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LAMPIRAN I

Gambar 6. Foto tanaman Lempuyang wangi (*Zingiber aromaticum* Vahl.)

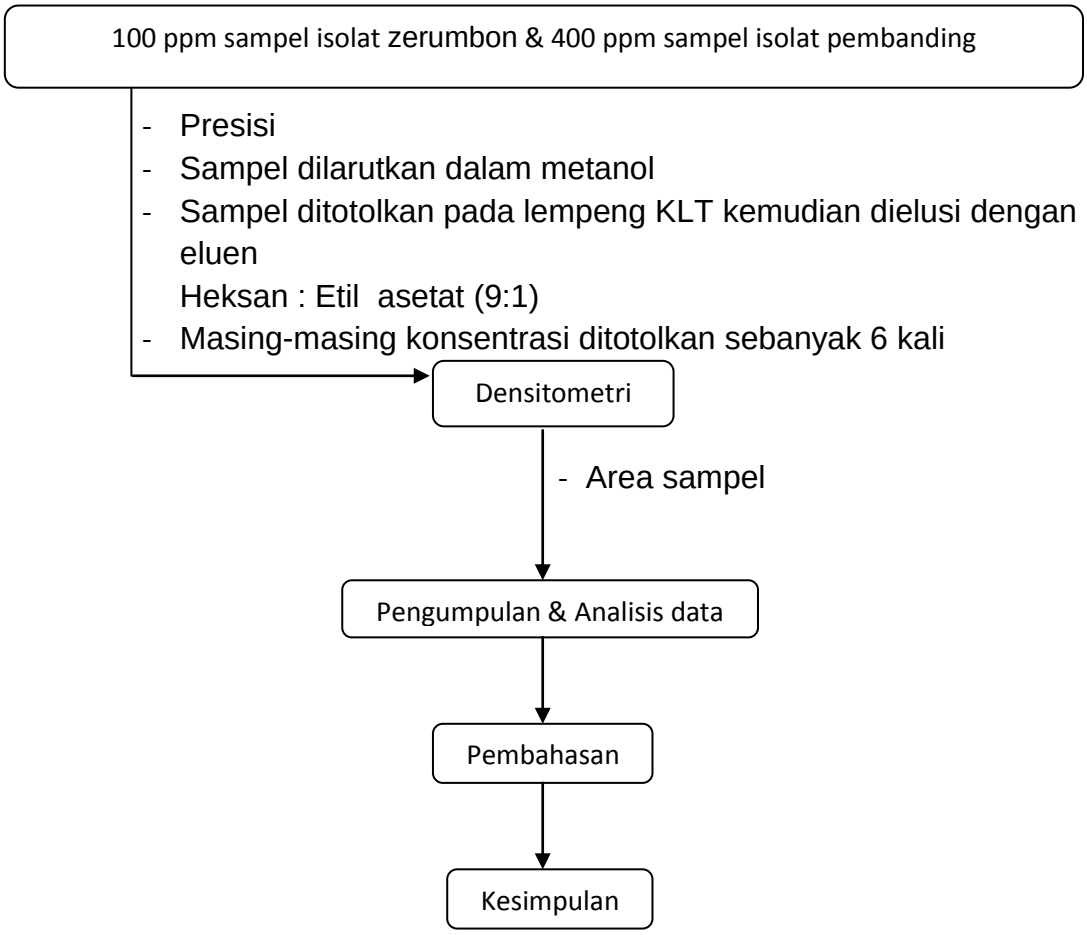
Gambar 7. Alat densitometer dengan perangkat yang mengontrol kerja dari TLC scanner

LAMPIRAN II

SKEMA KERJA

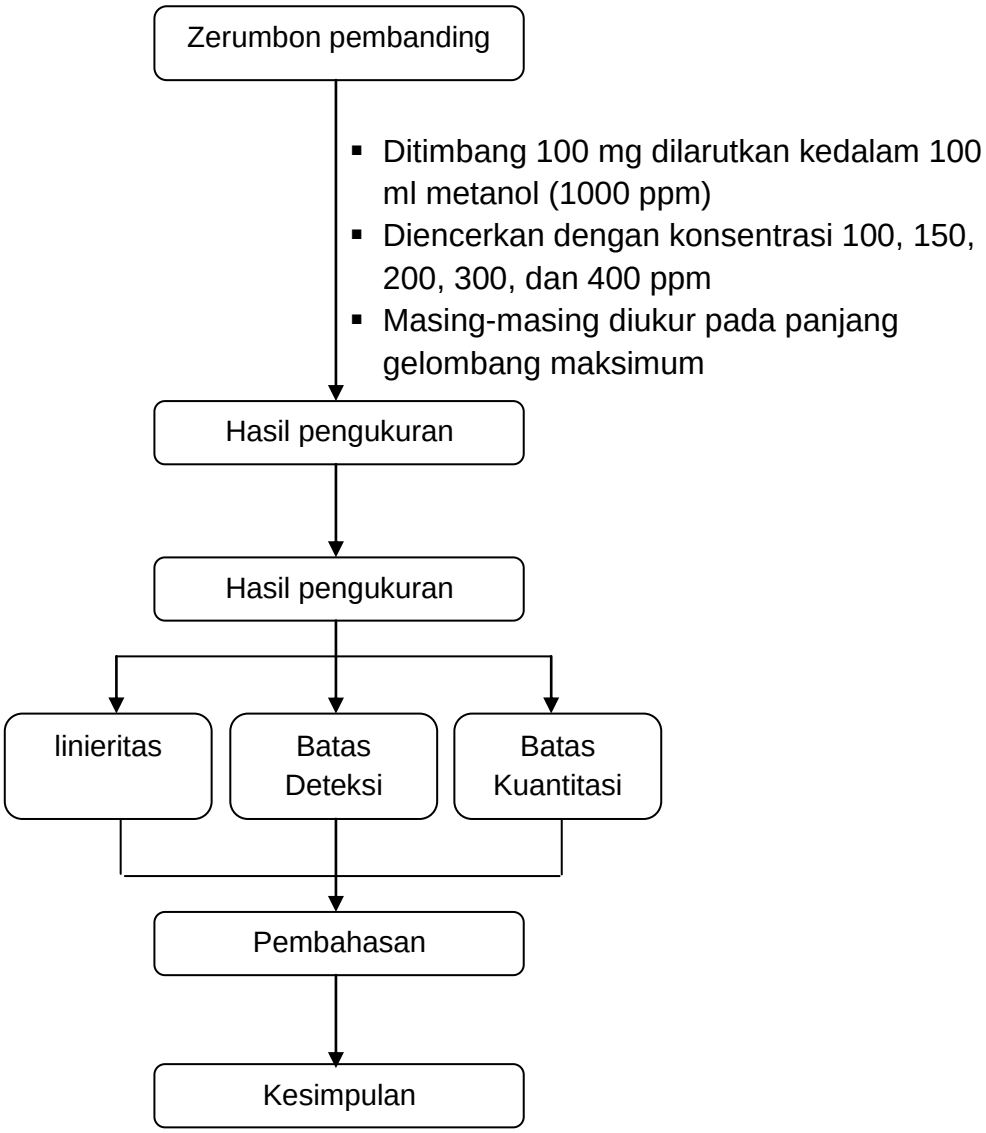
VALIDASI METODE DENSITOMETRI

A. Skema kerja presisi Metode Densitometri



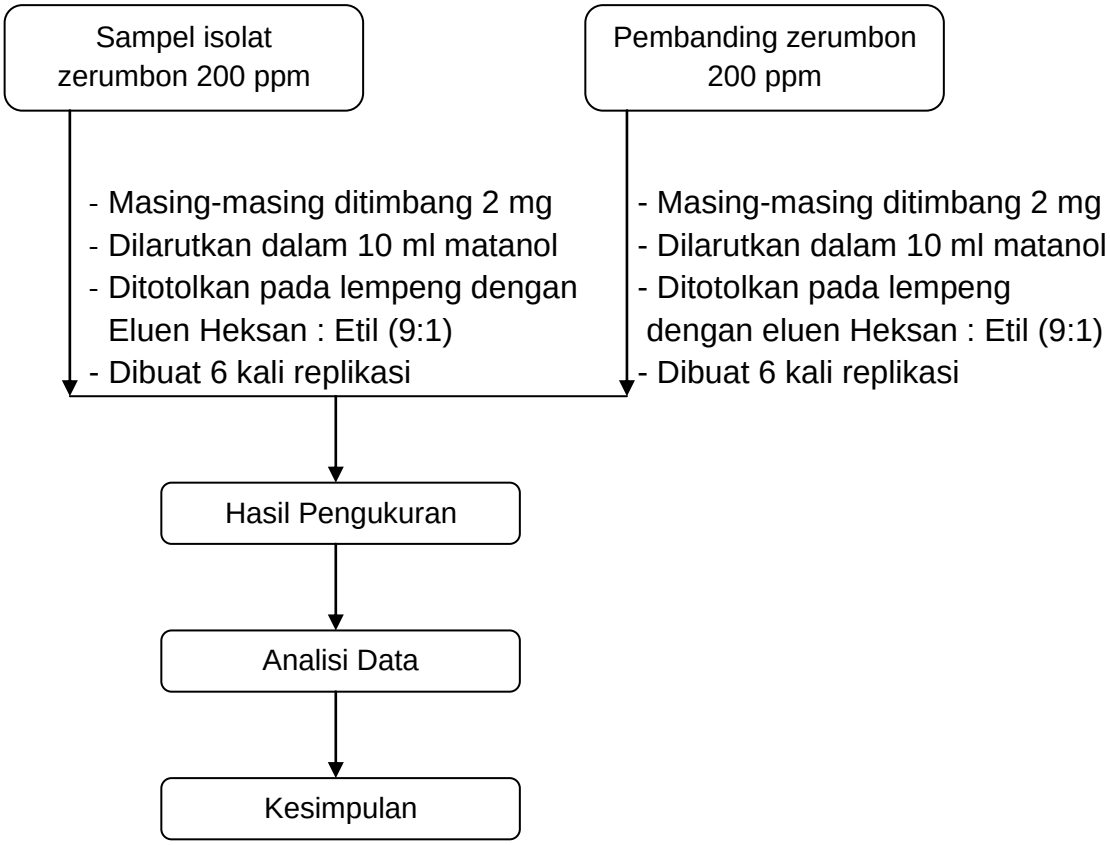
LAMPIRAN III

B. Pengujian Linieritas, Batas Deteksi dan Batas Kuantitasi Metode Densitometri



LAMPIRAN IV

C. Pengujian Keterulangan Metode Densitometri



LAMPIRAN V

PERHITUNGAN (LOD) & (LOQ)

No	*y*	*x(ng)*	x^2	$x-x_{rata2}$	$(x-x_{rata2})^2$	*Area (y dibagi 100)*	$\tilde{y}$	$(y-\tilde{y})^2$
1	1327,6	400	160000	-520	270400	13,276	534215,2	2,839692E+11
2	2366,3	600	360000	-320	102400	23,663	801415,2	6,384791E+11
3	3618,2	800	640000	-120	14400	36,182	1068615	1,134219E+12
4	5229,7	1200	1440000	280	78400	52,297	1603015	2,552919E+12
5	6576,8	1600	2560000	680	462400	65,768	2137415	4,540472E+12
Jumlah	19118,6	4600	5160000		928000			9,150058E+12
$Rata^2$	3823,72	920						

Persamaan kurva baku : -184,8 + 1336x

$$S_{y/x} = \left\{\left(\frac{\Sigma\,[y-\tilde{y}]^2}{n-2}\right)\right\}^{1/2}$$

$= \{9{,}150058x10^{12}/3\}^{1/2} = 1746430{,}43$

$S_b = S_{y/x} / \Sigma\,((x-x_{rata2})^2)^{1/2} = 1746430{,}43/\,(928000)^{1/2} = 1813$

$S_a = 1746430{,}43 / \{5{,}160000 / 5 \text{ x } (928000)\}^{1/2} = 1841692{,}631$

Nilai Y pada batas deteksi ditentukan dengan persamaan. $Y = Y_b + 3\,S_b$

Y_b = Nilai a pada persamaan kurva kalibrasi,

S_b = Simpangan baku Sb

$Y = - 184{,}8 + 3\,(1813)$

$Y = 5253{,}943$

Maka Nilai LOD = 5253,943 = – 184,8 + 1336x

X = 4,071 ng/totolan

= 4,071 x 10^{-3} µg/totolan

Nilai Y pada batas deteksi ditentukan dengan persamaan. $Y = Y_b + 10\ S_b$

Y = - 184,8 + 10 (5253,943)

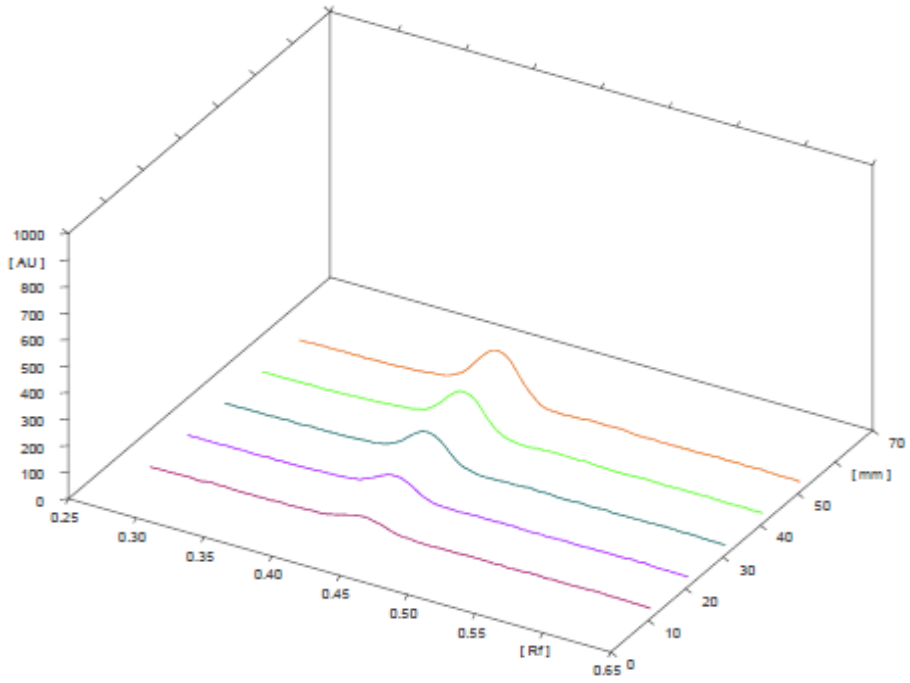
Y = 17944,344

Maka Nilai LOQ = 17944,344 = 1336x – 184,8

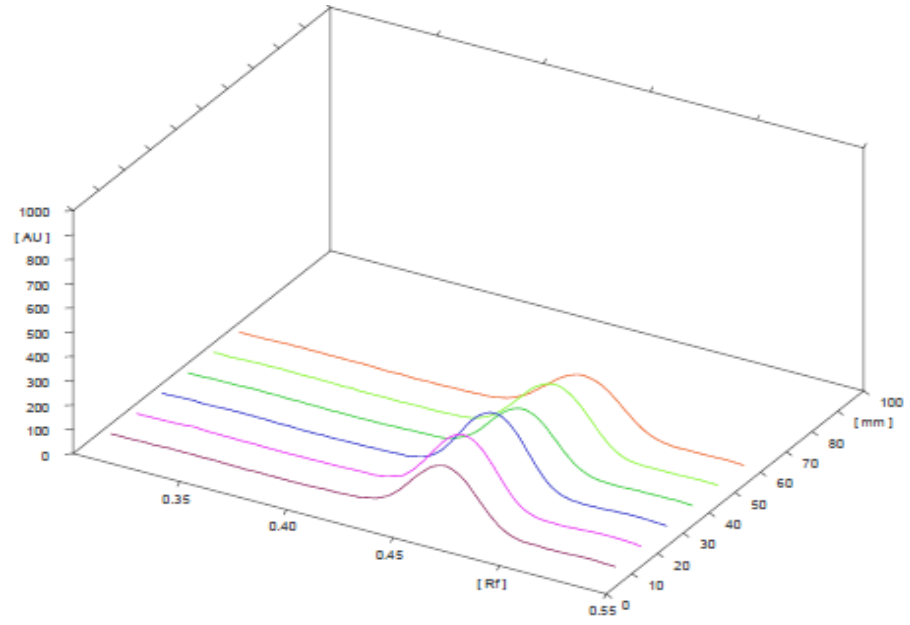
X = 13,570 ng/totolan

= 1,36 x 10^{-2} µg/totolan

LAMPIRAN VI

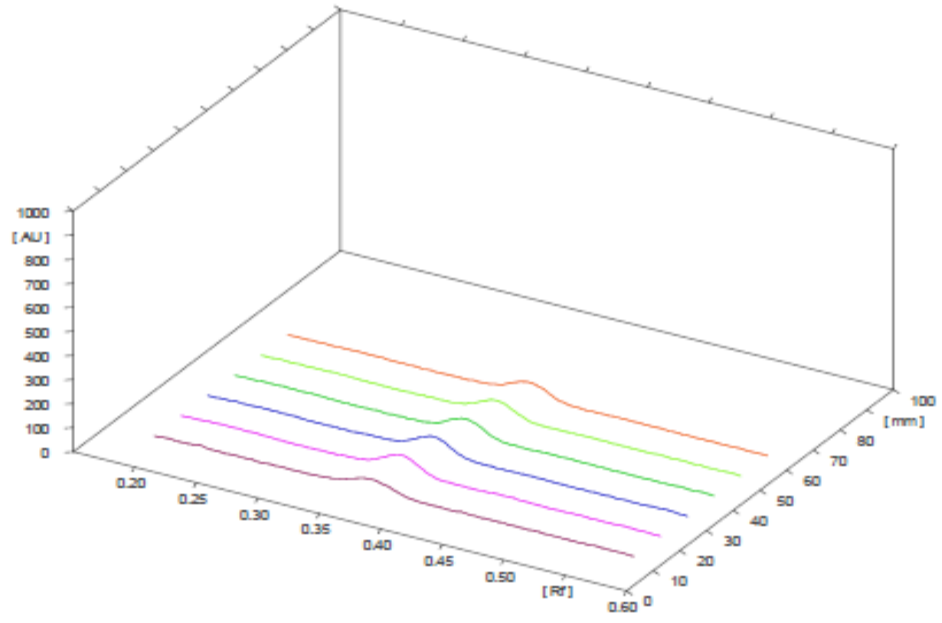


Gambar 8 : Kromatogram densitometri kurva baku zerumbon

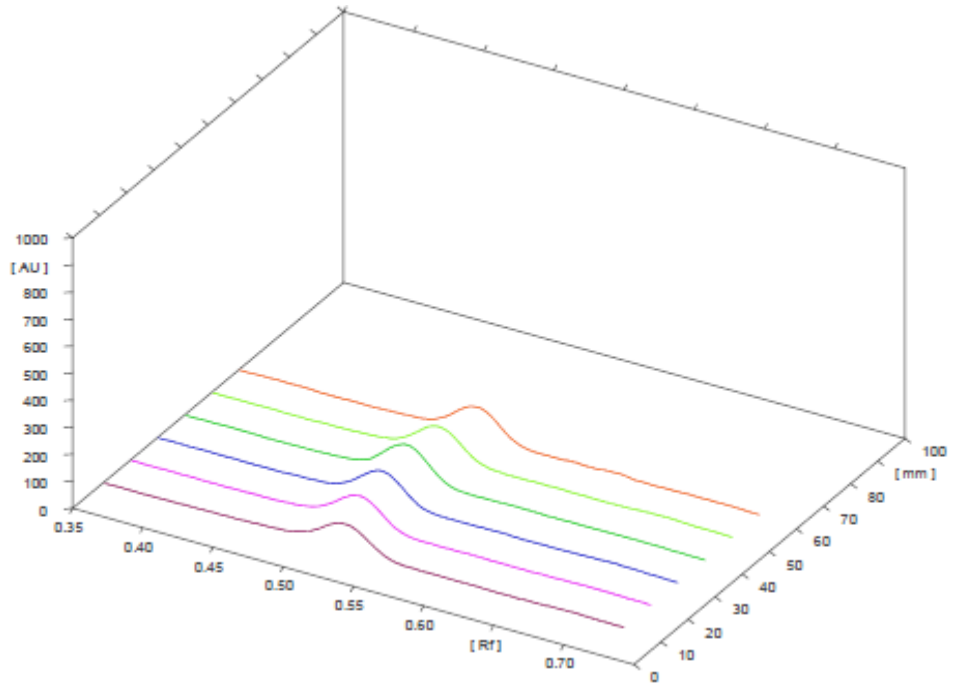


Gambar 9 : Kromatogram densitometri Presisi Tertinggi

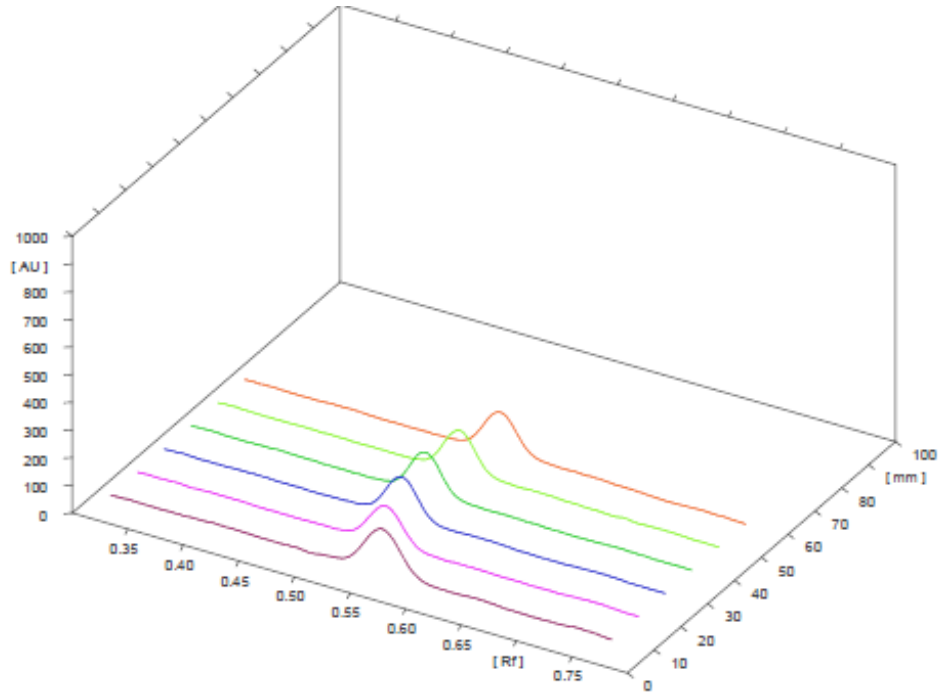
1. **Grafik Uji Ketelitian (*Precision*) pada Konsentrasi terendah (0,4 µg/totolan).**



Gambar 10 : Kromatogram densitometri presisi terendah



Gambar 11 : Kromatogram densitometri keterulangan sampel isolat zerumbon



Gambar 12 : Kromatogram densitometri keterulangan pembanding zerumbon