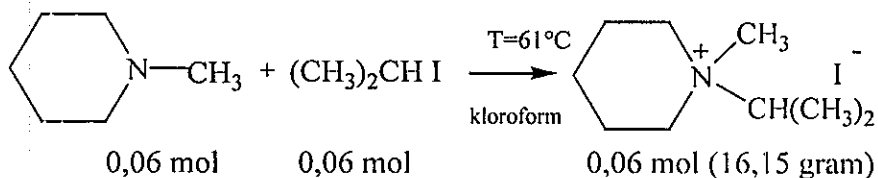


## Lampiran 1. Perhitungan

### I. Sintesis Garam *N*-isopropil-*N*-metilpiperidinium Iodida

Reaksi:



Mr garam *N*-isopropil-*N*-metilpiperidinium iodida = 269,17 g/mol

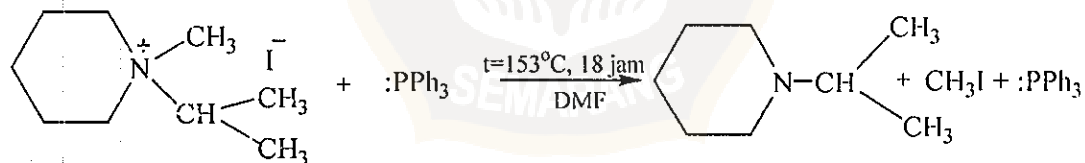
Berat teoritis garam tersebut = 269,17 g/mol x 0,06 mol = 16,15 gram

Berat garam hasil sintesis = 15,1897 gram

$$\text{Rendemen} = \frac{15,1897}{16,15} \times 100\%$$
$$= 94,05 \%$$

### II. Reaksi Dekuaternerisasi Garam *N*-isopropil-*N*-metilpiperidinium Iodida dengan Trifenilfosfin

Reaksi:



Mula-mula: 0,0036 mol      0,0036 mol  
(0,9708 gram)      (0,9437 gram)

bereaksi :      x                      y

sisa : (0,1494 gram)      (0,8801 gram)

Berat garam amonium sisa = 0,1494 gram

Berat trifenilfosfin sisa = 0,8801 gram

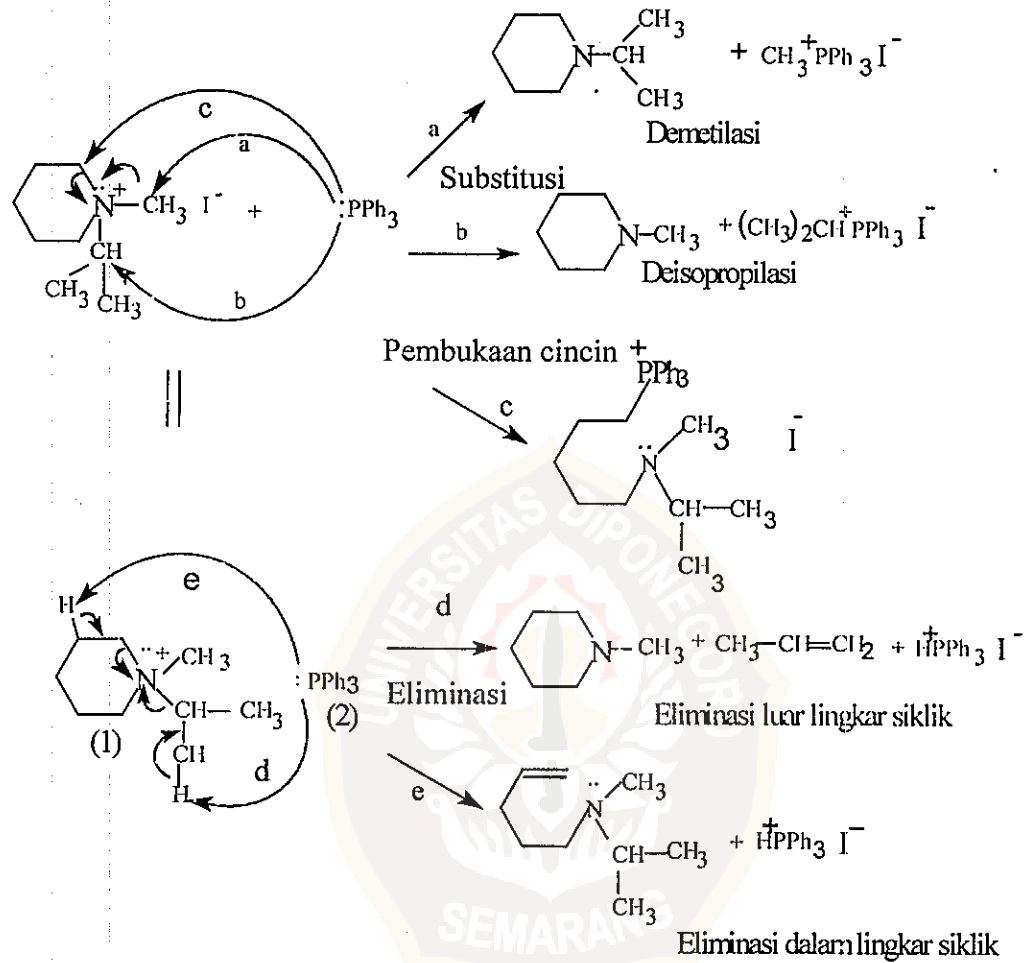
Berat garam amonium yang bereaksi =  $0,9708 \text{ g} - 0,1494 \text{ g} = 0,8214 \text{ g}$

$$\begin{aligned}\% \text{ Berat garam amonium yang bereaksi} &= \frac{0,8214}{0,9708} \times 100\% \\ &= 84,61 \%\end{aligned}$$

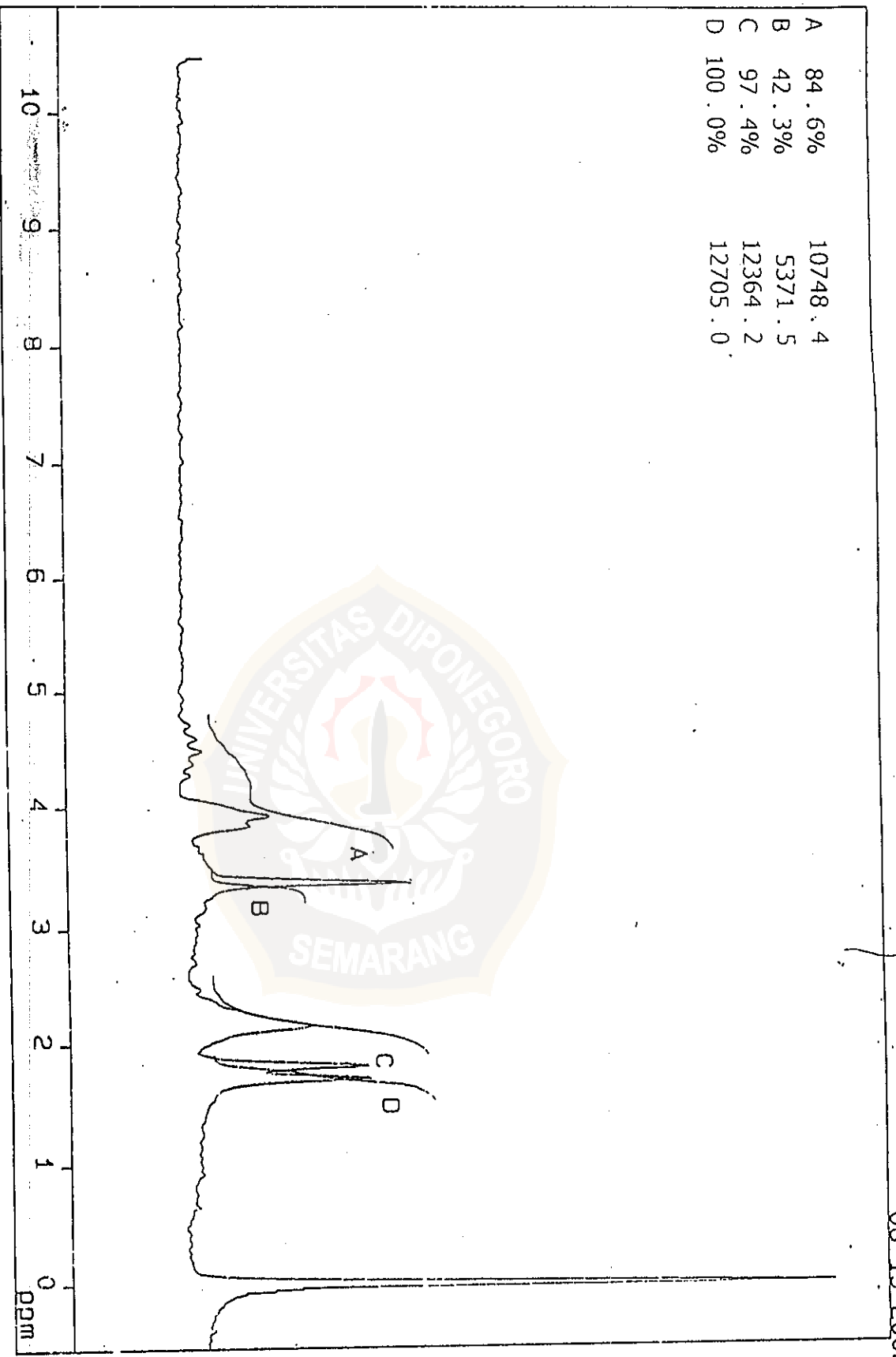
% Dekuaternerisasi = % berat garam amonium yang bereaksi = 84,61 %



**Lampiran 2. Kemungkinan Reaksi Dekuaternerisasi *N*-isopropyl-*N*-metil-piperidinium Iodida dengan Trifenilfosfin**



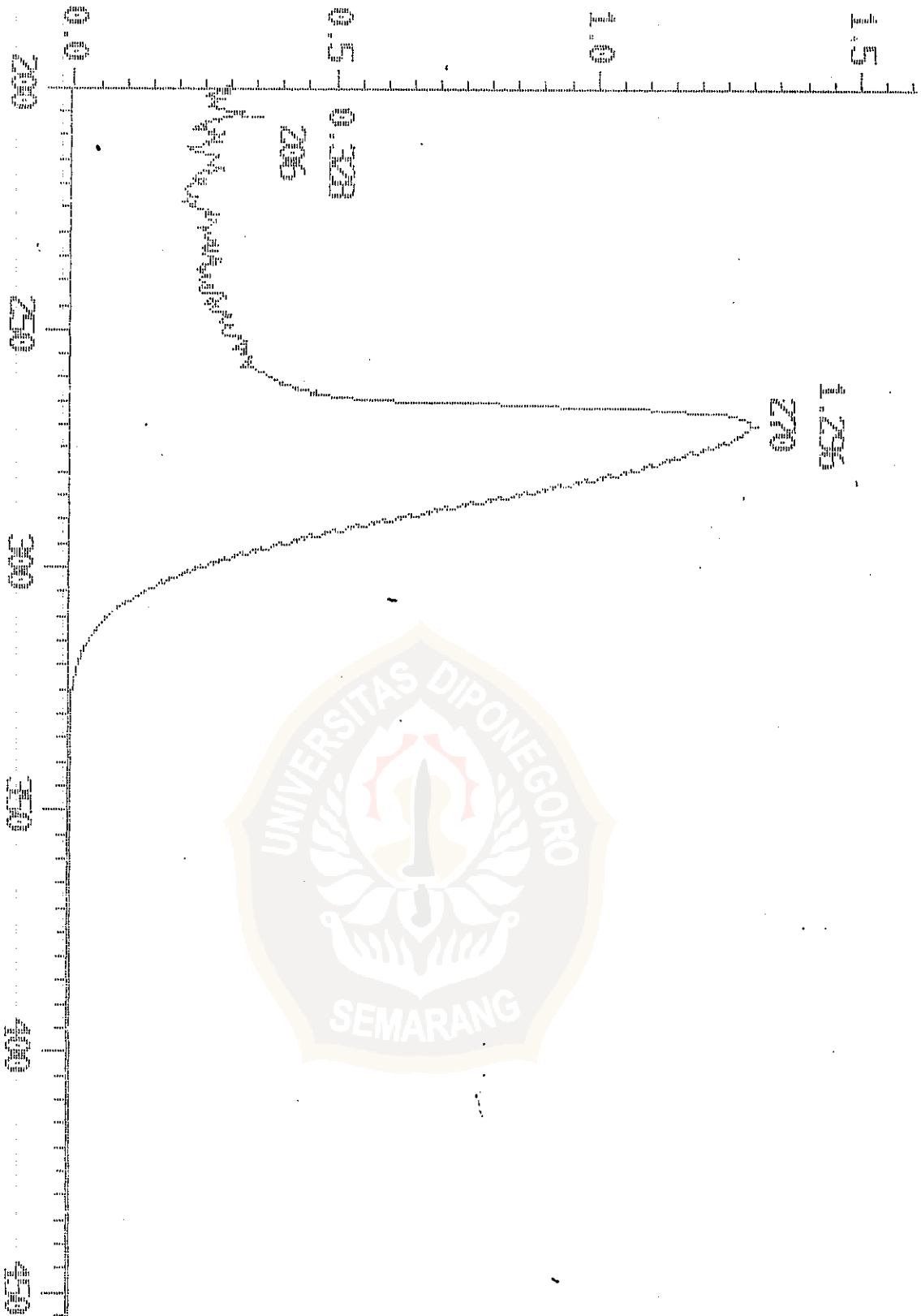
A	84.6%	10748.4
B	42.3%	5371.5
C	97.4%	12364.2
D	100.0%	12705.0



H1 LEVEL 1.0 FILTER 5 SOLVENT : CDCl3  
SWEEP WIDTH 600 SWEEP TIME 100 COMMENT : Sampel-A  
OFFSET 0 SCANS 1 DATE : 19-Jun-02 00:12  
AMPLITUDE \*10-2 H2 OFFSET 0 OPERATOR : Wadji iman

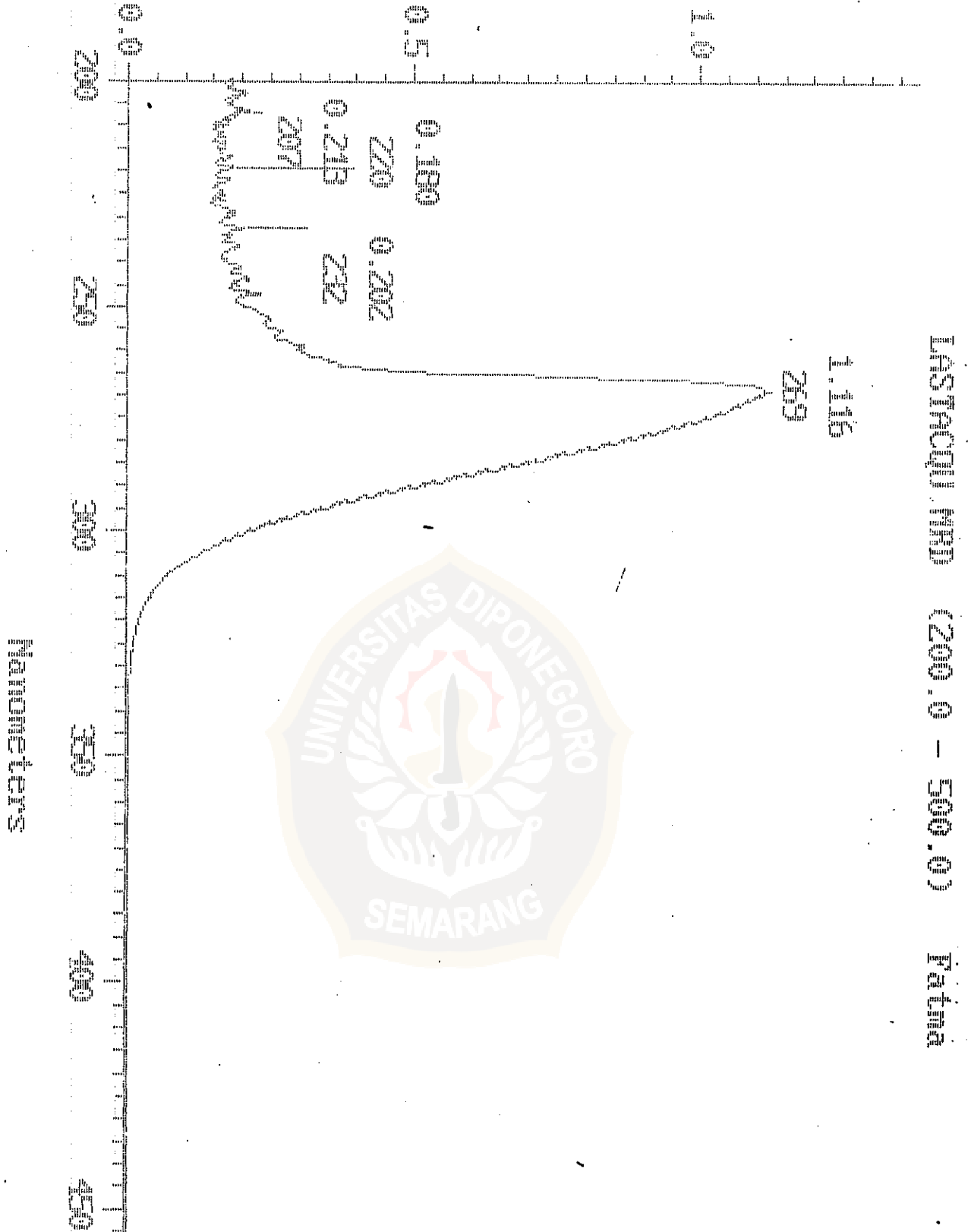
06-19-2002

Parameters



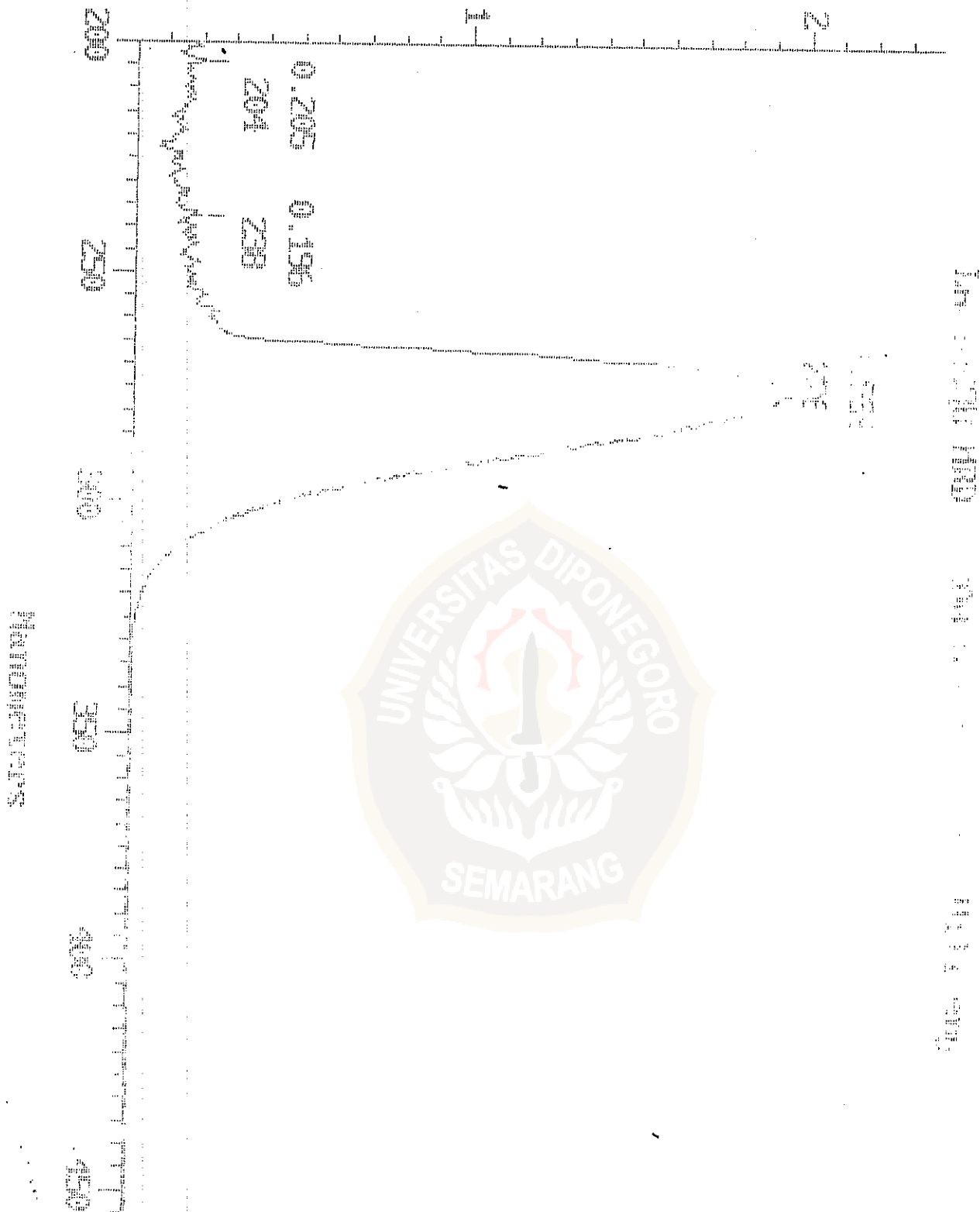
0 0 3 2 5 7 0 4 3 3

0 0 2 2 4 4 6 6 8 8



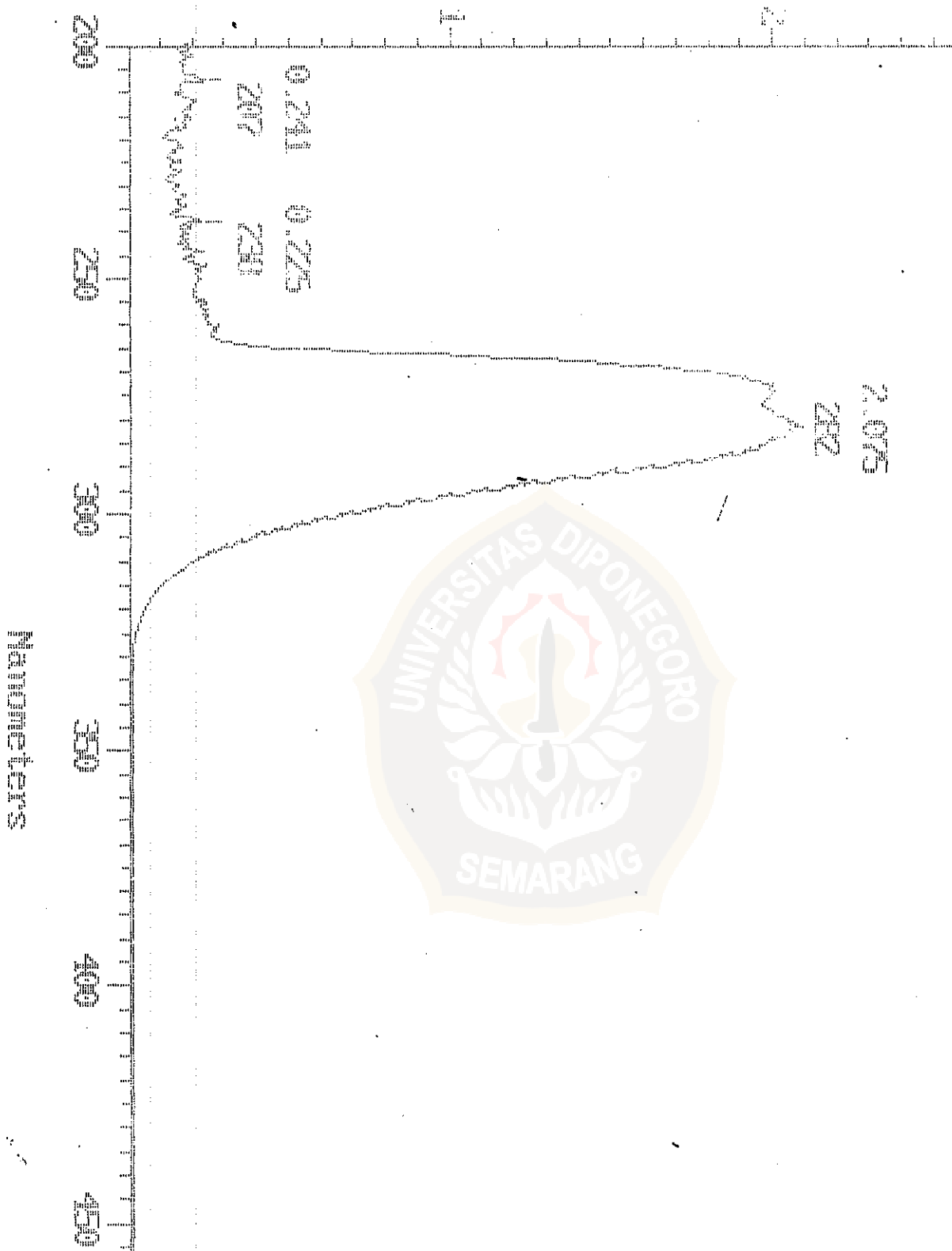
Lampiran 6

0 0 2 2 5 5 0 0 2 2



Lampiran 7

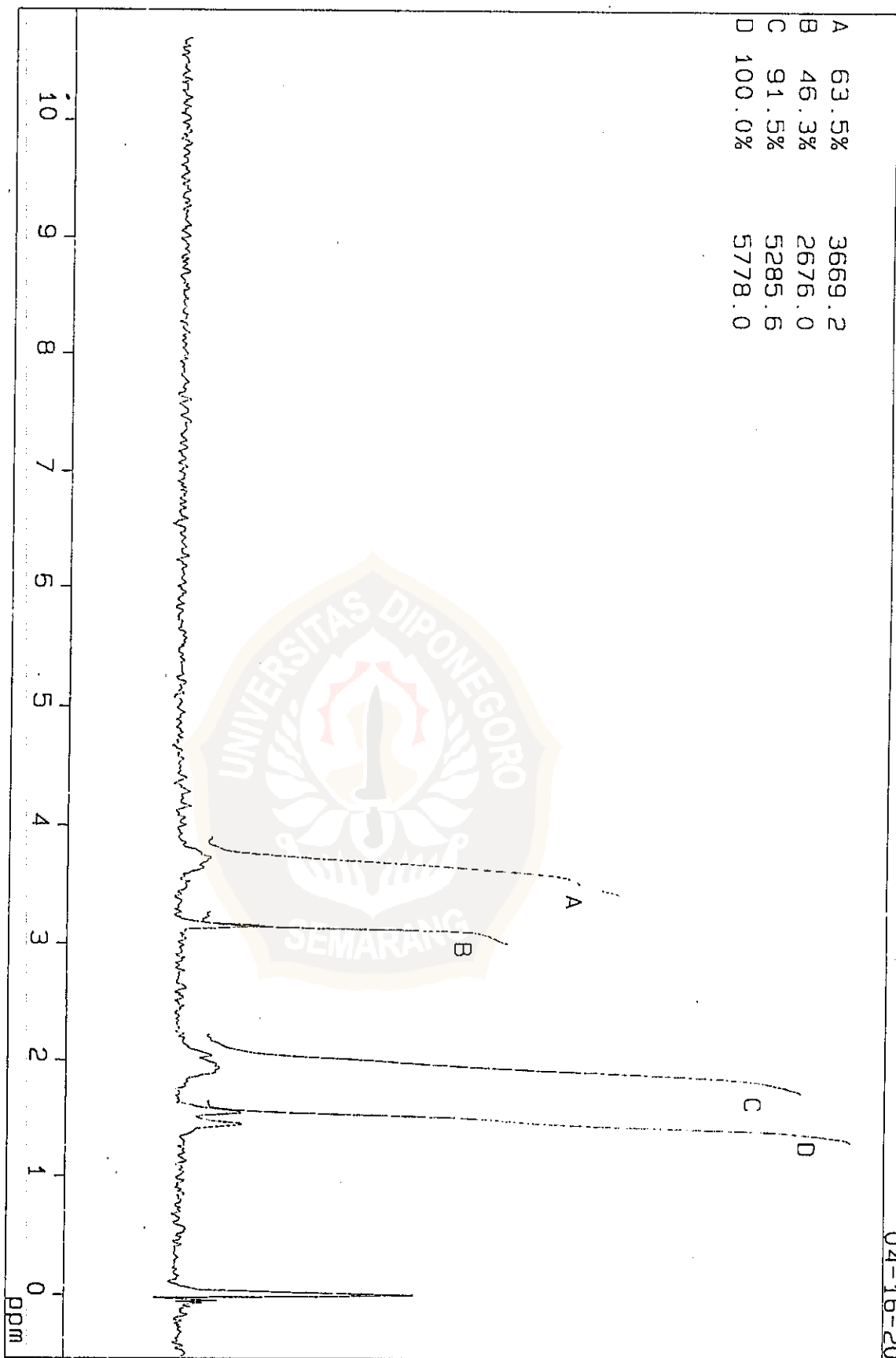
0 0 0 0 0 0 0 0 0 0



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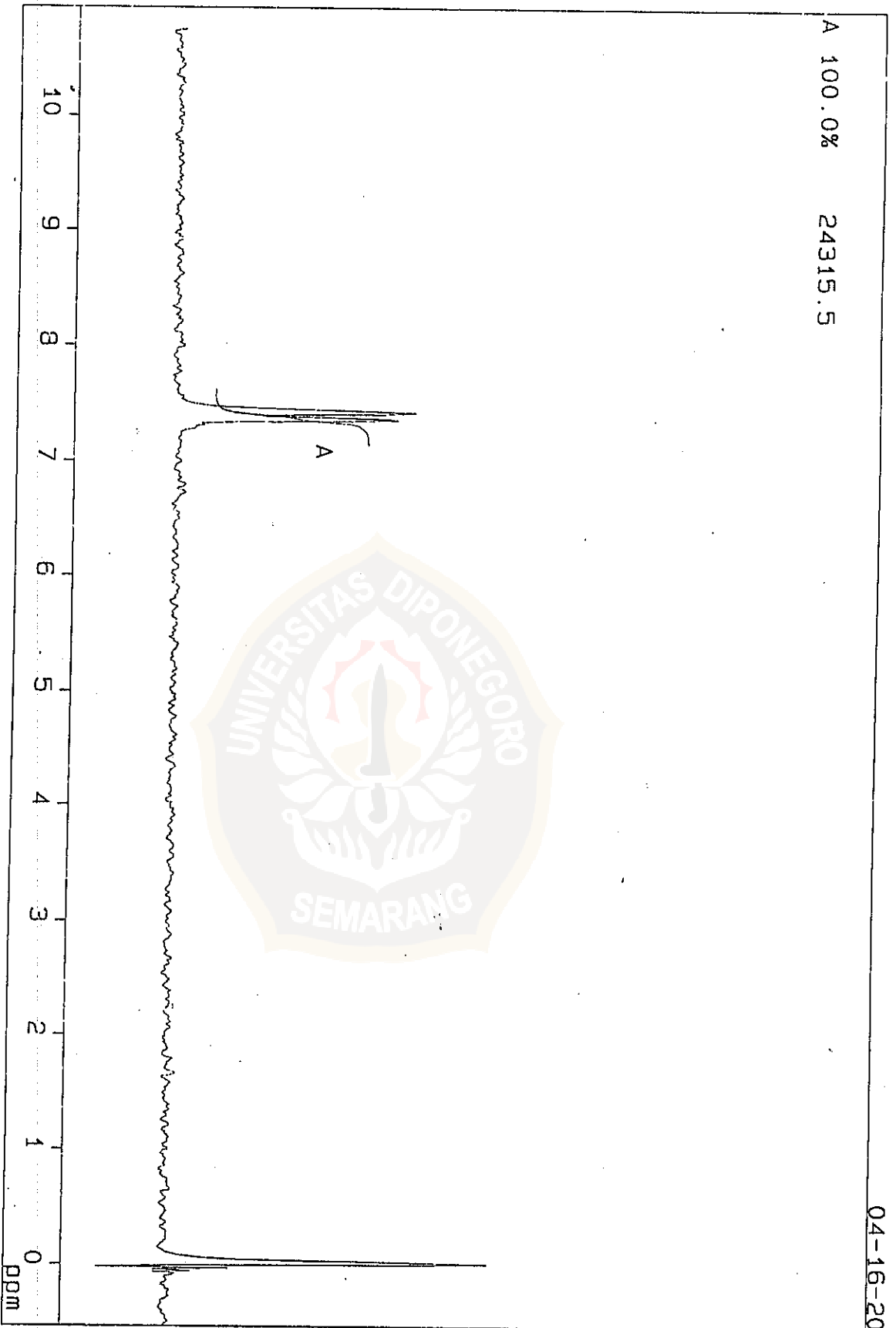
A	63.5%	3669.2
B	46.3%	2676.0
C	91.5%	5285.6
D	100.0%	5778.0



H1 LEVEL 1.0 FILTER 10 SOLVENT : CDCl3  
 SWEEP WIDTH 600 SWEEP TIME 100 COMMENT : Garam Fosfonium  
 OFFSET 0 SCANS 1 DATE : 16-Apr-03 11:22  
 AMPLITUDE \*10-2 H2 OFFSET 0 OPERATOR : Wadjiman

04-16-2003

A 100.0% 24315.5



04-16-2003

H1 LEVEL 1.0 FILTER 10 SOLVENT : CDCl3  
SWEEP WIDTH 600 SWEEP TIME 100 COMMENT : Garam Fosfonium  
OFFSET 0 SCANS 1 DATE : 16-Apr-03 11:34  
AMPLITUDE \*10-2 H2 OFFSET 0 OPERATOR : Wadiman