

Lampiran 2

PERHITUNGAN LOD DAN LOQ

1. Perhitungan Yc

Larutan seri standar 20%

$$y = bx + a$$

$$y = 544019,965 \times 20\% \times 1009525,3$$

$$y = 11889924,6$$

Larutan seri standar 40%

$$y = bx + a$$

$$y = 544019,965 \times 40\% \times 1009525,3$$

$$y = 22770323,2$$

Larutan seri standar 60%

$$y = bx + a$$

$$y = 544019,965 \times 60\% \times 1009525,3$$

$$y = 33650723,2$$

Larutan seri standar 80%

$$y = bx + a$$

$$y = 544019,965 \times 80\% \times 1009525,3$$

$$y = 44531122,5$$

Larutan seri standar 100%

$$y = bx + a$$

$$y = 544019,965 \times 100\% \times 1009525,3$$

$$y = 55411521,8$$

Larutan seri standar 120%

$$y = bx + a$$

$$y = 544019,965 \times 120\% \times 1009525,3$$

$$y = 66291921,1$$

Seri standar	Yi	Yc	(Yi-Yc)	(Yi-Yc) ²
20%	11301106	11889924.6	-588818.6	3.46707×10^{11}
40%	22841292	22770323.9	70968.1	5036471218
60%	34420032.7	33650723.2	769309.5	5.91837×10^{11}
80%	45134873.7	44531122.5	603751.2	3.64516×10^{11}
100%	54556311.7	55411521.8	-855210.1	7.31384×10^{11}
120%	63286596	66291921.1	-3005325.1	9.03198×10^{12}
Rata - rata				1.84524×10^{12}

$$S_{\frac{y}{x}} = \sqrt{\frac{\sum(Yi-Yc)^2}{n-2}} = \sqrt{\frac{1,84524 \times 10^{12}}{6-2}} = 679190,6949$$

$$LOD = \frac{3 \times S_{\frac{y}{x}}}{\text{slope}} = \frac{3 \times 679190,6949}{544019,965} = 3,7454\%$$

$$LOQ = \frac{10 \times S_{\frac{y}{x}}}{\text{slope}} = \frac{10 \times 679190,6949}{544019,965} = 12,4846\%$$