

MetaFLO Technologies Inc.

MF007 - Precious Metals Process

The MF007 precious metals process uses a combination of advanced organic polymers that can dramatically enhance the mineral extraction process.

This technology offers the mining industry process improvements in flotation, centrifuge, amalgamation and cyanidation resulting in lower extraction costs, lower disposal costs and higher precious metal purity. The greatest benefit is in the cyanidation process, however additional benefits can also be realized in all key extraction processes, including flotation, centrifuge and amalgamation.

Cyanidation Process

The polymers accelerate the cyanidation process and make it more environmentally friendly. Our unique advanced polymer dramatically reduces the time required for cyanidation from an average of 72 hours to approximately 4 hours. In addition to this reduction, there is also a resulting increase in recovery between 15-20%. By oxidizing the metals and by exposing the particles to be reacted, this makes the process more selective resulting in less contaminants in the water. At the end of the process the water will be clean and at non-toxic levels.

- **Time of reaction can be reduced from 72 hours to a total of 4 hours.**
- **Recovery efficiency increased by 15-20%**
- **Cleaner process, tailings with non-toxic levels.**
- **Higher levels of recovery, tailings have close to 0% of wanted materials.**
- **Bio-Compatible solution for the process.**
- **Gold and precious metals with higher purity.**

Amalgamation Process

The polymers enhance the amalgamation process by reducing the need for extra mercury to fully recover the gold and thus making the particles more visible to the reaction and easier to recover.

- **Cleaner process, tailings with low traces of mercury in levels that can be discharged.**
- **This blend, when smelted has a gas that is mixed with the polymers, and that makes it easier for gas washing systems to work without discharging toxic emissions to atmosphere.**
- **Gold and precious metals are extracted with higher purity.**
- **Potential decreases in mercury usage by 10%.**

Centrifuge Process

The polymers can help the centrifuge process by making the high weight particles loosen from the structures and be separated more easily resulting in:

- **Cleaner concentrate with less weight and higher value**
- **Possibility of going straight to smelting without the need of amalgamation process.**
- **Increase in slurry viscosity allows for more a more efficient process.**
- **Potential of making your centrifuge process up to 20% more efficient.**

Flotation Process

At MetaFLO, we appreciate that the flotation process can be complex and highly proprietary. The polymers can help the flotation process in 3 different ways depending on the flotation method being used:

- **Increasing the efficacy of the collector by balancing the charges in the solution resulting in a cleaner concentrate of a lower weight and higher value.**
- **Increases in efficiency can be easily proven in your own labs**



A SOLID SOLUTION

Liquid and Semi-Solid Solidification Reagents & Application Methodologies

- Increasing the opportunity for reaction for target particles which reduces the residence time.
- Increases the potential carrying weight in the bubbles, by changing the viscosity and surface tension which minimizes loss reduction in tailings which means higher recovery values.
- Potential for decreasing the residence time in flotation by 20%

