## Lampiran

Lampiran 1. 1

Perhitungan BD dan BK

Nilai BD dan BK logam Pb

| Konsentrasi (ppm) | Absorban | y' | y-y' | (y-y')^ |
|---|---|---|---|---|
| 0.5 | 0.0092 | 0.00945 | -0.0003 | 0.00000006 |
| 1.0 | 0.0208 | 0.0213 | -0.0005 | 0.00000025 |
| 1.5 | 0.0337 | 0.03315 | 0.0006 | 0.00000030 |
| 2.0 | 0.0456 | 0.045 | 0.0006 | 0.00000036 |
| 2.5 | 0.0570 | 0.05685 | 0.0002 | 0.00000002 |
| 3.0 | 0.0680 | 0.0687 | -0.0007 | 0.00000049 |

| Sy | BD | BK | Sx0 | Vx0 |
|---|---|---|---|---|
| 0.00060982 | 0.077192 | 0.257306 | 0.025731 | 1.470321 |

$$sy = \sqrt{\frac{(yi - y')^2}{n - 2}}$$

$$sy = \sqrt{\frac{0.00000149}{6 - 2}}$$

$$sy = 0.00060982$$

$$BD = \frac{3\,sy}{b}$$

$$BD = \frac{3 \times 0.00060982}{0.0237}$$

$$BD = 0.077192$$

$$BK = \frac{10\,sy}{b}$$

$$BK = \frac{10 \times 0.00060982}{0.0237}$$

$$BK = 0.257306$$

$$\boldsymbol{Sx0} = \frac{sy}{b}$$

$$Sx0 = \frac{0.00060982}{0.0237}$$

$$Sx0 = 0.025731$$

$$\boldsymbol{Vx0} = \frac{Sx0}{\bar{x}}$$

$$Vx0 = \frac{0.025731}{18.0}$$

$$Vx0 = 1.470321$$

Lampiran 1. 2

Perhitungan Akurasi logam Pb

| Konsentrasi | Absorbansi | C' | % Recovery | Rata-rata % Recovery | SD |
|---|---|---|---|---|---|
| 0.5 | 0.009 | 0.459634 | 91.92686 | 97.84339 | 0.01218 |
| | 0.009 | 0.459634 | 91.92686 | | |
| | 0.009 | 0.459634 | 91.92686 | | |
| 1 | 0.021 | 0.968535 | 96.85353 | | |
| | 0.021 | 0.968535 | 96.85353 | | |
| | 0.021 | 0.968535 | 96.85353 | | |
| 1.5 | 0.033 | 1.475566 | 98.37105 | | |
| | 0.034 | 1.517796 | 101.1864 | | |
| | 0.034 | 1.517796 | 101.1864 | | |
| 2 | 0.046 | 2.024436 | 101.2218 | | |
| | 0.045 | 1.982222 | 99.11111 | | |
| | 0.046 | 2.024436 | 101.2218 | | |
| 2.5 | 0.057 | 2.488741 | 99.54963 | | |
| | 0.057 | 2.488741 | 99.54963 | | |
| | 0.057 | 2.488741 | 99.54963 | | |
| 3 | 0.068 | 2.952991 | 98.43303 | | |
| | 0.067 | 2.910788 | 97.02626 | | |
| | 0.068 | 2.952991 | 98.43303 | | |

Lampiran 3

(Lanjutan)

$$\%Perolehan\ kembali = \frac{Konsentrasi\ Pengukuran}{Konsentrasi\ Teoritis} \times 100\%$$

$$\%Perolehan\ kembali = \frac{0.481012658 - 0.02137834}{0.5} \times 100\%$$

%perolehan kembali = 91.92686357%

Lampiran 1. 3

Perhitungan Presisi Logam Pb

| abs | X | Xi-X | (Xi-X)2 | SD | % SBR |
|---|---|---|---|---|---|
| 0.068 | 2.970464135 | 0.00703235 | 4.94539E-05 | | |
| 0.067 | 2.928270042 | -0.0351617 | 0.001236348 | | |
| 0.068 | 2.970464135 | 0.00703235 | 4.94539E-05 | | |
| 0.068 | 2.970464135 | 0.00703235 | 4.94539E-05 | 0.01722567 | **0.58127426** |
| 0.068 | 2.970464135 | 0.00703235 | 4.94539E-05 | | |
| 0.068 | 2.970464135 | 0.00703235 | 4.94539E-05 | | |
| | 2.963431786 | | 0.001483618 | | |

$$SD = \sqrt{\frac{\sum(xi-x)^2}{n-1}} \qquad SBR = \frac{SD}{X} \times 100\%$$

$$SD = \sqrt{\frac{0.001483618}{6-1}} \qquad SBR = \frac{0.01722567}{2.963431786} \times 100\%$$

$$SD = 0.01722567 \qquad SBR = 0.58127426$$

Lampiran 1. 4

Perhitungan Kadar Logam dalam sampel

| Logam | Kadar(bpj) | Syarat(bpj) |
|---|---|---|
| Timbal | 0.1926 | 0.2 |

$$Y = bx + a$$

$$Y = 0.0237x + 0.0024$$

$$0.01 = 0.0237x + 0.0024$$

$$x = \frac{0.01 - 0.0024}{0.0237} = 0.321$$

$$Kadar\ Timbal = \frac{konsentrasi \times volume\ inject}{Berat\ Sampel}$$

$$Kadar\ Timbal = \frac{0.321 \times 3}{5\ gram} = \mu g/mg$$

Kadar timbal = 0.1926 bpj