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ADDENDUM A

AVERAGES OF THE INTENSITIES MEASURED OF THE ISOTOPES OF THE INTERNAL STANDARDS, THE PLATINUM GROUP ELEMENTS AND GOLD

Table 3.5: Averages of the measured intensities (counts s^{-1}) of the different isotopes of Ar, Sc, Y, La, Au and Ir.

Sample	^{36}Ar	^{45}Sc	^{89}Y	^{138}La	^{139}La	^{197}Au	^{191}Ir	^{193}Ir
Blank in 1% v/v HCl	$2.06x10^{7}$	$9.83x10^{5}$	$6.98x10^{5}$	$4.58x10^{2}$	$3.53x10^{5}$	$1.16x10^{2}$	$7.12x10^{1}$	$7.44x10^{1}$
10 $\mu g\ dm^{-3}$ of element in 1% v/v HCl	$2.01x10^{7}$	$9.03x10^{5}$	$6.45x10^{5}$	$4.50x10^{2}$	$3.36x10^{5}$	$7.93x10^{2}$	$6.76x10^{2}$	$1.15x10^{3}$
50 $\mu g\ dm^{-3}$ of element in 1% v/v HCl	$2.00x10^{7}$	$8.81x10^{5}$	$6.21x10^{5}$	$4.60x10^{2}$	$3.22x10^{5}$	$3.52x10^{3}$	$3.11x10^{3}$	$5.03x10^{3}$
100 $\mu g\ dm^{-3}$ of element in 1% v/v HCl	$2.05x10^{7}$	$9.18x10^{5}$	$6.33x10^{5}$	$4.70x10^{2}$	$3.28x10^{5}$	$7.12x10^{3}$	$6.28x10^{3}$	$1.03x10^{4}$
150 $\mu g\ dm^{-3}$ of element in 1% v/v HCl	$1.97x10^{7}$	$9.22x10^{5}$	$6.63x10^{5}$	$4.24x10^{2}$	$3.39x10^{5}$	$1.10x10^{4}$	$9.76x10^{3}$	$1.60x10^{4}$
50 $\mu g\ dm^{-3}$ of element in 1% v/v HCl	$2.05x10^{7}$	$9.33x10^{5}$	$6.65x10^{5}$	$5.10x10^{2}$	$3.36x10^{5}$	$3.73x10^{3}$	$3.28x10^{3}$	$5.45x10^{3}$
50 $\mu g\ dm^{-3}$ of element in 0.35% v/v aqua regia	$1.63x10^{7}$	$8.31x10^{5}$	$6.08x10^{5}$	$4.29x10^{2}$	$3.26x10^{5}$	$3.49x10^{3}$	$3.16x10^{3}$	$5.11x10^{3}$
50 $\mu g\ dm^{-3}$ of element in 0.50% v/v aqua regia	$1.70x10^{7}$	$8.48x10^{5}$	$6.09x10^{5}$	$4.14x10^{2}$	$3.29x10^{5}$	$3.64x10^{3}$	$3.25x10^{3}$	$5.27x10^{3}$
50 $\mu g\ dm^{-3}$ of element in 1.00% v/v aqua regia	$1.86x10^{7}$	$8.73x10^{5}$	$6.42x10^{5}$	$4.49x10^{2}$	$3.33x10^{5}$	$3.58x10^{3}$	$3.17x10^{3}$	$5.25x10^{3}$
50 $\mu g\ dm^{-3}$ of element in 1% v/v HCl	$2.02x10^{7}$	$9.19x10^{5}$	$6.61x10^{5}$	$4.44x10^{2}$	$3.36x10^{5}$	$3.75x10^{3}$	$3.32x10^{3}$	$5.42x10^{3}$
50 $\mu g\ dm^{-3}$ of element in 1.50% v/v aqua regia	$2.07x10^{7}$	$9.33x10^{5}$	$6.57x10^{5}$	$4.51x10^{2}$	$3.33x10^{5}$	$3.67x10^{3}$	$3.19x10^{3}$	$5.32x10^{3}$
50 $\mu g\ dm^{-3}$ of element in 2.00% v/v aqua regia	$2.23x10^{7}$	$9.81x10^{5}$	$6.90x10^{5}$	$4.64x10^{2}$	$3.48x10^{5}$	$3.83x10^{3}$	$3.33x10^{3}$	$5.30x10^{3}$
50 $\mu g\ dm^{-3}$ of element in 2.50% v/v aqua regia	$2.27x10^{7}$	$9.75x10^{5}$	$6.76x10^{5}$	$4.80x10^{2}$	$3.44x10^{5}$	$3.71x10^{3}$	$3.20x10^{3}$	$5.45x10^{3}$
50 $\mu g\ dm^{-3}$ of element in 1% v/v HCl	$2.01x10^{7}$	$9.27x10^{5}$	$6.61x10^{5}$	$4.77x10^{2}$	$3.35x10^{5}$	$3.68x10^{3}$	$3.17x10^{3}$	$5.32x10^{3}$
Standard deviation of blank in 1% v/v HCl	$1.05x10^{6}$	$6.85x10^{4}$	$5.90x10^{4}$	$2.17x10^{1}$	$2.87x10^{4}$	$1.22x10^{1}$	$6.33x10^{0}$	$6.43x10^{0}$

Table 3.6: Averages of the measured intensities (counts s^{-1}) of the different isotopes of Pd and Pt.

Sample	^{102}Pd	^{104}Pd	^{105}Pd	^{106}Pd	^{108}Pd	^{110}Pd	^{192}Pt	^{194}Pt	^{195}Pt	^{196}Pt	^{198}Pt
Blank in 1% v/v HCl	$8.43x10^{1}$	$1.07x10^{2}$	$3.81x10^{3}$	$6.76x10^{2}$	$1.14x10^{2}$	$1.01x10^{2}$	$7.50x10^{1}$	$5.55x10^{1}$	$6.61x10^{1}$	$6.44x10^{1}$	$6.87x10^{1}$
10 μg dm^{-3} of element in 1% v/v HCl	$1.82x10^{3}$	$1.49x10^{3}$	$4.37x10^{3}$	$1.67x10^{3}$	$1.10x10^{3}$	$5.65x10^{2}$	$9.67x10^{1}$	$4.34x10^{2}$	$4.29x10^{2}$	$3.62x10^{2}$	$1.47x10^{2}$
50 μg dm^{-3} of element in 1% v/v HCl	$8.63x10^{3}$	$7.28x10^{3}$	$7.83x10^{3}$	$6.13x10^{3}$	$5.46x10^{3}$	$2.46x10^{3}$	$1.02x10^{2}$	$1.74x10^{3}$	$1.82x10^{3}$	$1.40x10^{3}$	$4.82x10^{2}$
100 μg dm^{-3} of element in 1% v/v HCl	$1.78x10^{4}$	$1.49x10^{4}$	$1.24x10^{4}$	$1.20x10^{4}$	$1.09x10^{4}$	$5.08x10^{3}$	$1.88x10^{2}$	$3.58x10^{3}$	$3.62x10^{3}$	$2.68x10^{3}$	$8.19x10^{2}$
150 μg dm^{-3} of element in 1% v/v HCl	$2.74x10^{4}$	$2.31x10^{4}$	$1.79x10^{4}$	$1.81x10^{4}$	$1.72x10^{4}$	$7.76x10^{3}$	$2.53x10^{2}$	$5.59x10^{3}$	$5.73x10^{3}$	$4.23x10^{3}$	$1.29x10^{3}$
50 μg dm^{-3} of element in 1% v/v HCl	$9.20x10^{3}$	$7.83x10^{3}$	$8.39x10^{3}$	$6.45x10^{3}$	$5.80x10^{3}$	$2.56x10^{3}$	$9.10x10^{1}$	$1.88x10^{3}$	$1.88x10^{3}$	$1.45x10^{3}$	$4.73x10^{2}$
50 μg dm^{-3} of element in 0.35% v/v aqua regia	$8.44x10^{3}$	$7.14x10^{3}$	$7.60x10^{3}$	$5.73x10^{3}$	$5.21x10^{3}$	$2.36x10^{3}$	$1.09x10^{2}$	$1.84x10^{3}$	$1.83x10^{3}$	$1.35x10^{3}$	$4.45x10^{2}$
50 μg dm^{-3} of element in 0.50% v/v aqua regia	$8.71x10^{3}$	$7.17x10^{3}$	$7.64x10^{3}$	$6.00x10^{3}$	$5.19x10^{3}$	$2.39x10^{3}$	$1.33x10^{2}$	$1.79x10^{3}$	$1.92x10^{3}$	$1.41x10^{3}$	$4.80x10^{2}$
50 μg dm^{-3} of element in 1.00% v/v aqua regia	$8.77x10^{3}$	$7.54x10^{3}$	$8.15x10^{3}$	$6.16x10^{3}$	$5.53x10^{3}$	$2.54x10^{3}$	$1.09x10^{2}$	$1.88x10^{3}$	$1.88x10^{3}$	$1.47x10^{3}$	$4.91x10^{2}$
50 μg dm^{-3} of element in 1% v/v HCl	$9.23x10^{3}$	$7.71x10^{3}$	$8.09x10^{3}$	$6.21x10^{3}$	$5.69x10^{3}$	$2.61x10^{3}$	$1.07x10^{2}$	$1.82x10^{3}$	$1.89x10^{3}$	$1.48x10^{3}$	$4.94x10^{2}$
50 μg dm^{-3} of element in 1.50% v/v aqua regia	$9.09x10^{3}$	$7.60x10^{3}$	$8.34x10^{3}$	$6.37x10^{3}$	$5.76x10^{3}$	$2.55x10^{3}$	$1.24x10^{2}$	$1.88x10^{3}$	$1.94x10^{3}$	$1.38x10^{3}$	$4.69x10^{2}$
50 μg dm^{-3} of element in 2.00% v/v aqua regia	$9.64x10^{3}$	$7.99x10^{3}$	$8.75x10^{3}$	$6.62x10^{3}$	$5.74x10^{3}$	$2.69x10^{3}$	$1.16x10^{2}$	$1.88x10^{3}$	$1.93x10^{3}$	$1.47x10^{3}$	$4.92x10^{2}$
50 μg dm^{-3} of element in 2.50% v/v aqua regia	$9.14x10^{3}$	$7.80x10^{3}$	$8.55x10^{3}$	$6.48x10^{3}$	$5.74x10^{3}$	$2.63x10^{3}$	$1.26x10^{2}$	$1.85x10^{3}$	$1.83x10^{3}$	$1.44x10^{3}$	$4.86x10^{2}$
50 μg dm^{-3} of element in 1% v/v HCl	$9.17x10^{3}$	$7.71x10^{3}$	$8.25x10^{3}$	$6.17x10^{3}$	$5.67x10^{3}$	$2.64x10^{3}$	$1.34x10^{2}$	$1.85x10^{3}$	$1.96x10^{3}$	$1.40x10^{3}$	$4.88x10^{2}$
Standard deviation of blank in 1% v/v HCl	$1.11x10^{1}$	$1.29x10^{1}$	$4.21x10^{2}$	$6.58x10^{1}$	$1.29x10^{1}$	$2.00x10^{1}$	$1.01x10^{1}$	$2.06x10^{1}$	$1.54x10^{1}$	$1.54x10^{1}$	$1.33x10^{1}$

Table 3.7: Averages of the measured intensities (counts s^{-1}) of the different isotopes of Rh and Ru.

Sample	**^{103}Rh**	**^{96}Ru**	**^{98}Ru**	**^{99}Ru**	**^{100}Ru**	**^{101}Ru**	**^{102}Ru**	**^{104}Ru**
Blank in 1% v/v HCl	1.24×10^{2}	1.06×10^{2}	1.60×10^{2}	8.42×10^{1}	1.49×10^{2}	8.99×10^{1}	9.21×10^{1}	1.05×10^{2}
10 μg dm^{-3} of element in 1% v/v HCl	4.68×10^{3}	4.29×10^{2}	2.88×10^{2}	7.95×10^{2}	8.15×10^{2}	1.04×10^{3}	1.81×10^{3}	1.53×10^{3}
50 μg dm^{-3} of element in 1% v/v HCl	2.25×10^{4}	1.49×10^{3}	6.26×10^{2}	3.36×10^{3}	3.41×10^{3}	4.69×10^{3}	8.51×10^{3}	7.24×10^{3}
100 μg dm^{-3} of element in 1% v/v HCl	4.65×10^{4}	3.09×10^{3}	1.21×10^{3}	6.83×10^{3}	6.96×10^{3}	9.26×10^{3}	1.75×10^{4}	1.50×10^{4}
150 μg dm^{-3} of element in 1% v/v HCl	7.28×10^{4}	4.53×10^{3}	1.67×10^{3}	1.05×10^{4}	1.04×10^{4}	1.42×10^{4}	2.69×10^{4}	2.26×10^{4}
50 μg dm^{-3} of element in 1% v/v HCl	2.41×10^{4}	1.55×10^{3}	6.80×10^{2}	3.72×10^{3}	3.74×10^{3}	4.90×10^{3}	9.34×10^{3}	7.72×10^{3}
50 μg dm^{-3} of element in 0.35% v/v aqua regia	2.23×10^{4}	1.55×10^{3}	6.24×10^{2}	3.38×10^{3}	3.35×10^{3}	4.48×10^{3}	8.25×10^{3}	7.18×10^{3}
50 μg dm^{-3} of element in 0.50% v/v aqua regia	2.26×10^{4}	1.52×10^{3}	6.31×10^{2}	3.38×10^{3}	3.43×10^{3}	4.54×10^{3}	8.42×10^{3}	7.09×10^{3}
50 μg dm^{-3} of element in 1.00% v/v aqua regia	2.33×10^{4}	1.53×10^{3}	7.12×10^{2}	3.49×10^{3}	3.43×10^{3}	4.72×10^{3}	9.02×10^{3}	7.51×10^{3}
50 μg dm^{-3} of element in 1% v/v HCl	2.41×10^{4}	1.69×10^{3}	7.18×10^{2}	3.58×10^{3}	3.55×10^{3}	4.79×10^{3}	9.12×10^{3}	7.60×10^{3}
50 μg dm^{-3} of element in 1.50% v/v aqua regia	2.37×10^{4}	1.62×10^{3}	7.04×10^{2}	3.57×10^{3}	3.59×10^{3}	4.75×10^{3}	9.03×10^{3}	7.55×10^{3}
50 μg dm^{-3} of element in 2.00% v/v aqua regia	2.47×10^{4}	1.64×10^{3}	7.54×10^{2}	3.75×10^{3}	3.64×10^{3}	5.20×10^{3}	9.50×10^{3}	8.03×10^{3}
50 μg dm^{-3} of element in 2.50% v/v aqua regia	2.43×10^{4}	1.65×10^{3}	7.38×10^{2}	3.58×10^{3}	3.82×10^{3}	4.97×10^{3}	9.46×10^{3}	7.75×10^{3}
50 μg dm^{-3} of element in 1% v/v HCl	2.39×10^{4}	1.53×10^{3}	6.77×10^{2}	3.65×10^{3}	3.64×10^{3}	4.70×10^{3}	9.18×10^{3}	7.66×10^{3}
Standard deviation of blank in 1% v/v HCl	3.67×10^{1}	6.44×10^{0}	2.41×10^{1}	2.00×10^{1}	3.08×10^{1}	3.42×10^{1}	1.40×10^{1}	2.89×10^{1}

ADDENDUM B

CALIBRATION DATA FOR THE ISOTOPES OF THE PLATINUM GROUP ELEMENTS AND GOLD

Table 3.8: Calibration data for Au and Ir isotopes when no internal standard was used.

	^{197}Au			^{191}Ir			^{193}Ir		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.16x10^{2}$	1.32	-	$7.12x10^{1}$	1.18	-	$7.44x10^{1}$	1.03	-
10	$7.93x10^{2}$	10.65	6.52	$6.76x10^{2}$	10.59	5.92	$1.15x10^{3}$	11.21	12.09
50	$3.52x10^{3}$	48.21	-3.59	$3.11x10^{3}$	48.50	-3.01	$5.03x10^{3}$	47.96	-4.08
100	$7.12x10^{3}$	97.80	-2.20	$6.28x10^{3}$	97.81	-2.19	$1.03x10^{4}$	97.60	-2.40
150	$1.10x10^{4}$	152.02	1.35	$9.76x10^{3}$	151.92	1.28	$1.60x10^{4}$	152.20	1.47
Correlation coefficient	0.9996			0.9996			0.9995		
Slope (counts s^{-1} ($\mu g\ dm^{-3}$)$^{-1}$)	$7.25x10^{1}$			$6.43x10^{1}$			$1.06x10^{2}$		
Intercept (counts s^{-1})	$2.06x10^{1}$			$-4.67x10^{0}$			$-3.45x10^{1}$		
Detection limit ($\mu g\ dm^{-3}$)	0.5028			0.2955			0.1827		
Standard error	2.1813			2.0399			2.3983		

Table 3.9: Calibration data for ^{102}Pd, ^{104}Pd and ^{105}Pd when no internal standard was used.

	^{102}Pd			^{104}Pd			^{105}Pd		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$8.43x10^{1}$	1.06	-	$1.07x10^{2}$	1.38	-	$3.81x10^{3}$	3.84	-
10	$1.82x10^{3}$	10.62	6.16	$1.49x10^{3}$	10.43	4.32	$4.37x10^{3}$	9.78	-2.21
50	$8.63x10^{3}$	48.18	-3.64	$7.28x10^{3}$	48.33	-3.35	$7.83x10^{3}$	46.76	-6.48
100	$1.78x10^{4}$	98.74	-1.26	$1.49x10^{4}$	98.00	-2.00	$1.24x10^{4}$	95.56	-4.44
150	$2.74x10^{4}$	151.41	0.94	$2.31x10^{4}$	151.86	1.24	$1.79x10^{4}$	154.05	2.70
Correlation coefficient	0.9997			0.9996			0.9981		
Slope (counts s^{-1} ($\mu g\ dm^{-3}$)$^{-1}$)	$1.81x10^{2}$			$1.53x10^{2}$			$9.37x10^{1}$		
Intercept (counts s^{-1})	$-1.08x10^{2}$			$-1.03x10^{2}$			$3.45x10^{3}$		
Detection limit ($\mu g\ dm^{-3}$)	0.1836			0.2524			13.4835		
Standard error	1.6710			2.0298			4.5156		

Table 3.10: Calibration data for ^{106}Pd, ^{108}Pd and ^{110}Pd when no internal standard was used.

	^{106}Pd			^{108}Pd			^{110}Pd		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$6.76x10^2$	1.50	-	$1.14x10^2$	1.60	-	$1.01x10^2$	1.44	-
10	$1.67x10^3$	10.02	0.15	$1.10x10^3$	10.32	3.18	$5.65x10^2$	10.53	5.33
50	$6.13x10^3$	48.33	-3.35	$5.46x10^3$	48.67	-2.65	$2.46x10^3$	47.58	-4.84
100	$1.20x10^4$	98.79	-1.21	$1.09x10^4$	96.96	-3.04	$5.08x10^3$	99.02	-0.98
150	$1.81x10^4$	151.36	0.91	$1.72x10^4$	152.45	1.63	$7.76x10^3$	151.42	0.95
Correlation coefficient	0.9997			0.9994			0.9996		
Slope (counts s^{-1} ($\mu g\ dm^{-3}$)$^{-1}$)	$1.17x10^2$			$1.14x10^2$			$5.11x10^1$		
Intercept (counts s^{-1})	$5.01x10^2$			$-6.78x10^1$			$2.73x10^1$		
Detection limit ($\mu g\ dm^{-3}$)	1.6930			0.3418			1.1743		
Standard error	1.6697			2.5588			1.9301		

Table 3.11: Calibration data for ^{192}Pt, ^{194}Pt and ^{195}Pt when no internal standard was used.

	^{192}Pt			^{194}Pt			^{195}Pt		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$7.50x10^{1}$	3.67	-	$5.55x10^{1}$	1.21	-	$6.61x10^{1}$	1.38	-
10	$9.67x10^{1}$	22.27	122.68	$4.34x10^{2}$	11.57	15.65	$4.29x10^{2}$	11.08	10.80
50	$1.02x10^{2}$	26.93	-46.14	$1.74x10^{3}$	47.20	-5.60	$1.82x10^{3}$	48.26	-3.47
100	$1.88x10^{2}$	100.77	0.77	$3.58x10^{3}$	97.58	-2.42	$3.62x10^{3}$	96.31	-3.69
150	$2.53x10^{2}$	156.36	4.24	$5.59x10^{3}$	152.44	1.63	$5.73x10^{3}$	152.96	1.98
Correlation coefficient	0.9776			0.9993			0.9991		
Slope ($counts\ s^{-1}\ (\mu g\ dm^{-3})^{-1}$)	$1.17x10^{0}$			$3.66x10^{1}$			$3.74x10^{1}$		
Intercept ($counts\ s^{-1}$)	$7.07x10^{1}$			$1.12x10^{1}$			$1.46x10^{1}$		
Detection limit ($\mu g\ dm^{-3}$)	26.0360			1.6907			1.2346		
Standard error	15.3245			2.7999			3.0762		

Table 3.12: Calibration data for ^{196}Pt, ^{198}Pt and ^{103}Rh when no internal standard was used.

	^{196}Pt			^{198}Pt			^{103}Rh		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$6.44x10^{1}$	0.47	-	$6.87x10^{1}$	0.32	-	$1.24x10^{2}$	1.40	-
10	$3.62x10^{2}$	11.36	13.61	$1.47x10^{2}$	10.15	1.51	$4.68x10^{3}$	10.85	8.53
50	$1.40x10^{3}$	49.34	-1.32	$4.82x10^{2}$	52.14	4.28	$2.25x10^{4}$	47.87	-4.26
100	$2.68x10^{3}$	96.08	-3.92	$8.19x10^{2}$	94.33	-5.67	$4.65x10^{4}$	97.67	-2.33
150	$4.23x10^{3}$	152.74	1.83	$1.29x10^{3}$	153.06	2.04	$7.28x10^{4}$	152.20	1.47
Correlation coefficient	0.9992			0.9985			0.9994		
Slope ($counts\ s^{-1}\ (\mu g\ dm^{-3})^{-1}$)	$2.73x10^{1}$			$7.98x10^{0}$			$4.82x10^{2}$		
Intercept ($counts\ s^{-1}$)	$5.14x10^{1}$			$6.61x10^{1}$			$-5.51x10^{2}$		
Detection limit ($\mu g\ dm^{-3}$)	1.6948			4.9849			0.2284		
Standard error	2.9059			3.9211			2.4137		

Table 3.13: Calibration data for ^{96}Ru, ^{98}Ru and ^{99}Ru when no internal standard was used.

	^{96}Ru			^{98}Ru			^{99}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.06x10^{2}$	0.32	-	$1.60x10^{2}$	-0.39	-	$8.42x10^{1}$	0.73	-
10	$4.29x10^{2}$	11.23	12.29	$2.88x10^{2}$	12.26	22.63	$7.95x10^{2}$	11.03	10.28
50	$1.49x10^{3}$	47.14	-5.72	$6.26x10^{2}$	45.74	-8.52	$3.36x10^{3}$	48.20	-3.60
100	$3.09x10^{3}$	101.33	1.33	$1.21x10^{3}$	103.37	3.37	$6.83x10^{3}$	98.54	-1.46
150	$4.53x10^{3}$	149.98	-0.01	$1.67x10^{3}$	149.03	-0.65	$1.05x10^{4}$	151.51	1.00
Correlation coefficient	0.9996			0.9989			0.9997		
Slope ($counts\ s^{-1}\ (\mu g\ dm^{-3})^{-1}$)	$2.96x10^{1}$			$1.01x10^{1}$			$6.90x10^{1}$		
Intercept ($counts\ s^{-1}$)	$9.65x10^{1}$			$1.64x10^{2}$			$3.41x10^{1}$		
Detection limit ($\mu g\ dm^{-3}$)	0.6533			7.1587			0.8686		
Standard error	1.9616			3.4455			1.7533		

Table 3.14: Calibration data for ^{100}Ru, ^{101}Ru and ^{102}Ru when no internal standard was used.

	^{100}Ru			^{101}Ru			^{102}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.49x10^{2}$	0.73	-	$8.99x10^{1}$	0.39	-	$9.21x10^{1}$	1.01	-
10	$8.15x10^{2}$	10.44	4.35	$1.04x10^{3}$	10.57	5.68	$1.81x10^{3}$	10.64	6.42
50	$3.41x10^{3}$	48.28	-3.44	$4.69x10^{3}$	49.48	-1.05	$8.51x10^{3}$	48.29	-3.42
100	$6.96x10^{3}$	100.04	0.04	$9.26x10^{3}$	98.27	-1.73	$1.75x10^{4}$	98.59	-1.41
150	$1.04x10^{4}$	150.52	0.35	$1.42x10^{4}$	151.29	0.86	$2.69x10^{4}$	151.47	0.98
Correlation coefficient	0.9999			0.9998			0.9997		
Slope ($counts\ s^{-1}\ (\mu g\ dm^{-3})^{-1}$)	$6.86x10^{1}$			$9.37x10^{1}$			$1.78x10^{2}$		
Intercept ($counts\ s^{-1}$)	$9.86x10^{1}$			$5.29x10^{1}$			$-8.83x10^{1}$		
Detection limit ($\mu g\ dm^{-3}$)	1.3473			1.0966			0.2361		
Standard error	1.1463			1.3409			1.6850		

Table 3.15: Calibration data for ^{104}Ru when no internal standard was used.

	^{104}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.05x10^{2}$	0.87	-
10	$1.53x10^{3}$	10.33	3.35
50	$7.24x10^{3}$	48.26	-3.48
100	$1.50x10^{4}$	99.92	-0.08
150	$2.26x10^{4}$	150.61	0.41
Correlation coefficient	0.9999		
Slope (counts s^{-1} ($\mu g\ dm^{-3}$)$^{-1}$)	$1.51x10^{2}$		
Intercept (counts s^{-1})	$-2.69x10^{1}$		
Detection limit ($\mu g\ dm^{-3}$)	0.5755		
Standard error	1.1944		

Table 3.16: Calibration data for Au and Ir when ^{36}Ar is used as internal standard.

	^{197}Au			^{191}Ir			^{193}Ir		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$5.64x10^{-6}$	1.79	-	$3.45x10^{-6}$	1.66	-	$3.61x10^{-6}$	1.51	-
10	$3.94x10^{-5}$	11.02	10.23	$3.36x10^{-5}$	10.96	9.58	$5.71x10^{-5}$	11.56	15.64
50	$1.76x10^{-4}$	48.37	-3.25	$1.56x10^{-4}$	48.66	-2.69	$2.52x10^{-4}$	48.12	-3.76
100	$3.46x10^{-4}$	95.02	-4.98	$3.06x10^{-4}$	95.04	-4.96	$5.00x10^{-4}$	94.84	-5.16
150	$5.61x10^{-4}$	153.79	2.53	$4.96x10^{-4}$	153.69	2.46	$8.15x10^{-4}$	153.96	2.64
Correlation coefficient	0.9986			0.9986			0.9984		
Slope $((\mu g\ dm^{-3})^{-1})$	$3.65x10^{-6}$			$3.24x10^{-6}$			$5.32x10^{-6}$		
Intercept	$-8.93x10^{-7}$			$-1.91x10^{-6}$			$-4.45x10^{-6}$		
Detection limit ($\mu g\ dm^{-3}$)	0.4840			0.2845			0.1758		
Standard error	3.9116			3.8119			4.1012		

Table 3.17: Calibration data for ^{102}Pd, ^{104}Pd and ^{105}Pd when ^{36}Ar is used as internal standard.

	^{102}Pd			^{104}Pd			^{105}Pd		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$4.09x10^{-6}$	1.54	-	$5.20x10^{-6}$	1.86	-	$1.85x10^{-4}$	3.85	-
10	$9.02x10^{-5}$	10.98	9.77	$7.40x10^{-5}$	10.80	7.97	$2.17x10^{-4}$	10.59	5.91
50	$4.31x10^{-4}$	48.34	-3.32	$3.64x10^{-4}$	48.48	-3.03	$3.92x10^{-4}$	47.38	-5.24
100	$8.66x10^{-4}$	95.96	-4.04	$7.23x10^{-4}$	95.23	-4.77	$6.04x10^{-4}$	92.04	-7.96
150	$1.39x10^{-3}$	153.18	2.12	$1.17x10^{-3}$	153.63	2.42	$9.08x10^{-4}$	156.14	4.09
Correlation coefficient	0.9990			0.9987			0.9961		
Slope $((\mu g\ dm^{-3})^{-1})$	$9.13x10^{-6}$			$7.69x10^{-6}$			$4.75x10^{-6}$		
Intercept	$-1.00x10^{-5}$			$-9.07x10^{-6}$			$1.67x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	0.1768			0.2430			12.8949		
Standard error	3.2914			3.7481			6.3785		

Table 3.18: Calibration data for ^{106}Pd, ^{108}Pd and ^{110}Pd when ^{36}Ar is used as internal standard.

	^{106}Pd			^{108}Pd			^{110}Pd		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$3.28x10^{-5}$	1.92	-	$5.53x10^{-6}$	2.07	-	$4.89x10^{-6}$	1.90	-
10	$8.28x10^{-5}$	10.44	4.42	$5.48x10^{-5}$	10.69	6.86	$2.81x10^{-5}$	10.91	9.12
50	$3.07x10^{-4}$	48.55	-2.91	$2.73x10^{-4}$	48.83	-2.35	$1.23x10^{-4}$	47.76	-4.47
100	$5.85x10^{-4}$	95.90	-4.10	$5.33x10^{-4}$	94.22	-5.78	$2.47x10^{-4}$	96.21	-3.79
150	$9.21x10^{-4}$	153.19	2.12	$8.76x10^{-4}$	154.20	2.80	$3.94x10^{-4}$	153.21	2.14
Correlation coefficient	0.9990			0.9982			0.9989		
Slope $((\mu g\ dm^{-3})^{-1})$	$5.87x10^{-6}$			$5.72x10^{-6}$			$2.57x10^{-6}$		
Intercept	$2.15x10^{-5}$			$-6.32x10^{-6}$			$-6.97x10^{-9}$		
Detection limit ($\mu g\ dm^{-3}$)	1.6288			0.3290			1.1305		
Standard error	3.3111			4.3593			3.3694		

Table 3.19: Calibration data for ^{192}Pt, ^{194}Pt and ^{195}Pt when ^{36}Ar is used as internal standard.

	^{192}Pt			^{194}Pt			^{195}Pt		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$3.64x10^{-6}$	3.47	-	$2.69x10^{-6}$	1.68	-	$3.20x10^{-6}$	1.84	-
10	$4.80x10^{-6}$	23.07	130.73	$2.16x10^{-5}$	11.92	19.25	$2.13x10^{-5}$	11.45	14.46
50	$5.11x10^{-6}$	28.22	-43.57	$8.69x10^{-5}$	47.37	-5.25	$9.09x10^{-5}$	48.42	-3.15
100	$9.17x10^{-6}$	96.55	-3.45	$1.74x10^{-4}$	94.81	-5.19	$1.76x10^{-4}$	93.57	-6.43
150	$1.29x10^{-5}$	158.69	5.79	$2.84x10^{-4}$	154.21	2.81	$2.91x10^{-4}$	154.72	3.14
Correlation coefficient	0.9773			0.9982			0.9978		
Slope $((\mu g\ dm^{-3})^{-1})$	$5.95x10^{-8}$			$1.84x10^{-6}$			$1.88x10^{-6}$		
Intercept	$3.43x10^{-6}$			$-4.12x10^{-7}$			$-2.71x10^{-7}$		
Detection limit ($\mu g\ dm^{-3}$)	24.8009			1.6274			1.1882		
Standard error	15.4003			4.3943			4.8748		

Table 3.20: Calibration data for ^{196}Pt, ^{198}Pt and ^{103}Rh when ^{36}Ar is used as internal standard.

	^{196}Pt			^{198}Pt			^{103}Rh		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$3.12x10^{-6}$	0.95	-	$3.33x10^{-6}$	0.73	-	$6.03x10^{-6}$	1.88	-
10	$1.80x10^{-5}$	11.73	17.28	$7.31x10^{-6}$	10.60	5.99	$2.32x10^{-4}$	11.21	12.07
50	$7.00x10^{-5}$	49.50	-0.99	$2.41x10^{-5}$	52.34	4.68	$1.13x10^{-3}$	48.02	-3.96
100	$1.30x10^{-4}$	93.31	-6.69	$3.99x10^{-5}$	91.46	-8.54	$2.26x10^{-3}$	94.93	-5.07
150	$2.15x10^{-4}$	154.51	3.01	$6.54x10^{-5}$	154.88	3.25	$3.70x10^{-3}$	153.96	2.64
Correlation coefficient	0.9978			0.9968			0.9984		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$1.38x10^{-6}$			$4.03x10^{-7}$			$2.43x10^{-5}$		
Intercept	$1.82x10^{-6}$			$3.04x10^{-6}$			$-3.97x10^{-5}$		
Detection limit ($\mu g\ dm^{-3}$)	1.6309			4.7914			0.2199		
Standard error	4.7953			5.8438			4.0889		

Table 3.21: Calibration data for ^{96}Ru, ^{98}Ru and ^{99}Ru when ^{36}Ar is used as internal standard.

	^{96}Ru			^{98}Ru			^{99}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$5.13x10^{-6}$	0.78	-	$7.75x10^{-6}$	-0.04	-	$4.08x10^{-6}$	1.21	-
10	$2.13x10^{-5}$	11.62	16.19	$1.43x10^{-5}$	12.77	27.73	$3.95x10^{-5}$	11.39	13.91
50	$7.45x10^{-5}$	47.36	-5.27	$3.13x10^{-5}$	46.14	-7.73	$1.68x10^{-4}$	48.37	-3.26
100	$1.51x10^{-4}$	98.40	-1.60	$5.88x10^{-5}$	100.09	0.09	$3.32x10^{-4}$	95.73	-4.27
150	$2.30x10^{-4}$	151.84	1.22	$8.47x10^{-5}$	151.04	0.69	$5.32x10^{-4}$	153.29	2.20
Correlation coefficient	0.9995			0.9993			0.9989		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$1.49x10^{-6}$			$5.10x10^{-7}$			$3.47x10^{-6}$		
Intercept	$3.97x10^{-6}$			$7.77x10^{-6}$			$-1.16x10^{-7}$		
Detection limit ($\mu g\ dm^{-3}$)	0.6289			6.8785			0.8362		
Standard error	2.3158			2.8093			3.4160		

Table 3.22: Calibration data for ^{100}Ru, ^{101}Ru and ^{102}Ru when ^{36}Ar is used as internal standard.

	^{100}Ru			^{101}Ru			^{102}Ru		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$7.20x10^{-6}$	1.20	-	$4.36x10^{-6}$	0.88	-	$4.46x10^{-6}$	1.50	-
10	$4.04x10^{-5}$	10.82	8.17	$5.18x10^{-5}$	10.93	9.33	$8.97x10^{-5}$	11.00	10.02
50	$1.71x10^{-4}$	48.47	-3.06	$2.34x10^{-4}$	49.63	-0.73	$4.26x10^{-4}$	48.45	-3.10
100	$3.39x10^{-4}$	97.18	-2.82	$4.51x10^{-4}$	95.48	-4.52	$8.50x10^{-4}$	95.81	-4.19
150	$5.29x10^{-4}$	152.33	1.56	$7.22x10^{-4}$	153.08	2.05	$1.37x10^{-3}$	153.25	2.16
Correlation coefficient	0.9994			0.9990			0.9989		
Slope $((\mu g\ dm^{-3})^{-1})$	$3.46x10^{-6}$			$4.72x10^{-6}$			$8.97x10^{-6}$		
Intercept	$3.06x10^{-6}$			$1.99x10^{-7}$			$-8.96x10^{-6}$		
Detection limit ($\mu g\ dm^{-3}$)	1.2972			1.0557			0.2274		
Standard error	2.4372			3.2474			3.3519		

Table 3.23: Calibration data for ^{104}Ru when ^{36}Ar is used as internal standard.

	^{104}Ru		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	5.08×10^{-6}	1.36	-
10	7.59×10^{-5}	10.70	7.02
50	3.62×10^{-4}	48.43	-3.14
100	7.31×10^{-4}	97.10	-2.90
150	1.15×10^{-3}	152.41	1.61
Correlation coefficient	0.9994		
Slope $((\mu g\ dm^{-3})^{-1})$	7.58×10^{-6}		
Intercept	-5.21×10^{-6}		
Detection limit ($\mu g\ dm^{-3}$)	0.5542		
Standard error	2.5168		

Table 3.24: Calibration data for Au and Ir when ^{45}Sc is used as internal standard.

	^{197}Au			^{191}Ir			^{193}Ir		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$1.18x10^{-4}$	0.58	-	$7.25x10^{-5}$	0.46	-	$7.58x10^{-5}$	0.33	-
10	$8.79x10^{-4}$	10.25	2.50	$7.49x10^{-4}$	10.17	1.73	$1.27x10^{-3}$	10.80	7.95
50	$3.99x10^{-3}$	49.91	-0.18	$3.53x10^{-3}$	50.19	0.39	$5.71x10^{-3}$	49.62	-0.76
100	$7.75x10^{-3}$	97.75	-2.25	$6.85x10^{-3}$	97.75	-2.25	$1.12x10^{-2}$	97.55	-2.45
150	$1.20x10^{-2}$	151.51	1.01	$1.06x10^{-2}$	151.42	0.95	$1.74x10^{-2}$	151.71	1.14
Correlation coefficient	0.9998			0.9998			0.9997		
Slope $((\mu g\ dm^{-3})^{-1})$	$7.86x10^{-5}$			$6.96x10^{-5}$			$1.14x10^{-4}$		
Intercept	$7.32x10^{-5}$			$4.06x10^{-5}$			$3.82x10^{-5}$		
Detection limit $(\mu g\ dm^{-3})$	0.4725			0.2777			0.1717		
Standard error	1.6081			1.5639			1.8085		

Table 3.25: Calibration data for ^{102}Pd, ^{104}Pd and ^{105}Pd when ^{45}Sc is used as internal standard.

	^{102}Pd			^{104}Pd			^{105}Pd		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$8.58x10^{-5}$	0.37	-	$1.09x10^{-4}$	0.69	-	$3.88x10^{-3}$	1.03	-
10	$2.01x10^{-3}$	10.18	1.84	$1.65x10^{-3}$	10.00	0.02	$4.84x10^{-3}$	10.41	4.10
50	$9.80x10^{-3}$	49.84	-0.32	$8.26x10^{-3}$	49.99	-0.01	$8.90x10^{-3}$	50.17	0.33
100	$1.94x10^{-2}$	98.69	-1.31	$1.62x10^{-2}$	97.95	-2.05	$1.35x10^{-2}$	95.44	-4.56
150	$2.97x10^{-2}$	150.91	0.61	$2.50x10^{-2}$	151.37	0.91	$1.94x10^{-2}$	152.96	1.97
Correlation coefficient	0.9999			0.9998			0.9990		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$1.96x10^{-4}$			$1.65x10^{-4}$			$1.02x10^{-4}$		
Intercept	$1.28x10^{-5}$			$-4.43x10^{-6}$			$3.77x10^{-3}$		
Detection limit ($\mu g\ dm^{-3}$)	0.1726			0.2372			12.5941		
Standard error	0.9573			1.4796			3.2028		

Table 3.26: Calibration data for ^{106}Pd, ^{108}Pd and ^{110}Pd when ^{45}Sc is used as internal standard.

	^{106}Pd			^{108}Pd			^{110}Pd		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$6.88x10^{-4}$	0.54	-	$1.16x10^{-4}$	0.89	-	$1.03x10^{-4}$	0.69	-
10	$1.85x10^{-3}$	9.71	-2.86	$1.22x10^{-3}$	9.89	-1.10	$6.26x10^{-4}$	10.15	1.46
50	$6.96x10^{-3}$	50.23	0.46	$6.20x10^{-3}$	50.36	0.73	$2.79x10^{-3}$	49.28	-1.45
100	$1.31x10^{-2}$	98.73	-1.27	$1.19x10^{-2}$	96.90	-3.10	$5.54x10^{-3}$	98.98	-1.02
150	$1.97x10^{-2}$	150.79	0.52	$1.87x10^{-2}$	151.95	1.30	$8.41x10^{-3}$	150.91	0.61
Correlation coefficient	0.9999			0.9995			0.9999		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$1.26x10^{-4}$			$1.23x10^{-4}$			$5.53x10^{-5}$		
Intercept	$6.21x10^{-4}$			$6.16x10^{-6}$			$6.46x10^{-5}$		
Detection limit ($\mu g\ dm^{-3}$)	1.5897			0.3212			1.1033		
Standard error	0.9393			2.1875			0.9810		

Table 3.27: Calibration data for ^{192}Pt, ^{194}Pt and ^{195}Pt when ^{45}Sc is used as internal standard.

	^{192}Pt			^{194}Pt			^{195}Pt		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$7.63x10^{-5}$	-0.31	-	$5.65x10^{-5}$	0.47	-	$6.73x10^{-5}$	0.62	-
10	$1.07x10^{-4}$	23.80	138.01	$4.81x10^{-4}$	11.19	11.86	$4.75x10^{-4}$	10.69	6.88
50	$1.16x10^{-4}$	30.78	-38.43	$1.97x10^{-3}$	48.86	-2.27	$2.07x10^{-3}$	49.98	-0.05
100	$2.05x10^{-4}$	100.71	0.71	$3.90x10^{-3}$	97.53	-2.47	$3.94x10^{-3}$	96.25	-3.75
150	$2.75x10^{-4}$	155.01	3.34	$6.06x10^{-3}$	151.94	1.30	$6.22x10^{-3}$	152.46	1.64
Correlation coefficient	0.9821			0.9996			0.9993		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$1.28x10^{-6}$			$3.96x10^{-5}$			$4.05x10^{-5}$		
Intercept	$7.67x10^{-5}$			$3.78x10^{-5}$			$4.21x10^{-5}$		
Detection limit ($\mu g\ dm^{-3}$)	24.2390			1.5887			1.1601		
Standard error	13.7187			2.0643			2.6417		

Table 3.28: Calibration data for ^{196}Pt, ^{198}Pt and ^{103}Rh when ^{45}Sc is used as internal standard.

	^{196}Pt			^{198}Pt			^{103}Rh		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$6.55x10^{-5}$	-0.35	-	$7.00x10^{-5}$	-0.87	-	$1.27x10^{-4}$	0.73	-
10	$4.01x10^{-4}$	10.98	9.78	$1.63x10^{-4}$	9.89	-1.14	$5.18x10^{-3}$	10.42	4.22
50	$1.59x10^{-3}$	51.15	2.30	$5.48x10^{-4}$	54.36	8.71	$2.56x10^{-2}$	49.50	-1.01
100	$2.92x10^{-3}$	96.00	-4.00	$8.92x10^{-4}$	94.20	-5.80	$5.07x10^{-2}$	97.63	-2.37
150	$4.58x10^{-3}$	152.22	1.48	$1.40x10^{-3}$	152.42	1.61	$7.89x10^{-2}$	151.72	1.15
Correlation coefficient	0.9993			0.9981			0.9997		
Slope $((\mu g\ dm^{-3})^{-1})$	$2.96x10^{-5}$			$8.65x10^{-6}$			$5.22x10^{-4}$		
Intercept	$7.58x10^{-5}$			$7.74x10^{-5}$			$-2.57x10^{-4}$		
Detection limit $(\mu g\ dm^{-3})$	1.5926			4.6804			0.2146		
Standard error	2.7855			4.4352			1.7865		

Table 3.29: Calibration data for ^{96}Ru, ^{98}Ru and ^{99}Ru when ^{45}Sc is used as internal standard.

	^{96}Ru			^{98}Ru			^{99}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.08x10^{-4}$	-0.55	-	$1.63x10^{-4}$	-1.94	-	$8.57x10^{-5}$	-0.01	-
10	$4.75x10^{-4}$	10.90	9.00	$3.19x10^{-4}$	12.29	22.86	$8.80x10^{-4}$	10.62	6.22
50	$1.69x10^{-3}$	48.92	-2.15	$7.11x10^{-4}$	48.06	-3.88	$3.82x10^{-3}$	49.91	-0.19
100	$3.37x10^{-3}$	101.29	1.29	$1.32x10^{-3}$	103.29	3.29	$7.44x10^{-3}$	98.48	-1.52
150	$4.92x10^{-3}$	149.44	-0.37	$1.81x10^{-3}$	148.30	-1.13	$1.14x10^{-2}$	151.00	0.67
Correlation coefficient	0.9999			0.9992			0.9999		
Slope $((\mu g\ dm^{-3})^{-1})$	$3.21x10^{-5}$			$1.10x10^{-5}$			$7.47x10^{-5}$		
Intercept	$1.25x10^{-4}$			$1.84x10^{-4}$			$8.66x10^{-5}$		
Detection limit ($\mu g\ dm^{-3}$)	0.6137			6.7135			0.8162		
Standard error	1.1885			2.9688			1.1112		

Table 3.30: Calibration data for ^{100}Ru, ^{101}Ru and ^{102}Ru when ^{45}Sc is used as internal standard.

	^{100}Ru			^{101}Ru			^{102}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.51x10^{-4}$	-0.06	-	$9.15x10^{-5}$	-0.35	-	$9.37x10^{-5}$	0.32	-
10	$9.02x10^{-4}$	10.04	0.44	$1.16x10^{-3}$	10.14	1.35	$2.00x10^{-3}$	10.21	2.10
50	$3.87x10^{-3}$	50.03	0.07	$5.32x10^{-3}$	51.23	2.46	$9.67x10^{-3}$	49.96	-0.09
100	$7.59x10^{-3}$	99.99	-0.01	$1.01x10^{-2}$	98.21	-1.79	$1.90x10^{-2}$	98.54	-1.46
150	$1.13x10^{-2}$	149.99	0.00	$1.54x10^{-2}$	150.78	0.52	$2.92x10^{-2}$	150.98	0.65
Correlation coefficient	1.0000			0.9998			0.9999		
Slope $((\mu g\ dm^{-3})^{-1})$	$7.43x10^{-5}$			$1.01x10^{-4}$			$1.93x10^{-4}$		
Intercept	$1.56x10^{-4}$			$1.27x10^{-4}$			$3.19x10^{-5}$		
Detection limit ($\mu g\ dm^{-3}$)	1.2659			1.0306			0.2219		
Standard error	0.0482			1.3509			1.0402		

Table 3.31: Calibration data for ^{104}Ru when ^{45}Sc is used as internal standard.

	^{104}Ru		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$1.07x10^{-4}$	0.17	-
10	$1.69x10^{-3}$	9.90	-0.96
50	$8.22x10^{-3}$	49.94	-0.12
100	$1.64x10^{-2}$	99.87	-0.13
150	$2.46x10^{-2}$	150.11	0.07
Correlation coefficient	1.0000		
Slope $((\mu g\ dm^{-3})^{-1})$	$1.63x10^{-4}$		
Intercept	$7.85x10^{-5}$		
Detection limit ($\mu g\ dm^{-3}$)	0.5408		
Standard error	0.1544		

Table 3.32: Calibration data for Au and Ir when ^{89}Y is used as internal standard.

	^{197}Au			^{191}Ir			^{193}Ir		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.67x10^{-4}$	0.11	-	$1.02x10^{-4}$	0.00	-	$1.07x10^{-4}$	-0.13	-
10	$1.23x10^{-3}$	9.74	-2.57	$1.05x10^{-3}$	9.67	-3.31	$1.78x10^{-3}$	10.29	2.94
50	$5.66x10^{-3}$	49.92	-0.15	$5.01x10^{-3}$	50.21	0.41	$8.10x10^{-3}$	49.63	-0.74
100	$1.12x10^{-2}$	100.53	0.53	$9.93x10^{-3}$	100.52	0.52	$1.62x10^{-2}$	100.31	0.31
150	$1.67x10^{-2}$	149.69	-0.21	$1.47x10^{-2}$	149.60	-0.26	$2.42x10^{-2}$	149.90	-0.07
Correlation coefficient	1.0000			1.0000			1.0000		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$1.10x10^{-4}$			$9.78x10^{-5}$			$1.61x10^{-4}$		
Intercept	$1.54x10^{-4}$			$1.02x10^{-4}$			$1.28x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	0.4738			0.2785			0.1722		
Standard error	0.3907			0.4406			0.3392		

Table 3.33: Calibration data for ^{102}Pd, ^{104}Pd and ^{105}Pd when ^{89}Y is used as internal standard.

	^{102}Pd			^{104}Pd			^{105}Pd		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.21x10^{-4}$	-0.09	-	$1.54x10^{-4}$	0.23	-	$5.46x10^{-3}$	0.49	-
10	$2.82x10^{-3}$	9.68	-3.16	$2.31x10^{-3}$	9.50	-4.96	$6.77x10^{-3}$	9.58	-4.16
50	$1.39x10^{-2}$	49.84	-0.32	$1.17x10^{-2}$	50.00	0.01	$1.26x10^{-2}$	50.31	0.61
100	$2.81x10^{-2}$	101.47	1.47	$2.35x10^{-2}$	100.70	0.70	$1.96x10^{-2}$	99.08	-0.92
150	$4.13x10^{-2}$	149.10	-0.60	$3.48x10^{-2}$	149.56	-0.29	$2.70x10^{-2}$	150.54	0.36
Correlation coefficient	0.9999			1.0000			0.9999		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$2.76x10^{-4}$			$2.32x10^{-4}$			$1.43x10^{-4}$		
Intercept	$1.45x10^{-4}$			$1.01x10^{-4}$			$5.39x10^{-3}$		
Detection limit ($\mu g\ dm^{-3}$)	0.1730			0.2379			12.6231		
Standard error	1.0164			0.5725			0.7369		

Table 3.34: Calibration data for ^{106}Pd, ^{108}Pd and ^{110}Pd when ^{89}Y is used as internal standard.

	^{106}Pd			^{108}Pd			^{110}Pd		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$9.70x10^{-4}$	0.06	-	$1.63x10^{-4}$	0.43	-	$1.45x10^{-4}$	0.22	-
10	$2.59x10^{-3}$	9.17	-8.30	$1.71x10^{-3}$	9.39	-6.07	$8.76x10^{-4}$	9.64	-3.64
50	$9.87x10^{-3}$	50.25	0.50	$8.79x10^{-3}$	50.38	0.76	$3.96x10^{-3}$	49.28	-1.45
100	$1.90x10^{-2}$	101.63	1.63	$1.73x10^{-2}$	99.64	-0.36	$8.04x10^{-3}$	101.79	1.79
150	$2.74x10^{-2}$	148.88	-0.74	$2.60x10^{-2}$	150.16	0.10	$1.17x10^{-2}$	149.07	-0.62
Correlation coefficient	0.9999			1.0000			0.9998		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$1.77x10^{-4}$			$1.73x10^{-4}$			$7.77x10^{-5}$		
Intercept	$9.58x10^{-4}$			$8.86x10^{-5}$			$1.27x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	1.5940			0.3221			1.1063		
Standard error	1.2468			0.5350			1.2623		

Table 3.35: Calibration data for ^{192}Pt, ^{194}Pt and ^{195}Pt when ^{89}Y is used as internal standard.

	^{192}Pt			^{194}Pt			^{195}Pt		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.08x10^{-4}$	-0.85	-	$7.96x10^{-5}$	0.02	-	$9.48x10^{-5}$	0.16	-
10	$1.50x10^{-4}$	22.75	127.46	$6.73x10^{-4}$	10.68	6.80	$6.65x10^{-4}$	10.18	1.83
50	$1.65x10^{-4}$	30.87	-38.25	$2.80x10^{-3}$	48.87	-2.26	$2.93x10^{-3}$	50.00	0.00
100	$2.98x10^{-4}$	105.10	5.10	$5.66x10^{-3}$	100.31	0.31	$5.72x10^{-3}$	99.00	-1.00
150	$3.82x10^{-4}$	152.13	1.42	$8.43x10^{-3}$	150.12	0.08	$8.65x10^{-3}$	150.65	0.44
Correlation coefficient	0.9828			0.9999			1.0000		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$1.80x10^{-6}$			$5.56x10^{-5}$			$5.69x10^{-5}$		
Intercept	$1.09x10^{-4}$			$7.88x10^{-5}$			$8.55x10^{-5}$		
Detection limit ($\mu g\ dm^{-3}$)	24.2669			1.5933			1.1637		
Standard error	13.4226			0.7854			0.7032		

Table 3.36: Calibration data for ^{196}Pt, ^{198}Pt and ^{103}Rh when ^{89}Y is used as internal standard.

	^{196}Pt			^{198}Pt			^{103}Rh		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$9.23x10^{-5}$	-0.81	-	$9.85x10^{-5}$	-1.35	-	$1.78x10^{-4}$	0.28	-
10	$5.61x10^{-4}$	10.46	4.58	$2.28x10^{-4}$	9.31	-6.91	$7.25x10^{-3}$	9.93	-0.71
50	$2.25x10^{-3}$	51.19	2.38	$7.76x10^{-4}$	54.45	8.90	$3.63x10^{-2}$	49.50	-1.00
100	$4.23x10^{-3}$	98.78	-1.22	$1.29x10^{-3}$	97.10	-2.90	$7.36x10^{-2}$	100.37	0.37
150	$6.38x10^{-3}$	150.39	0.26	$1.94x10^{-3}$	150.50	0.33	$1.10x10^{-1}$	149.93	-0.05
Correlation coefficient	0.9999			0.9990			1.0000		
Slope $((\mu g\ dm^{-3})^{-1})$	$4.16x10^{-5}$			$1.21x10^{-5}$			$7.33x10^{-4}$		
Intercept	$1.26x10^{-4}$			$1.15x10^{-4}$			$-2.49x10^{-5}$		
Detection limit $(\mu g\ dm^{-3})$	1.5974			4.6946			0.2152		
Standard error	1.1437			3.2005			0.3961		

Table 3.37: Calibration data for ^{96}Ru, ^{98}Ru and ^{99}Ru when ^{89}Y is used as internal standard.

	^{96}Ru			^{98}Ru			^{99}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.52x10^{-4}$	-1.02	-	$2.29x10^{-4}$	-2.44	-	$1.21x10^{-4}$	-0.48	-
10	$6.64x10^{-4}$	10.36	3.62	$4.46x10^{-4}$	11.63	16.27	$1.23x10^{-3}$	10.11	1.12
50	$2.40x10^{-3}$	48.92	-2.16	$1.01x10^{-3}$	48.08	-3.84	$5.41x10^{-3}$	49.92	-0.17
100	$4.89x10^{-3}$	104.22	4.22	$1.91x10^{-3}$	106.59	6.59	$1.08x10^{-2}$	101.28	1.28
150	$6.84x10^{-3}$	147.53	-1.65	$2.52x10^{-3}$	146.14	-2.57	$1.58x10^{-2}$	149.17	-0.56
Correlation coefficient	0.9992			0.9978			0.9999		
Slope $((\mu g\ dm^{-3})^{-1})$	$4.50x10^{-5}$			$1.54x10^{-5}$			$1.05x10^{-4}$		
Intercept	$1.98x10^{-4}$			$2.67x10^{-4}$			$1.71x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	0.6152			6.7259			0.8185		
Standard error	2.9548			4.8410			0.9275		

Table 3.38: Calibration data for ^{100}Ru, ^{101}Ru and ^{102}Ru when ^{89}Y is used as internal standard.

	^{100}Ru			^{101}Ru			^{102}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$2.13x10^{-4}$	-0.53	-	$1.29x10^{-4}$	-0.82	-	$1.32x10^{-4}$	-0.14	-
10	$1.26x10^{-3}$	9.52	-4.76	$1.62x10^{-3}$	9.62	-3.76	$2.80x10^{-3}$	9.71	-2.90
50	$5.49x10^{-3}$	50.04	0.07	$7.55x10^{-3}$	51.25	2.50	$1.37x10^{-2}$	49.96	-0.08
100	$1.10x10^{-2}$	102.84	2.84	$1.46x10^{-2}$	101.00	1.00	$2.76x10^{-2}$	101.31	1.31
150	$1.57x10^{-2}$	148.13	-1.25	$2.15x10^{-2}$	148.94	-0.70	$4.06x10^{-2}$	149.16	-0.56
Correlation coefficient	0.9996			0.9999			0.9999		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$1.04x10^{-4}$			$1.43x10^{-4}$			$2.71x10^{-4}$		
Intercept	$2.68x10^{-4}$			$2.45x10^{-4}$			$1.70x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	1.2692			1.0335			0.2225		
Standard error	2.0072			1.2224			0.9187		

Table 3.39: Calibration data for ^{104}Ru when ^{89}Y is used as internal standard.

	^{104}Ru		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$1.50x10^{-4}$	-0.29	-
10	$2.37x10^{-3}$	9.40	-6.01
50	$1.17x10^{-2}$	49.94	-0.12
100	$2.37x10^{-2}$	102.68	2.68
150	$3.42x10^{-2}$	148.27	-1.15
Correlation coefficient	0.9997		
Slope $((\mu g\ dm^{-3})^{-1})$	$2.29x10^{-4}$		
Intercept	$2.17x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	0.5423		
Standard error	1.8812		

Table 3.40: Calibration data for Au and Ir when ^{138}La is used as internal standard.

	^{197}Au			^{191}Ir			^{193}Ir		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$2.54x10^{-1}$	3.01	-	$1.56x10^{-1}$	2.87	-	$1.63x10^{-1}$	2.73	-
10	$1.76x10^{0}$	11.98	19.80	$1.50x10^{0}$	11.92	19.16	$2.56x10^{0}$	12.50	25.01
50	$7.65x10^{0}$	46.98	-6.03	$6.77x10^{0}$	47.26	-5.48	$1.09x10^{1}$	46.75	-6.49
100	$1.51x10^{1}$	91.47	-8.53	$1.34x10^{1}$	91.50	-8.50	$2.19x10^{1}$	91.31	-8.69
150	$2.61x10^{1}$	156.56	4.37	$2.30x10^{1}$	156.45	4.30	$3.79x10^{1}$	156.71	4.47
Correlation coefficient	0.9957			0.9958			0.9955		
Slope $((\mu g\ dm^{-3})^{-1})$	$1.68x10^{-1}$			$1.49x10^{-1}$			$2.45x10^{-1}$		
Intercept	$-2.51x10^{-1}$			$-2.72x10^{-1}$			$-5.05x10^{-1}$		
Detection limit ($\mu g\ dm^{-3}$)	0.4738			0.2785			0.1721		
Standard error	6.7496			6.6405			6.9172		

Table 3.41: Calibration data for ^{102}Pd, ^{104}Pd and ^{105}Pd when ^{138}La is used as internal standard.

	^{102}Pd			^{104}Pd			^{105}Pd		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.84x10^{-1}$	2.75	-	$2.34x10^{-1}$	3.06	-	$8.33x10^{0}$	5.58	-
10	$4.04x10^{0}$	11.93	19.28	$3.31x10^{0}$	11.75	17.53	$9.71x10^{0}$	11.87	18.66
50	$1.88x10^{1}$	46.98	-6.04	$1.58x10^{1}$	47.11	-5.78	$1.70x10^{1}$	45.18	-9.64
100	$3.79x10^{1}$	92.39	-7.61	$3.16x10^{1}$	91.70	-8.30	$2.64x10^{1}$	87.68	-12.32
150	$6.46x10^{1}$	155.95	3.97	$5.45x10^{1}$	156.38	4.25	$4.22x10^{1}$	159.69	6.46
Correlation coefficient	0.9964			0.9959			0.9906		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$4.20x10^{-1}$			$3.54x10^{-1}$			$2.20x10^{-1}$		
Intercept	$-9.72x10^{-1}$			$-8.48x10^{-1}$			$7.10x10^{0}$		
Detection limit ($\mu g\ dm^{-3}$)	0.1731			0.2379			12.5505		
Standard error	6.1337			6.5650			9.9640		

Table 3.42: Calibration data for ^{106}Pd, ^{108}Pd and ^{110}Pd when ^{138}La is used as internal standard.

	^{106}Pd			^{108}Pd			^{110}Pd		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$1.48x10^{0}$	3.20	-	$2.49x10^{-1}$	3.27	-	$2.20x10^{-1}$	3.12	-
10	$3.71x10^{0}$	11.45	14.51	$2.46x10^{0}$	11.65	16.47	$1.26x10^{0}$	11.87	18.71
50	$1.33x10^{1}$	47.06	-5.88	$1.19x10^{1}$	47.43	-5.14	$5.34x10^{0}$	46.40	-7.19
100	$2.56x10^{1}$	92.22	-7.78	$2.33x10^{1}$	90.72	-9.28	$1.08x10^{1}$	92.60	-7.40
150	$4.28x10^{1}$	156.07	4.05	$4.07x10^{1}$	156.93	4.62	$1.83x10^{1}$	156.01	4.00
Correlation coefficient	0.9963			0.9952			0.9963		
Slope $((\mu g\ dm^{-3})^{-1})$	$2.70x10^{-1}$			$2.63x10^{-1}$			$1.18x10^{-1}$		
Intercept	$6.12x10^{-1}$			$-6.12x10^{-1}$			$-1.49x10^{-1}$		
Detection limit ($\mu g\ dm^{-3}$)	1.5938			0.3221			1.1068		
Standard error	6.2606			7.1359			6.2202		

Table 3.43: Calibration data for ^{192}Pt, ^{194}Pt and ^{195}Pt when ^{138}La is used as internal standard.

	^{192}Pt			^{194}Pt			^{195}Pt		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.64x10^{-1}$	5.46	-	$1.21x10^{-1}$	2.90	-	$1.44x10^{-1}$	3.07	-
10	$2.15x10^{-1}$	23.99	139.93	$9.65x10^{-1}$	12.85	28.52	$9.54x10^{-1}$	12.39	23.93
50	$2.22x10^{-1}$	26.60	-46.81	$3.78x10^{0}$	46.03	-7.94	$3.96x10^{0}$	47.02	-5.96
100	$4.01x10^{-1}$	91.25	-8.75	$7.61x10^{0}$	91.25	-8.75	$7.69x10^{0}$	90.06	-9.94
150	$5.98x10^{-1}$	162.70	8.47	$1.32x10^{1}$	156.97	4.64	$1.35x10^{1}$	157.46	4.97
Correlation coefficient	0.9696			0.9951			0.9944		
Slope $((\mu g\ dm^{-3})^{-1})$	$2.76x10^{-3}$			$8.48x10^{-2}$			$8.68x10^{-2}$		
Intercept	$1.49x10^{-1}$			$-1.25x10^{-1}$			$-1.22x10^{-1}$		
Detection limit ($\mu g\ dm^{-3}$)	24.0620			1.5929			1.1628		
Standard error	17.8035			7.2072			7.6676		

Table 3.44: Calibration data for ^{196}Pt, ^{198}Pt and ^{103}Rh when ^{138}La is used as internal standard.

	^{196}Pt			^{198}Pt			^{103}Rh		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.41x10^{-1}$	2.22	-	$1.50x10^{-1}$	2.13	-	$2.72x10^{-1}$	3.07	-
10	$8.05x10^{-1}$	12.69	26.89	$3.27x10^{-1}$	11.66	16.63	$1.04x10^{1}$	12.15	21.45
50	$3.05x10^{0}$	48.01	-3.97	$1.05x10^{0}$	50.54	1.09	$4.90x10^{1}$	46.68	-6.64
100	$5.69x10^{0}$	89.79	-10.21	$1.74x10^{0}$	87.87	-12.13	$9.90x10^{1}$	91.41	-8.59
150	$9.98x10^{0}$	157.29	4.86	$3.04x10^{0}$	157.79	5.20	$1.72x10^{2}$	156.69	4.46
Correlation coefficient	0.9946			0.9933			0.9955		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$6.34x10^{-2}$			$1.86x10^{-2}$			$1.12x10^{0}$		
Intercept	$-1.70x10^{-4}$			$1.11x10^{-1}$			$-3.16x10^{0}$		
Detection limit ($\mu g\ dm^{-3}$)	1.5956			4.6824			0.2153		
Standard error	7.5661			8.4189			6.8868		

Table 3.45: Calibration data for ^{96}Ru, ^{98}Ru and ^{99}Ru when ^{138}La is used as internal standard.

	^{96}Ru			^{98}Ru			^{99}Ru		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$2.31x10^{-1}$	2.06	-	$3.49x10^{-1}$	1.45	-	$1.84x10^{-1}$	2.44	-
10	$9.53x10^{-1}$	12.58	25.82	$6.40x10^{-1}$	13.81	38.10	$1.77x10^{0}$	12.34	23.41
50	$3.24x10^{0}$	45.98	-8.05	$1.36x10^{0}$	44.52	-10.95	$7.31x10^{0}$	46.98	-6.03
100	$6.58x10^{0}$	94.64	-5.36	$2.57x10^{0}$	95.93	-4.07	$1.45x10^{1}$	92.15	-7.85
150	$1.07x10^{1}$	154.74	3.16	$3.94x10^{0}$	154.29	2.86	$2.48x10^{1}$	156.08	4.05
Correlation coefficient	0.9975			0.9974			0.9963		
Slope $((\mu g\ dm^{-3})^{-1})$	$6.86x10^{-2}$			$2.35x10^{-2}$			$1.60x10^{-1}$		
Intercept	$9.01x10^{-2}$			$3.15x10^{-1}$			$-2.07x10^{-1}$		
Detection limit ($\mu g\ dm^{-3}$)	0.6157			6.7238			0.8186		
Standard error	5.0941			5.2013			6.2785		

Table 3.46: Calibration data for ^{100}Ru, ^{101}Ru and ^{102}Ru when ^{138}La is used as internal standard.

	^{100}Ru			^{101}Ru			^{102}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$3.24x10^{-1}$	2.44	-	$1.96x10^{-1}$	2.13	-	$2.01x10^{-1}$	2.71	-
10	$1.81x10^{0}$	11.79	17.92	$2.32x10^{0}$	11.90	19.04	$4.02x10^{0}$	11.95	19.54
50	$7.42x10^{0}$	47.06	-5.87	$1.02x10^{1}$	48.18	-3.64	$1.85x10^{1}$	47.08	-5.84
100	$1.48x10^{1}$	93.52	-6.48	$1.97x10^{1}$	91.91	-8.09	$3.72x10^{1}$	92.25	-7.75
150	$2.46x10^{1}$	155.18	3.45	$3.36x10^{1}$	155.87	3.91	$6.35x10^{1}$	156.01	4.01
Correlation coefficient	0.9973			0.9965			0.9964		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$1.59x10^{-1}$			$2.17x10^{-1}$			$4.13x10^{-1}$		
Intercept	$-6.42x10^{-2}$			$-2.67x10^{-1}$			$-9.17x10^{-1}$		
Detection limit ($\mu g\ dm^{-3}$)	1.2701			1.0335			0.2226		
Standard error	5.3568			6.0714			6.1948		

Table 3.47: Calibration data for ^{104}Ru when ^{138}La is used as internal standard.

	^{104}Ru		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$2.29x10^{-1}$	2.58	-
10	$3.40x10^{0}$	11.67	16.66
50	$1.57x10^{1}$	47.06	-5.87
100	$3.19x10^{1}$	93.49	-6.51
150	$5.35x10^{1}$	155.21	3.47
Correlation coefficient	0.9973		
Slope $((\mu g\ dm^{-3})^{-1})$	$3.49x10^{-1}$		
Intercept	$-6.69x10^{-1}$		
Detection limit ($\mu g\ dm^{-3}$)	0.5428		
Standard error	5.3898		

Table 3.48: Calibration data for Au and Ir when ^{139}La is used as internal standard.

	^{197}Au			^{191}Ir			^{193}Ir		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$3.30x10^{-4}$	0.47	-	$2.02x10^{-4}$	0.34	-	$2.11x10^{-4}$	0.21	-
10	$2.36x10^{-3}$	9.90	-1.03	$2.01x10^{-3}$	9.83	-1.71	$3.42x10^{-3}$	10.45	4.49
50	$1.09x10^{-2}$	49.65	-0.70	$9.66x10^{-3}$	49.93	-0.13	$1.56x10^{-2}$	49.37	-1.27
100	$2.17x10^{-2}$	99.59	-0.41	$1.91x10^{-2}$	99.58	-0.42	$3.13x10^{-2}$	99.37	-0.63
150	$3.26x10^{-2}$	150.40	0.27	$2.88x10^{-2}$	150.31	0.21	$4.73x10^{-2}$	150.60	0.40
Correlation coefficient	1.0000			1.0000			1.0000		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$2.15x10^{-4}$			$1.91x10^{-4}$			$3.13x10^{-4}$		
Intercept	$2.29x10^{-4}$			$1.36x10^{-4}$			$1.44x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	0.4799			0.2821			0.1744		
Standard error	0.4776			0.3745			0.6842		

Table 3.49: Calibration data for ^{102}Pd, ^{104}Pd and ^{105}Pd when ^{139}La is used as internal standard.

	^{102}Pd			^{104}Pd			^{105}Pd		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$2.39x10^{-4}$	0.25	-	$3.04x10^{-4}$	0.56	-	$1.08x10^{-2}$	1.48	-
10	$5.41x10^{-3}$	9.85	-1.50	$4.43x10^{-3}$	9.67	-3.29	$1.30x10^{-2}$	9.32	-6.75
50	$2.68x10^{-2}$	49.58	-0.85	$2.26x10^{-2}$	49.73	-0.53	$2.43x10^{-2}$	49.78	-0.45
100	$5.42x10^{-2}$	100.52	0.52	$4.53x10^{-2}$	99.77	-0.23	$3.78x10^{-2}$	97.89	-2.11
150	$8.07x10^{-2}$	149.80	-0.13	$6.81x10^{-2}$	150.27	0.18	$5.28x10^{-2}$	151.53	1.02
Correlation coefficient	1.0000			1.0000			0.9997		
Slope $((\mu g\ dm^{-3})^{-1})$	$5.38x10^{-4}$			$4.53x10^{-4}$			$2.80x10^{-4}$		
Intercept	$1.06x10^{-4}$			$4.87x10^{-5}$			$1.04x10^{-2}$		
Detection limit $(\mu g\ dm^{-3})$	0.1753			0.2410			12.7873		
Standard error	0.4380			0.4547			1.7771		

Table 3.50: Calibration data for ^{106}Pd, ^{108}Pd and ^{110}Pd when ^{139}La is used as internal standard.

	^{106}Pd			^{108}Pd			^{110}Pd		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.92x10^{-3}$	0.48	-	$3.23x10^{-4}$	0.77	-	$2.86x10^{-4}$	0.58	-
10	$4.96x10^{-3}$	9.29	-7.14	$3.28x10^{-3}$	9.56	-4.41	$1.68x10^{-3}$	9.79	-2.13
50	$1.90x10^{-2}$	49.95	-0.11	$1.70x10^{-2}$	50.11	0.21	$7.63x10^{-3}$	49.01	-1.98
100	$3.66x10^{-2}$	100.65	0.65	$3.33x10^{-2}$	98.71	-1.29	$1.55x10^{-2}$	100.84	0.84
150	$5.35x10^{-2}$	149.63	-0.25	$5.09x10^{-2}$	150.86	0.57	$2.29x10^{-2}$	149.79	-0.14
Correlation coefficient	1.0000			0.9999			0.9999		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$3.46x10^{-4}$			$3.37x10^{-4}$			$1.52x10^{-4}$		
Intercept	$1.75x10^{-3}$			$6.27x10^{-5}$			$1.98x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	1.6146			0.3263			1.1206		
Standard error	0.6607			1.0327			0.8390		

Table 3.51: Calibration data for ^{192}Pt, ^{194}Pt and ^{195}Pt when ^{139}La is used as internal standard.

	^{192}Pt			^{194}Pt			^{195}Pt		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	$2.13x10^{-4}$	0.58	-	$1.57x10^{-4}$	0.37	-	$1.87x10^{-4}$	0.52	-
10	$2.88x10^{-4}$	22.04	120.45	$1.29x10^{-3}$	10.82	8.21	$1.28x10^{-3}$	10.33	3.29
50	$3.17x10^{-4}$	30.44	-39.13	$5.39x10^{-3}$	48.61	-2.78	$5.65x10^{-3}$	49.72	-0.56
100	$5.74x10^{-4}$	103.66	3.66	$1.09x10^{-2}$	99.37	-0.63	$1.10x10^{-2}$	98.07	-1.93
150	$7.48x10^{-4}$	153.28	2.19	$1.65x10^{-2}$	150.83	0.55	$1.69x10^{-2}$	151.36	0.90
Correlation coefficient	0.9831			0.9999			0.9998		
Slope $((\mu g\ dm^{-3})^{-1})$	$3.51x10^{-6}$			$1.09x10^{-4}$			$1.11x10^{-4}$		
Intercept	$2.10x10^{-4}$			$1.17x10^{-4}$			$1.29x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	24.5744			1.6137			1.1785		
Standard error	13.3378			1.1304			1.4151		

Table 3.52: Calibration data for ^{196}Pt, ^{198}Pt and ^{103}Rh when ^{139}La is used as internal standard.

	^{196}Pt			^{198}Pt			^{103}Rh		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$1.82x10^{-4}$	-0.43	-	$1.95x10^{-4}$	-0.86	-	$3.52x10^{-4}$	0.61	-
10	$1.08x10^{-3}$	10.59	5.92	$4.38x10^{-4}$	9.39	-6.08	$1.39x10^{-2}$	10.09	0.95
50	$4.34x10^{-3}$	50.89	1.79	$1.50x10^{-3}$	54.07	8.15	$6.99x10^{-2}$	49.24	-1.52
100	$8.15x10^{-3}$	97.85	-2.15	$2.49x10^{-3}$	96.14	-3.86	$1.42x10^{-1}$	99.44	-0.56
150	$1.25x10^{-2}$	151.10	0.73	$3.80x10^{-3}$	151.26	0.84	$2.15x10^{-1}$	150.62	0.42
Correlation coefficient	0.9998			0.9989			0.9999		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$8.11x10^{-5}$			$2.37x10^{-5}$			$1.43x10^{-3}$		
Intercept	$2.17x10^{-4}$			$2.15x10^{-4}$			$-5.15x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	1.6177			4.7542			0.2180		
Standard error	1.5467			3.3730			0.7443		

Table 3.53: Calibration data for ^{96}Ru, ^{98}Ru and ^{99}Ru when ^{139}La is used as internal standard.

	^{96}Ru			^{98}Ru			^{99}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$3.00x10^{-4}$	-0.62	-	$4.53x10^{-4}$	-1.81	-	$2.39x10^{-4}$	-0.12	-
10	$1.28x10^{-3}$	10.48	4.81	$8.56x10^{-4}$	11.59	15.93	$2.36x10^{-3}$	10.26	2.63
50	$4.63x10^{-3}$	48.65	-2.71	$1.94x10^{-3}$	47.74	-4.51	$1.04x10^{-2}$	49.64	-0.71
100	$9.42x10^{-3}$	103.22	3.22	$3.68x10^{-3}$	105.48	5.48	$2.08x10^{-2}$	100.33	0.33
150	$1.34x10^{-2}$	148.27	-1.15	$4.93x10^{-3}$	146.99	-2.01	$3.09x10^{-2}$	149.88	-0.08
Correlation coefficient	0.9995			0.9984			1.0000		
Slope ($(\mu g\ dm^{-3})^{-1}$)	$8.79x10^{-5}$			$3.01x10^{-5}$			$2.05x10^{-4}$		
Intercept	$3.54x10^{-4}$			$5.07x10^{-4}$			$2.63x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	0.6231			6.8131			0.8290		
Standard error	2.2946			4.0773			0.3339		

Table 3.54: Calibration data for ^{100}Ru, ^{101}Ru and ^{102}Ru when ^{139}La is used as internal standard.

	^{100}Ru			^{101}Ru			^{102}Ru		
[Element] ($\mu g\ dm^{-3}$)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)	Intensity ratio	Calculated concentration ($\mu g\ dm^{-3}$)	% difference (certified value - calculated value)
0	$4.21x10^{-4}$	-0.16	-	$2.55x10^{-4}$	-0.46	-	$2.61x10^{-4}$	0.20	-
10	$2.42x10^{-3}$	9.67	-3.28	$3.10x10^{-3}$	9.78	-2.16	$5.38x10^{-3}$	9.87	-1.26
50	$1.06x10^{-2}$	49.76	-0.48	$1.46x10^{-2}$	50.97	1.93	$2.64x10^{-2}$	49.69	-0.61
100	$2.12x10^{-2}$	101.87	1.87	$2.82x10^{-2}$	100.05	0.05	$5.32x10^{-2}$	100.37	0.37
150	$3.08x10^{-2}$	148.85	-0.76	$4.20x10^{-2}$	149.66	-0.23	$7.94x10^{-2}$	149.86	-0.09
Correlation coefficient	0.9998			1.0000			1.0000		
Slope $((\mu g\ dm^{-3})^{-1})$	$2.04x10^{-4}$			$2.78x10^{-4}$			$5.29x10^{-4}$		
Intercept	$4.53x10^{-4}$			$3.82x10^{-4}$			$1.56x10^{-4}$		
Detection limit ($\mu g\ dm^{-3}$)	1.2856			1.0467			0.2254		
Standard error	1.2925			0.6609			0.3174		

Table 3.55: Calibration data for ^{104}Ru when ^{139}La is used as internal standard.

	^{104}Ru		
[Element] ($\mu g\ dm^{-3}$)	**Intensity ratio**	**Calculated concentration ($\mu g\ dm^{-3}$)**	**% difference (certified value - calculated value)**
0	2.97×10^{-4}	0.05	-
10	4.55×10^{-3}	9.56	-4.35
50	2.25×10^{-2}	49.67	-0.66
100	4.57×10^{-2}	101.73	1.73
150	6.68×10^{-2}	148.99	-0.67
Correlation coefficient	0.9999		
Slope $((\mu g\ dm^{-3})^{-1})$	4.47×10^{-4}		
Intercept	2.74×10^{-4}		
Detection limit $(\mu g\ dm^{-3})$	0.5493		
Standard error	1.1972		