CARBON ACTIVITY ANALYSER (CAA)

MINTEK

Specialists in mineral and metallurgical technology

During the gold extraction process, activated carbon is used to remove dissolved gold from the solution.

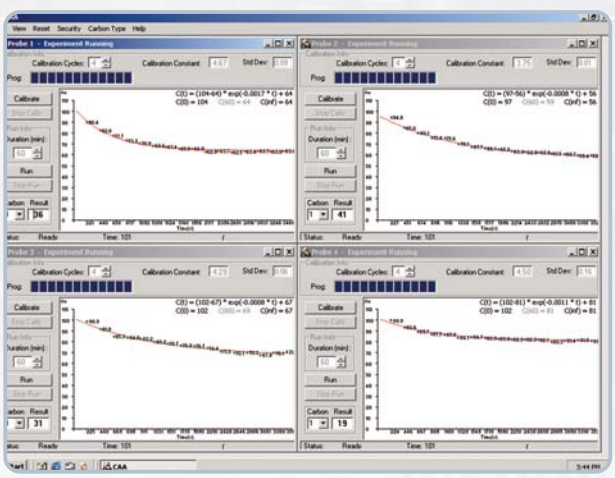
Carbon activity must be monitored continuously to minimize dissolved gold losses, increase recovery and ensure optimum plant operation.

The Mintek **Carbon Activity Analyser (CAA)** facilitates the rapid and reliable control of carbon activity.

The CAA is a computer based, automated instrument that provides independent, simultaneous measurement of the activity of up to four samples of carbon.

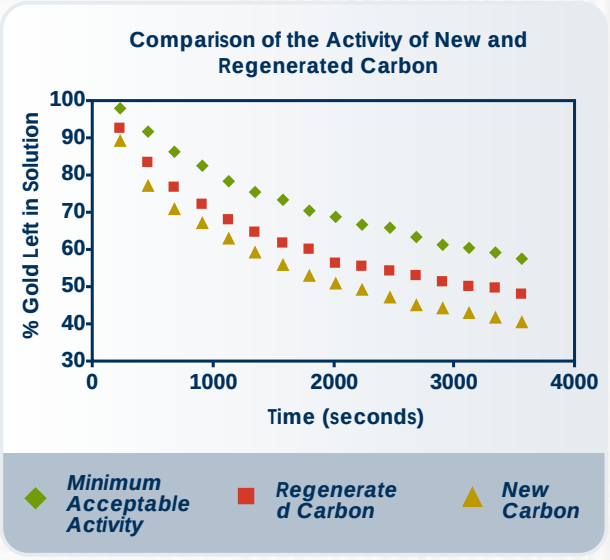
Set masses of carbon are placed in contact with a standard gold solution for approximately an hour, and the concentration of gold in the solution is monitored.

The gold concentration is measured using the electrochemical technique of potentiometric stripping analysis. The resulting concentrations are plotted against time to provide an indication of carbon activity.



RESULTS

Fresh carbon will typically adsorb gold quickly and the curve will dip sharply, while poor carbon will adsorb more slowly, resulting in a flatter curve. The plant personnel can decide on the threshold quality that would indicate carbon replacement.



FEATURES AND BENEFITS

- Simple, rapid and reliable determination of carbon activity.
- Independent, simultaneous measurements of four samples.
- Dynamic comparison of sample adsorption vs defined “threshold” curves.
- Sample measurement time of one hour.
- Human error eliminated.
- Significant time and cost reduction.
- No need for a highly skilled operator. Operator training is provided in the software supplied with the instrument.
- Minimum maintenance.

COMPONENTS OF THE CAA

- PC, MS Win 2000 OS (optionally supplied by Mintek).
- Data acquisition card.
- Quad channel interface module.
- Four specially designed gold/platinum probes.
- Four 600ml pyrex beakers (with brackets for holding the probes.)
- A multi-position, variable-speed, tabletop stirrer and magnetic stirrer bars.
- Software CD.

Contact Details:

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