

## Blank silica chips

AMIS0052

### Certificate of Analysis

#### Indicated values

#### Common economic elements

	Ag ppm	Au ppb	Co ppm	Cu ppm	Ni ppm	Pb ppm	Pd ppb	Pt ppb	U ppm	Zn ppm
mean	-1	1	-5	7	4	3	-5	-5	1	4
std dev		0.4		2	2	2			0.1	2

#### Major elements

	Si %	Al %	Ca %	Fe %	K %	Mg %	Mn ppm	Na %	Ti %
mean	45	1	0.02	1	0.3	0.02	122	0.02	0.04
std dev	1	0.1	0.02	0.2	0.03	0.01	51	0.004	0.01

#### Minor elements

	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Cd ppm	Ce ppm	Cr ppm	Cs ppm	Dy ppm	Er ppm	Eu ppm	Ga ppm	Gd ppm	Ge ppm	Hf ppm
mean	-1	26	56	0.2	-0.1	-1	8	-50	0.3	0.5	0.3	0.1	2	0.5	-20	2
std dev		9.1	10	0.02			4		0.04	0.05	0.03	0.02	0.2	0.1		0.2

	Ho ppm	In ppm	La ppm	Li ppm	Lu ppm	Mo ppm	Nb ppm	Nd ppm	P ppm	Pr ppm	Rb ppm	Re ppm	S ppm	Sb ppm	Sc ppm	Se ppm
mean	0.11	-0.02	4	14	0.1	-1	2	3	-50	1	13	-0.1	-50	-0.2	2	-5
std dev	0.01		1	1	0.01		0.3	0.5		0.1	2				0.6	

	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Te ppm	Th ppm	Tl ppm	Tm ppm	V ppm	W ppm	Y ppm	Yb ppm	Zr ppm
mean	1	-1	4	-0.1	0.1	-0.2	1	-0.1	0.05	10	1	3	0.3	106
std dev	0.1		1		0.01		0.3		0.01	5	0.3	0.2	0.03	17

**Intended use:** AMIS0052 is a coarse blank material suitable to test assay laboratory sample preparation and quality control procedures. The material should be routinely inserted within batches of samples to test for contamination or sample mixing in the sample preparation or assay process.

**Origin of material:** This standard was made from silica chips.

**Appearance:** The material comprises white chips of crushed quartzite.

**Method of preparation:** The material was crushed to approximately 13mm and split into 25kg lots. Three samples were taken from each lot, combined, mixed, re-crushed, split into 28 samples and milled. These samples were sent for homogeneity testing to a commercial laboratory for third party analysis. Statistical analysis for the test results were then carried out.

**Methods of analysis:**

The 30 QC samples were analysed by an independent commercial laboratory. Three methods were used.

1. The samples were analysed by firing a 40 gm (approx) portion of the sample. Au, Pt and Pd were determined by ICP OES.

2. The samples were digested and refluxed with a mixture of Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids. Cu, Zn, Co, Ni, Mn, P, Sc, V, Al, Ca, Na, K, S were then determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry. As, Ag, Ba, Be, Bi, Cd, Ga, Li, Mo, Pb, Sb, Sn, Sr, W, Ta, Y, Hf, Nb, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Th, U, Se, Rb, In, Te, Cs, Re, Tl were determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.

3. The samples were fused with Sodium Peroxide and subsequently the melt was dissolved in dilute Hydrochloric acid for analysis. B, Cr, Si, Fe, Mg, Ti were determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry. Ge, Zr were determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.

**Certification:** This material has been carefully prepared and tested but has not been submitted to a full inter-laboratory round robin.

**Availability:** This product has been supplied in sealed buckets containing 25kg of material. Additional material is available sealed in 1.5kg tubs.

**Legal notice:** This certificate and the blank chip material described in it have been prepared with due care and attention. However AMIS, Set Point Technology (Pty) Ltd and Mike McWha; accept no liability for any decisions or actions taken following the use of the material.

3 January 2008

**Certifying officers:**



**African Mineral Standards:** \_\_\_\_\_

**Mike McWha**  
**BSc (Hons), FGSSA, MSAIMM, Pr.Sci.Nat**