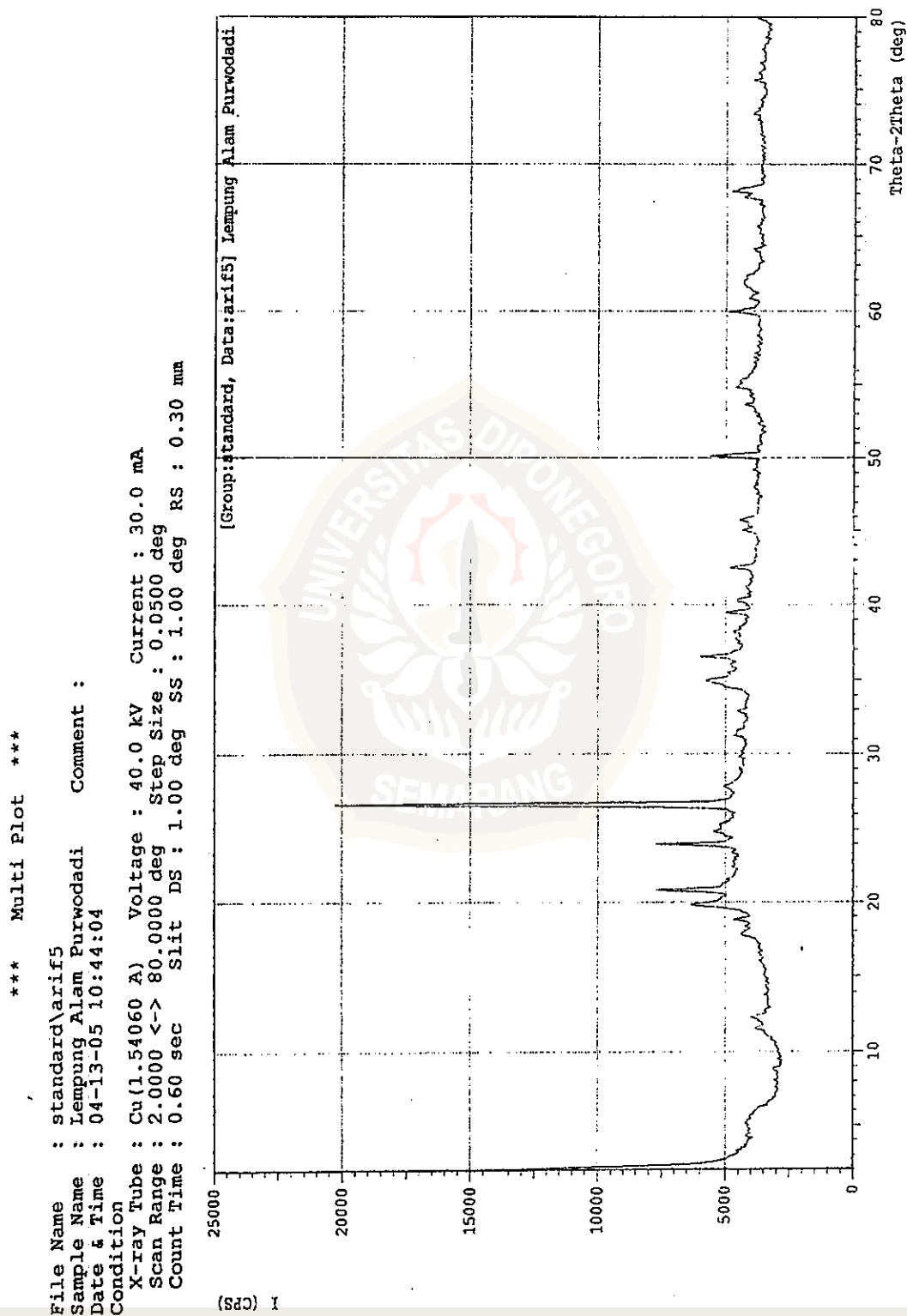


B.6 Skema Kerja Total



Lampiran C. Data hasil analisis dengan Difraktometer Sinar-X

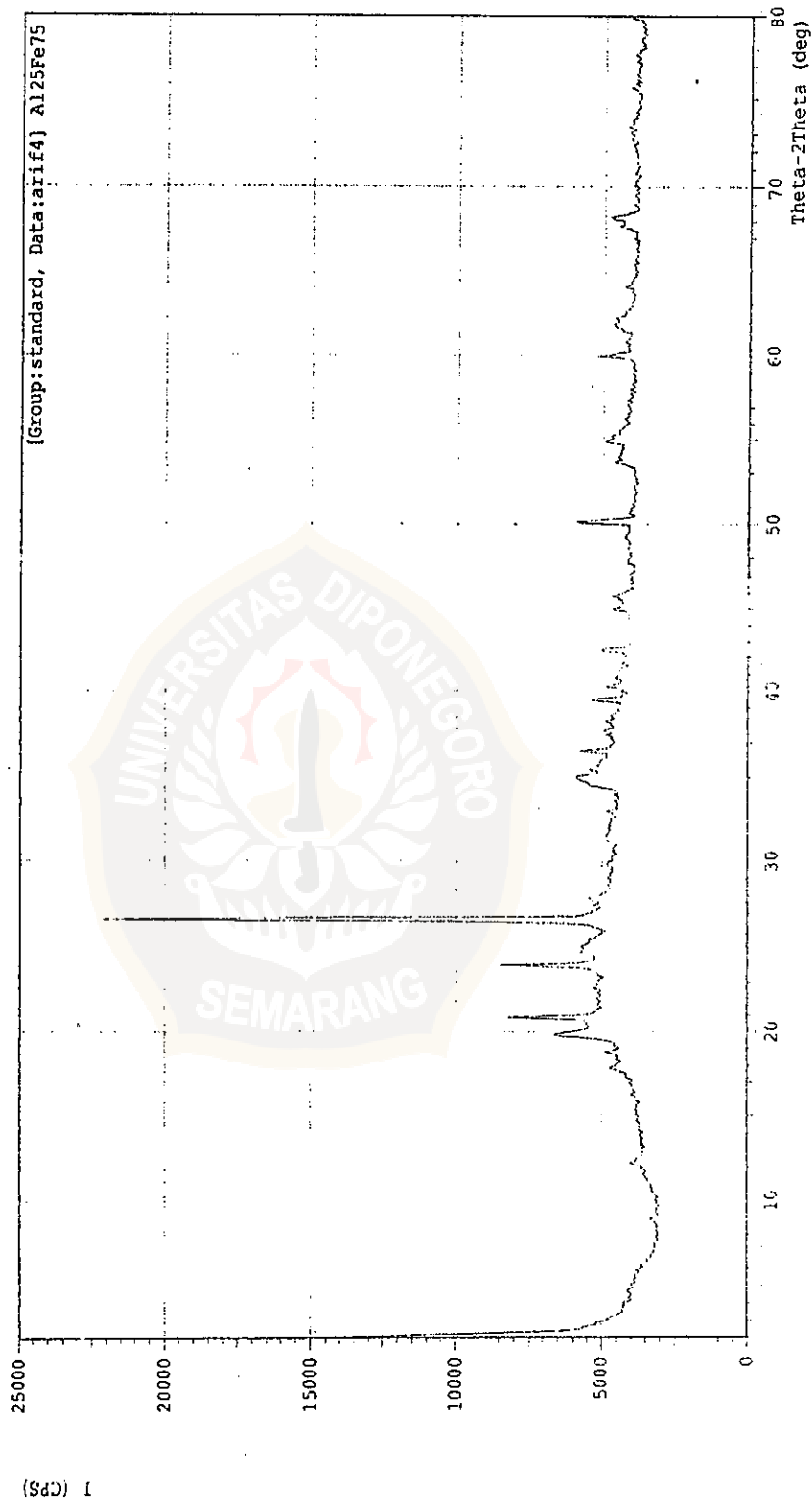
C.1 Lempung alam Purwodadi



C.2 Lempung terpillar $\text{Al}_{25}\text{Fe}_{75}$

*** Multi Plot ***

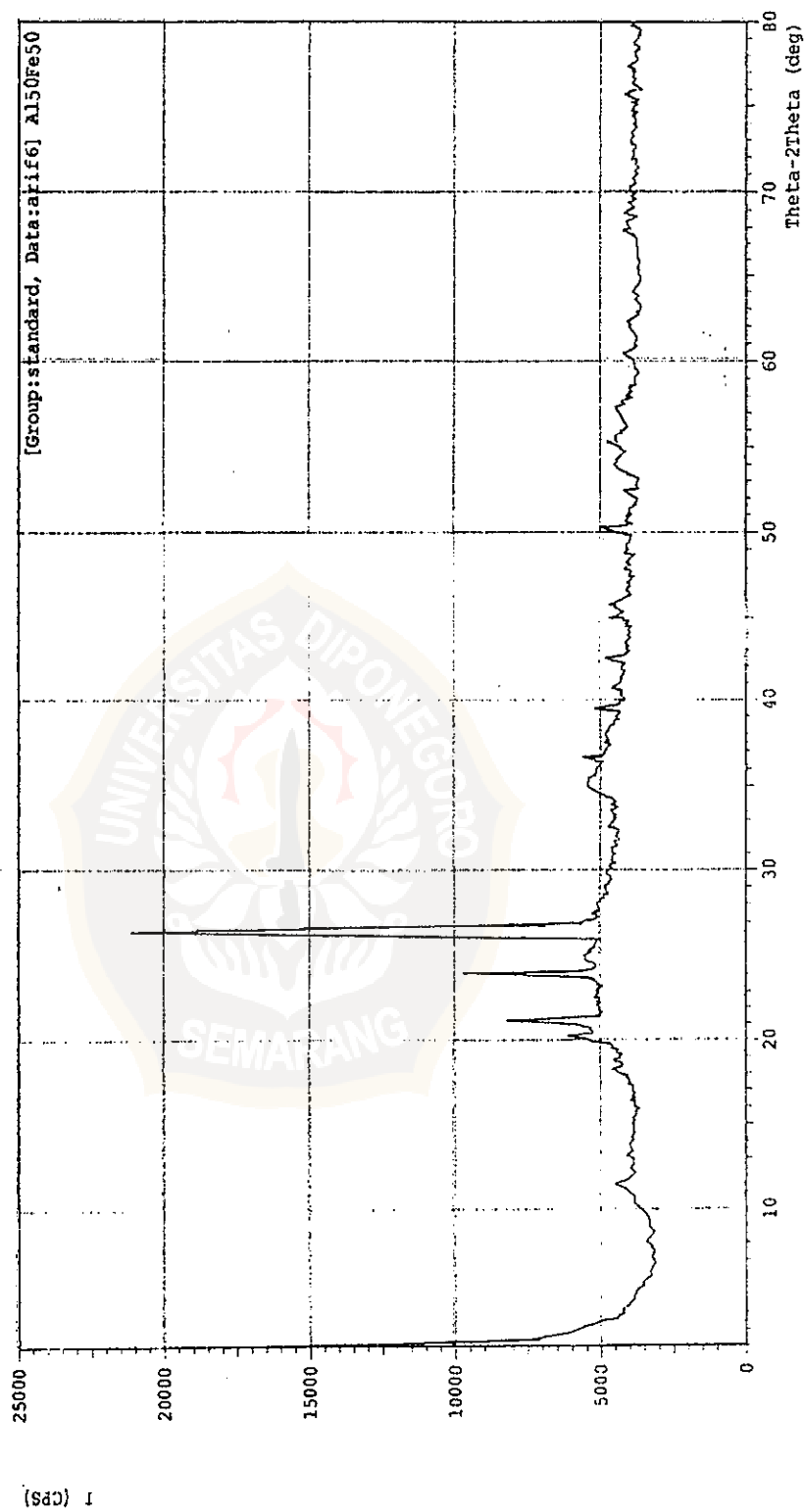
File Name : standard\arif4
Sample Name : Al25Fe75
Date & Time : 04-13-05 10:25:08
Condition
X-ray Tube : Cu(1.54060 Å) Voltage : 40.0 kV Current : 30.0 mA
Scan Range : 2.0000 <-> 80.0000 deg Step Size : 0.0500 deg
Count Time : 0.60 sec Slit DS : 1.00 deg SS : 1.00 deg RS : 0.30 mm
Comment :



C.3 Lempung terpilal Al₅₀Fe₅₀

*** Multi Plot ***

File Name : standard\arif6
Sample Name : Al50Fe50
Date & Time : 04-11-05 10:20:08
Condition
X-ray Tube : Cu(1.54060 Å) Voltage : 40.0 kV Current : 30.0 mA
Scan Range : 2.0000 <-> 80.0000 deg Step Size : 0.0500 deg
Count Time : 0.60 sec Slit DS : 1.00 deg SS : 1.00 deg RS : 0.30 mm
Comment :



C.4 Lempung terpillar Al₇₅Fe₂₅

*** Multi Plot ***

File Name : standard\arif3

Sample Name : Al75Fe25

Date & Time : 04-13-05 10:05:44

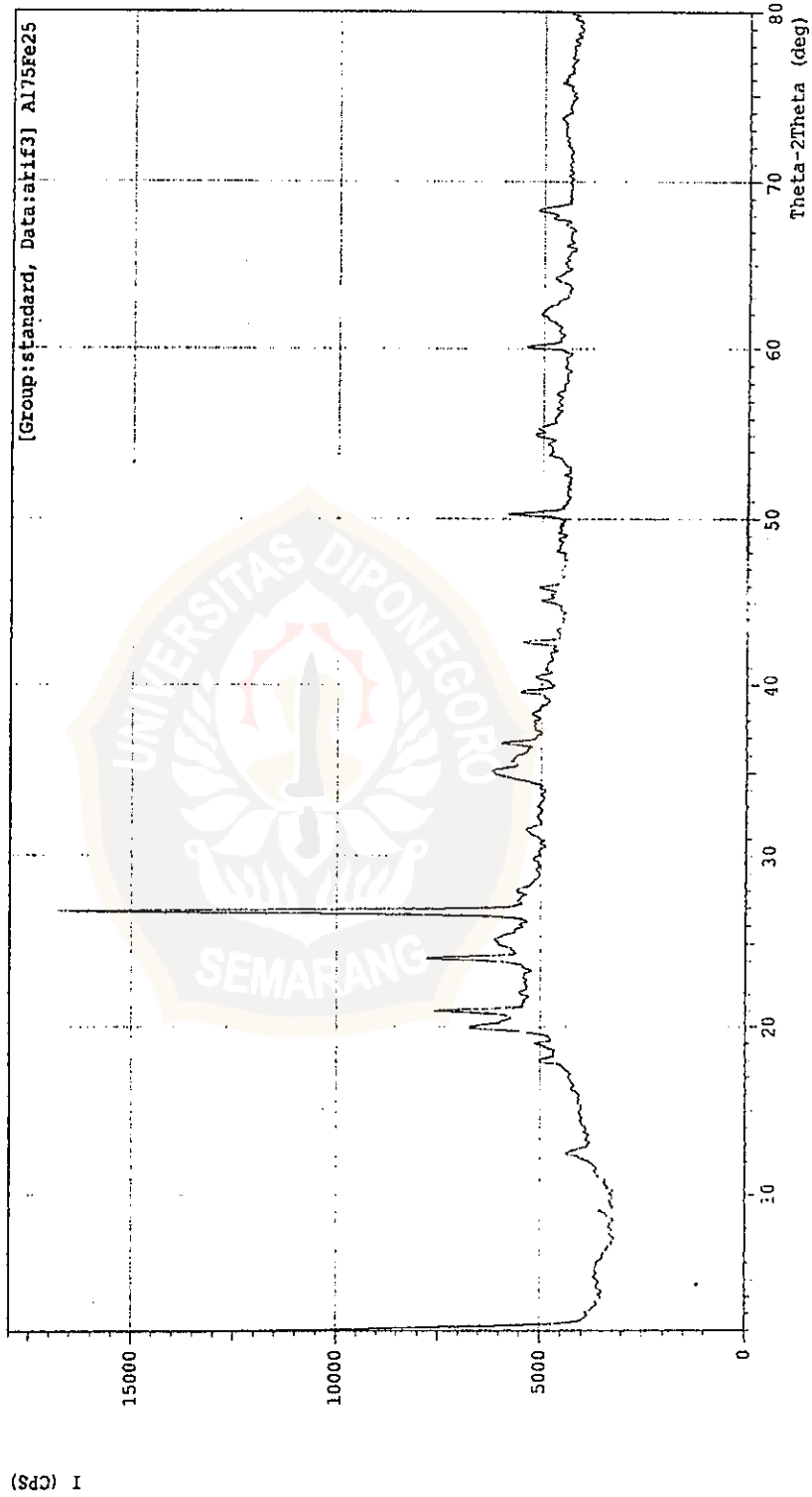
Comment :

Condition

X-ray Tube : Cu(1.54060 Å) Voltage : 40.0 kV Current : 30.0 mA

Scan Range : 2.0000 <-> 80.0000 deg Step Size : 0.0500 deg

Count Time : 0.60 sec Slit DS : 1.00 deg SS : 1.00 deg RS : 0.30 mm

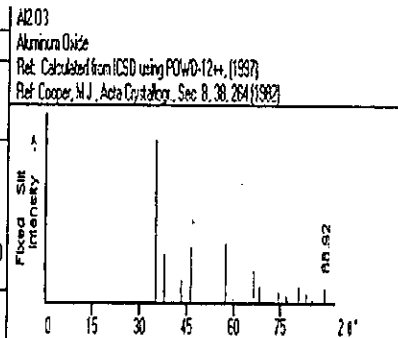


Lampiran D. Data puncak XRD mineral murni ASTM

<p>131035 Quartz CAS Number: 1318-93-0 Molecular Weight: 442.38 Volume(CD): 347.85 Dx: Dm 2.300 Syst: Hexagonal Lattice: Primitive S.G.: P Cell Parameters: a 5.153 b c 15.02 SS/FOM: F16=2(127, 65) Moor: 16 Rad: Calc Lambda: 5.832 Filter: 17.703 d-sp diffractometer: 19.728 Mineral Name: 23.998 Monsite: 25.448 27.019</p>	<p>Ca0.2Al2Mg12Si4O10(OH)2·4H2O Calcium Magnesium Aluminum Silicate Hydroxide Hydrate Ref: Rosenzweig, N.C. Geol. Surv., 39, 350 (1955)</p>	<p>291431 Quartz I CAS Number: 12173-47-6 Molecular Weight: 453.34 Volume(CD): 370.88 Dx: Dm: Syst: Hexagonal Lattice: Primitive S.G.: P Cell Parameters: a 5.282 b c 15.35 SS/FOM: F10=10(148, 90) Moor: 16 Rad: Calc Lambda: 1.5418 Filter: Ni d-sp diffractometer: 11.447 Mineral Name: 17.354 Saprock: 19.423</p>	<p>Ca0.2Mg11Si4Al4O10(OH)2·4H2O Calcium Magnesium Aluminum Silicate Hydroxide Hydrate Ref: Brindley, G., Penn State University, University Park, Pennsylvania, USA, I.C.C. Quarterly, (1977)</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
<p>231161 (Deleted) SiO2 CAS Number: Molecular Weight: 60.08 Volume(CD): 113.01 Dx: 2.649 Dm: 2.656 Syst: Hexagonal Lattice: Primitive S.G.: P321 (154) Cell Parameters: a 4.913 b c 5.405 SS/FOM: F30=77(1026, 21) Moor: 35 Rad: Calc Lambda: 1.54058 Filter: d-sp diffractometer: Mineral Name: Quartz, sm Also called: Silica Low quartz</p>	<p>421468 (Deleted) Al2O3 CAS Number: Molecular Weight: 101.96 Volume(CD): 254.91 Dx: 3.587 Dm: 4.052 Syst: Rhombohedral Lattice: Rhombohedral S.G.: R3c (157) Cell Parameters: a 4.758 b c 12.952 SS/FOM: F30=124(1073, 31) Moor: 100 Rad: Calc Lambda: 1.54056 Filter: Graph d-sp diffractometer: Mineral Name: Corundum, syn Also called: Alumina Aluminum Aluminate</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
<table border="1"> <thead> <tr> <th>2θ</th> <th>h</th> <th>k</th> <th>l</th> <th>2θ</th> <th>h</th> <th>k</th> <th>l</th> <th>2θ</th> <th>h</th> <th>k</th> <th>l</th> </tr> </thead> <tbody> <tr><td>29.850</td><td>22</td><td>1</td><td>0</td><td>0</td><td>84.001</td><td>1</td><td>1</td><td>1</td><td>3</td><td>84.971</td><td><1</td><td>2</td><td>0</td><td>4</td></tr> <tr><td>25.652</td><td>100</td><td>1</td><td>0</td><td>1</td><td>85.761</td><td><1</td><td>3</td><td>0</td><td>0</td><td>87.464</td><td><1</td><td>3</td><td>0</td><td>3</td></tr> <tr><td>35.542</td><td>8</td><td>1</td><td>1</td><td>0</td><td>87.750</td><td>6</td><td>2</td><td>1</td><td>2</td><td>90.858</td><td>2</td><td>3</td><td>1</td><td>2</td></tr> <tr><td>39.458</td><td>8</td><td>1</td><td>0</td><td>2</td><td>89.133</td><td>7</td><td>2</td><td>0</td><td>3</td><td>92.822</td><td><1</td><td>4</td><td>0</td><td>0</td></tr> <tr><td>41.284</td><td>4</td><td>1</td><td>1</td><td>1</td><td>89.323</td><td>8</td><td>3</td><td>0</td><td>1</td><td>94.685</td><td>1</td><td>1</td><td>0</td><td>5</td></tr> <tr><td>42.485</td><td>6</td><td>2</td><td>0</td><td>0</td><td>93.462</td><td>2</td><td>1</td><td>0</td><td>4</td><td>95.119</td><td><1</td><td>4</td><td>0</td><td>1</td></tr> <tr><td>45.609</td><td>4</td><td>2</td><td>0</td><td>1</td><td>95.671</td><td>2</td><td>3</td><td>0</td><td>2</td><td>96.227</td><td><1</td><td>2</td><td>1</td><td>4</td></tr> <tr><td>52.141</td><td>14</td><td>1</td><td>1</td><td>2</td><td>97.662</td><td>1</td><td>2</td><td>2</td><td>0</td><td>98.737</td><td>1</td><td>2</td><td>2</td><td>3</td></tr> <tr><td>53.611</td><td><1</td><td>0</td><td>0</td><td>3</td><td>99.879</td><td>2</td><td>2</td><td>1</td><td>3</td><td>102.19</td><td>1</td><td>4</td><td>0</td><td>2</td></tr> <tr><td>54.689</td><td>4</td><td>2</td><td>0</td><td>2</td><td>100.045</td><td>1</td><td>2</td><td>2</td><td>1</td><td>102.95</td><td>1</td><td>3</td><td>1</td><td>3</td></tr> <tr><td>55.528</td><td>2</td><td>1</td><td>0</td><td>3</td><td>101.147</td><td>3</td><td>1</td><td>1</td><td>4</td><td>103.88</td><td><1</td><td>3</td><td>0</td><td>4</td></tr> <tr><td>57.230</td><td><1</td><td>2</td><td>1</td><td>0</td><td>101.472</td><td>3</td><td>3</td><td>1</td><td>0</td><td>104.19</td><td>1</td><td>3</td><td>2</td><td>0</td></tr> <tr><td>59.548</td><td>9</td><td>2</td><td>1</td><td>1</td><td>103.821</td><td>1</td><td>3</td><td>1</td><td>1</td><td>106.14</td><td><1</td><td>2</td><td>0</td><td>5</td></tr> </tbody> </table>	2θ	h	k	l	2θ	h	k	l	2θ	h	k	l	29.850	22	1	0	0	84.001	1	1	1	3	84.971	<1	2	0	4	25.652	100	1	0	1	85.761	<1	3	0	0	87.464	<1	3	0	3	35.542	8	1	1	0	87.750	6	2	1	2	90.858	2	3	1	2	39.458	8	1	0	2	89.133	7	2	0	3	92.822	<1	4	0	0	41.284	4	1	1	1	89.323	8	3	0	1	94.685	1	1	0	5	42.485	6	2	0	0	93.462	2	1	0	4	95.119	<1	4	0	1	45.609	4	2	0	1	95.671	2	3	0	2	96.227	<1	2	1	4	52.141	14	1	1	2	97.662	1	2	2	0	98.737	1	2	2	3	53.611	<1	0	0	3	99.879	2	2	1	3	102.19	1	4	0	2	54.689	4	2	0	2	100.045	1	2	2	1	102.95	1	3	1	3	55.528	2	1	0	3	101.147	3	1	1	4	103.88	<1	3	0	4	57.230	<1	2	1	0	101.472	3	3	1	0	104.19	1	3	2	0	59.548	9	2	1	1	103.821	1	3	1	1	106.14	<1	2	0	5	<table border="1"> <thead> <tr> <th>2θ</th> <th>h</th> <th>k</th> <th>l</th> <th>2θ</th> <th>h</th> <th>k</th> <th>l</th> <th>2θ</th> <th>h</th> <th>k</th> <th>l</th> </tr> </thead> <tbody> <tr><td>25.576</td><td>70</td><td>0</td><td>1</td><td>2</td><td>81.439</td><td>2</td><td>2</td><td>1</td><td>7</td><td>110.61</td><td>2</td><td>3</td><td>0</td><td>2</td></tr> <tr><td>26.150</td><td>97</td><td>1</td><td>0</td><td>4</td><td>80.632</td><td>5</td><td>2</td><td>2</td><td>0</td><td>116.99</td><td>2</td><td>3</td><td>1</td><td>8</td></tr> <tr><td>37.784</td><td>42</td><td>1</td><td>1</td><td>0</td><td>83.234</td><td>1</td><td>3</td><td>6</td><td>6</td><td>114.06</td><td>2</td><td>2</td><td>2</td><td>9</td></tr> <tr><td>41.683</td><td>1</td><td>0</td><td>0</td><td>6</td><td>84.355</td><td>4</td><td>3</td><td>2</td><td>3</td><td>116.16</td><td>5</td><td>3</td><td>2</td><td>4</td></tr> <tr><td>43.362</td><td>100</td><td>1</td><td>1</td><td>3</td><td>85.126</td><td><1</td><td>1</td><td>3</td><td>1</td><td>116.58</td><td>7</td><td>0</td><td>1</td><td>4</td></tr> <tr><td>46.183</td><td>1</td><td>2</td><td>0</td><td>2</td><td>85.355</td><td>4</td><td>3</td><td>1</td><td>2</td><td>117.83</td><td>5</td><td>4</td><td>1</td><td>0</td></tr> <tr><td>52.588</td><td>42</td><td>0</td><td>2</td><td>4</td><td>86.500</td><td>3</td><td>1</td><td>2</td><td>6</td><td>120.21</td><td><1</td><td>2</td><td>3</td><td>5</td></tr> <tr><td>57.802</td><td>82</td><td>1</td><td>1</td><td>5</td><td>89.937</td><td>5</td><td>0</td><td>2</td><td>10</td><td>123.04</td><td>3</td><td>4</td><td>1</td><td>3</td></tr> <tr><td>59.763</td><td>2</td><td>2</td><td>1</td><td>1</td><td>90.737</td><td>2</td><td>0</td><td>8</td><td>12</td><td>124.59</td><td>2</td><td>0</td><td>4</td><td>8</td></tr> <tr><td>61.133</td><td>5</td><td>1</td><td>2</td><td>2</td><td>91.180</td><td>6</td><td>1</td><td>3</td><td>4</td><td>127.67</td><td>16</td><td>1</td><td>3</td><td>0</td></tr> <tr><td>61.300</td><td>7</td><td>0</td><td>1</td><td>8</td><td>95.249</td><td>12</td><td>2</td><td>2</td><td>6</td><td>128.85</td><td>4</td><td>3</td><td>0</td><td>12</td></tr> <tr><td>65.530</td><td>30</td><td>2</td><td>1</td><td>4</td><td>99.427</td><td>2</td><td>0</td><td>4</td><td>2</td><td>131.21</td><td>1</td><td>2</td><td>0</td><td>14</td></tr> <tr><td>68.207</td><td>45</td><td>3</td><td>0</td><td>0</td><td>101.06</td><td>3</td><td>2</td><td>1</td><td>10</td><td>132.23</td><td><1</td><td>2</td><td>1</td><td>7</td></tr> <tr><td>70.430</td><td>1</td><td>1</td><td>2</td><td>5</td><td>102.84</td><td>1</td><td>1</td><td>1</td><td>12</td><td>132.67</td><td><1</td><td>2</td><td>2</td><td>7</td></tr> <tr><td>74.307</td><td>1</td><td>2</td><td>0</td><td>8</td><td>103.13</td><td>2</td><td>4</td><td>0</td><td>4</td><td>136.09</td><td>16</td><td>4</td><td>1</td><td>8</td></tr> <tr><td>76.880</td><td>13</td><td>1</td><td>0</td><td>10</td><td>109.59</td><td><1</td><td>3</td><td>2</td><td>1</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>77.242</td><td>6</td><td>1</td><td>1</td><td>9</td><td>109.85</td><td><1</td><td>1</td><td>2</td><td>11</td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	2θ	h	k	l	2θ	h	k	l	2θ	h	k	l	25.576	70	0	1	2	81.439	2	2	1	7	110.61	2	3	0	2	26.150	97	1	0	4	80.632	5	2	2	0	116.99	2	3	1	8	37.784	42	1	1	0	83.234	1	3	6	6	114.06	2	2	2	9	41.683	1	0	0	6	84.355	4	3	2	3	116.16	5	3	2	4	43.362	100	1	1	3	85.126	<1	1	3	1	116.58	7	0	1	4	46.183	1	2	0	2	85.355	4	3	1	2	117.83	5	4	1	0	52.588	42	0	2	4	86.500	3	1	2	6	120.21	<1	2	3	5	57.802	82	1	1	5	89.937	5	0	2	10	123.04	3	4	1	3	59.763	2	2	1	1	90.737	2	0	8	12	124.59	2	0	4	8	61.133	5	1	2	2	91.180	6	1	3	4	127.67	16	1	3	0	61.300	7	0	1	8	95.249	12	2	2	6	128.85	4	3	0	12	65.530	30	2	1	4	99.427	2	0	4	2	131.21	1	2	0	14	68.207	45	3	0	0	101.06	3	2	1	10	132.23	<1	2	1	7	70.430	1	1	2	5	102.84	1	1	1	12	132.67	<1	2	2	7	74.307	1	2	0	8	103.13	2	4	0	4	136.09	16	4	1	8	76.880	13	1	0	10	109.59	<1	3	2	1						77.242	6	1	1	9	109.85	<1	1	2	11					
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35.542	8	1	1	0	87.750	6	2	1	2	90.858	2	3	1	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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41.284	4	1	1	1	89.323	8	3	0	1	94.685	1	1	0	5																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
42.485	6	2	0	0	93.462	2	1	0	4	95.119	<1	4	0	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
45.609	4	2	0	1	95.671	2	3	0	2	96.227	<1	2	1	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
52.141	14	1	1	2	97.662	1	2	2	0	98.737	1	2	2	3																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
53.611	<1	0	0	3	99.879	2	2	1	3	102.19	1	4	0	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
54.689	4	2	0	2	100.045	1	2	2	1	102.95	1	3	1	3																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
55.528	2	1	0	3	101.147	3	1	1	4	103.88	<1	3	0	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
57.230	<1	2	1	0	101.472	3	3	1	0	104.19	1	3	2	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
59.548	9	2	1	1	103.821	1	3	1	1	106.14	<1	2	0	5																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
2θ	h	k	l	2θ	h	k	l	2θ	h	k	l																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
25.576	70	0	1	2	81.439	2	2	1	7	110.61	2	3	0	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
26.150	97	1	0	4	80.632	5	2	2	0	116.99	2	3	1	8																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
37.784	42	1	1	0	83.234	1	3	6	6	114.06	2	2	2	9																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
41.683	1	0	0	6	84.355	4	3	2	3	116.16	5	3	2	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
43.362	100	1	1	3	85.126	<1	1	3	1	116.58	7	0	1	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
46.183	1	2	0	2	85.355	4	3	1	2	117.83	5	4	1	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
52.588	42	0	2	4	86.500	3	1	2	6	120.21	<1	2	3	5																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
57.802	82	1	1	5	89.937	5	0	2	10	123.04	3	4	1	3																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
59.763	2	2	1	1	90.737	2	0	8	12	124.59	2	0	4	8																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
61.133	5	1	2	2	91.180	6	1	3	4	127.67	16	1	3	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
61.300	7	0	1	8	95.249	12	2	2	6	128.85	4	3	0	12																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
65.530	30	2	1	4	99.427	2	0	4	2	131.21	1	2	0	14																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
68.207	45	3	0	0	101.06	3	2	1	10	132.23	<1	2	1	7																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
70.430	1	1	2	5	102.84	1	1	1	12	132.67	<1	2	2	7																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
74.307	1	2	0	8	103.13	2	4	0	4	136.09	16	4	1	8																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
76.880	13	1	0	10	109.59	<1	3	2	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
77.242	6	1	1	9	109.85	<1	1	2	11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

Data puncak XRD mineral murni ASTM (Lanjutan)

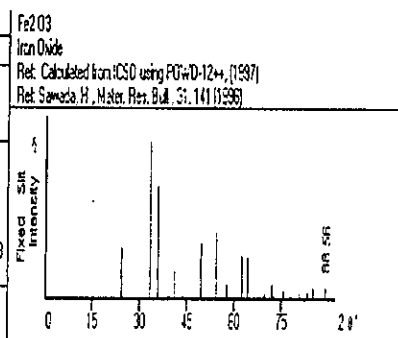
73-2294 Quality: C
 CAS Number: Al₂O₃
 Molecular Weight: 101.96
 Volume(CD): 255.41
 Dx: 3.977 Dm
 Sys: Rhombohedral
 Lattice: Rhomb-centered
 S.G.: R3c(167)
 Cell Parameters:
 a 4.763 b c 13.000
 a b c



Moor: 218
 Rad: CuKα
 Lambda: 1.54060
 Filter:
 d-sp: calculated
 ICSD #: 024851

2θ	Int	h	k	l	2θ	Int	h	k	l	2θ	Int	h	k	l
25.556	1	0	1	2	58.685	24	2	1	1	77.175	12	1	1	5
35.125	993	1	0	4	61.074	4	1	2	2	80.346	9	2	1	7
37.744	283	1	1	0	61.258	7	0	1	8	80.617	99	2	2	0
41.651	2	0	0	6	66.458	200	2	1	4	83.138	53	0	3	6
43.318	125	1	1	3	68.144	93	3	0	0	84.270	1	2	2	3
46.139	335	2	0	2	70.254	12	1	2	5	85.051	19	1	3	1
52.538	8	0	2	4	74.240	65	2	0	8	86.425	6	1	2	6
57.455	355	1	1	6	76.818	39	1	0	10	88.922	87	0	2	10

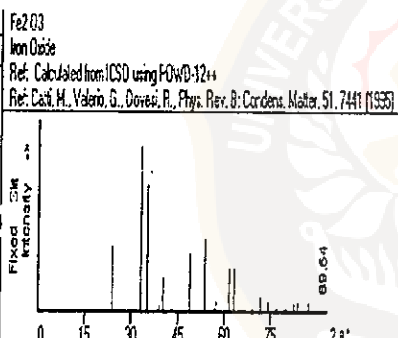
87-1165 Quality: C
 CAS Number: Fe₂O₃
 Molecular Weight: 159.69
 Volume(CD): 301.90
 Dx: 5.270 Dm
 Sys: Rhombohedral
 Lattice: Rhomb-centered
 S.G.: R3c(167)
 Cell Parameters:
 a 5.035 b c 13.749
 a b c



Moor: 326
 Rad: CuKα
 Lambda: 1.54060
 Filter:
 d-sp: calculated
 ICSD #: 082903
 Mineral Name:
 Hematite

2θ	Int	h	k	l	2θ	Int	h	k	l	2θ	Int	h	k	l
24.749	314	0	1	2	57.509	86	0	1	8	78.776	9	2	2	3
33.158	993	1	0	4	62.438	264	2	1	4	79.488	1	1	3	1
35.632	712	1	1	0	64.002	257	3	0	0	80.584	16	3	1	2
39.284	19	0	0	6	66.033	2	1	2	5	80.712	35	1	2	6
40.853	192	1	1	3	69.587	25	2	0	8	82.956	43	0	2	10
43.939	19	2	0	2	71.549	88	1	0	10	84.488	2	0	0	12
49.454	342	0	2	4	72.283	21	1	1	9	84.936	65	1	3	4
54.070	411	1	1	6	75.193	3	2	1	7	88.960	59	2	2	6
56.161	5	2	1	1	75.457	55	2	2	0					
57.450	25	1	2	2	77.740	19	0	3	6					

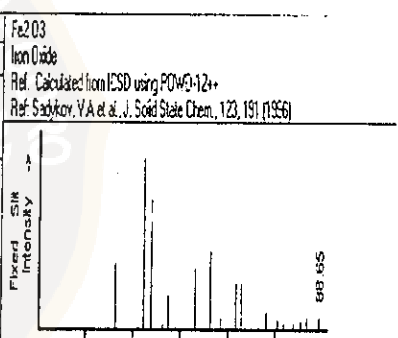
89-2359 Quality: C
 CAS Number: Fe₂O₃
 Molecular Weight: 159.69
 Volume(CD): 312.77
 Dx: 5.087 Dm
 Sys: Rhombohedral
 Lattice: Rhomb-centered
 S.G.: R3c(167)
 Cell Parameters:
 a 5.112 b c 13.820
 a b c



Moor: 293
 Rad: CuKα
 Lambda: 1.54060
 Filter:
 d-sp: calculated
 ICSD #: 041541
 Mineral Name:
 Hematite

2θ	Int	h	k	l	2θ	Int	h	k	l	2θ	Int	h	k	l
23.651	382	0	1	2	57.194	62	0	1	8	78.074	1	1	3	1
32.856	993	1	0	4	61.527	255	2	1	4	79.163	13	3	1	2
35.060	771	1	1	0	62.931	252	3	0	0	79.718	23	1	2	8
39.076	24	0	0	6	65.114	3	1	2	5	82.158	39	0	2	10
40.321	202	1	1	3	68.891	19	2	0	8	83.436	54	1	3	4
42.866	20	2	0	2	71.451	86	1	0	10	83.958	3	0	0	12
48.823	347	0	2	4	71.636	57	1	1	9	86.782	1	3	1	5
53.511	441	1	1	6	74.133	52	2	2	0	87.150	56	2	2	6
55.254	7	2	1	1	76.622	21	0	3	6	89.636	6	0	4	2
56.544	22	1	2	2	77.438	3	2	2	3					

89-0599 Quality: C
 CAS Number: Fe₂O₃
 Molecular Weight: 159.69
 Volume(CD): 301.15
 Dx: 5.253 Dm
 Sys: Rhombohedral
 Lattice: Rhomb-centered
 S.G.: R3c(167)
 Cell Parameters:
 a 5.032 b c 13.733
 a b c



Moor: 303
 Rad: CuKα
 Lambda: 1.54060
 Filter:
 d-sp: calculated
 ICSD #: 082137
 Mineral Name:
 Hematite, syn

2θ	Int	h	k	l	2θ	Int	h	k	l	2θ	Int	h	k	l
24.169	375	0	1	2	57.570	75	0	1	8	78.843	10	2	2	3
33.193	993	1	0	4	62.491	294	2	1	4	79.552	1	1	3	1
35.656	750	1	1	0	64.060	266	3	0	0	80.680	16	3	1	2
39.333	25	0	0	6	66.082	3	1	2	5	80.801	26	1	2	6
40.896	203	1	1	3	69.576	19	2	0	8	83.062	45	0	2	10
43.542	22	2	0	2	72.345	94	1	0	10	84.512	3	0	0	12
49.506	347	0	2	4	72.371	23	1	1	9	85.012	62	1	3	4
54.126	450	1	1	6	75.271	3	2	1	7	88.648	65	2	2	6
56.201	6	2	1	1	75.515	55	2	2	0					
57.483	27	1	2	2	77.815	23	0	3	6					