The Met-Solve Bulk Gravity Assay (MBGA) is an industry standard service that combines the metallurgical experience of Met-Solve Laboratories with the assay capabilities of Met-Solve Analytical.

Sampling and analysis during exploration is a key component to the success of all potential mining companies. However, for some deposits standard assay protocols have a tendency to underestimate grades.

Gold in particular can be subject to the “nugget effect”, in which the gold is heterogeneously distributed in the form of discrete particles.

The MBGA uses centrifugal gravity concentration to collect free gold within a sample that is 160 times larger than a standard assay. This produces a single concentrate that can be assayed to extinction.

Combined with multiple assays of the tails, this quick testing method allows for a calculated head grade that more accurately represents the true deposit grade.

By standardizing the metallurgical process, Met-Solve can process a large number of samples while offering attractive pricing that is a fraction of the cost of standard metallurgical testing programs.

Nugget Effect
The “Nugget Effect” is a well-documented mineralogical phenomenon that primarily affects ores containing gold.

Typically, gold particles greater than 100µm are considered coarse gold and are subject to the nugget effect.

When 50% or more of the gold within an ore is coarse, or when the gold particles are significantly larger than 100 µm, standard sampling protocols are no longer appropriate.

Once it has been established that an ore is susceptible to the nugget effect, there are a number of procedures that can improve the accuracy of grade determination calculations.

One of the recommendations for reducing the nugget effect is the use of large sample sizes, which can be difficult due to the limitations of assays. The MBGA is an efficient and cost-effective method of increasing sample size during exploration by 160 times or more.
Nugget Effect illustrated: Heterogeneous distribution of coarse free gold within a bulk sample

Standard Assay Method

- Overestimated Grade
- Underestimated Grade

MBGA

- Concentrate of Free Gold

MBGA Test Details

- 10 samples required for bulk discount
- 5 kg per sample minimum
- 20# mesh/850 μm particle size required
- 2 passes of gravity concentration
- Fire assays on cons and tails

Met-Solve Laboratories Inc.

101B - 9850 - 201 Street, Langley, British Columbia, Canada  V1M 4A3

P: 604.888.7604 F: 604.888.5521 W: www.met-solvelabs.com  E: info@met-solve.com