



## SOLUTIONS FOR MINING

As LapisChem, our solutions for mining offers a diverse range of chemicals for mining industry in order to improve the recovery of valuable resources.

As a leading provider in the mining industry, we specialize in producing sulphate minerals such as high quality copper sulfate, zinc sulfate, cobalt sulfate and providing many mining chemicals such as flotation collectors, frothers, depressants etc.

Due to characteristics of mine ore, different type of chemicals are required in order to extract and recover valuable metals. As LapisChem we provide wide range of chemicals for froth flotation process and focus on contributing sustainable mining operations through increasing operational efficiency.

## Froth Flotation

Flotation process in mining depends on factors such as surface colloid, surface charge on the minerals, reagent chemistry like hydrocarbon chain length of the collector, polar functional group of the collector, solution chemistry of the collector, grade, mineralogy etc.

### *Activators & Depressants*

Activators and Depressants are a group of chemicals that react with the minerals to prevent them from floating with the collector. Depressants represses certain minerals and promote the selective flotation of desired minerals. As LapisChem, we are a leading producer of high purity sulphate minerals along with being a leading provider of other activators and depressants.



Zinc Sulphate Heptahydrate

Zinc Sulphate Monohydrate

Copper Sulphate Pentahydrate

Cobalt Sulphate Heptahydrate

Iron Sulphate Heptahydrate

Iron Sulphate Monohydrate


Sodium Sulphite and Metabisulfite

Sodium Silicate

Carboxy Methyl Cellulose (CMC)

Dextrin

## Collectors



Collector reagent is used to gather the desired minerals which attaches itself to an air bubble while it is also attached to the mineral. As the air bubble rises to the surface of the slurry, it will carry the desired minerals away from other minerals.

As LapisChem we provide wide range of xanthate compounds used as collector in mining processes.

Potassium Amyl Xanthate (PAX) 90%

Sodium Amyl Xanthate (SAX) %85

Potassium Ethyl Xanthate (PEX) 90%

Sodium Ethyl Xanthate (SEX) 90%

Sodium Isobutyl Xanthate (SIBX) >90%

Sodium Izopropyl Xanthate (SIPX) > % 90

Sodyum N-Buthyl Xanthate SNBX% 90

## Frothers

In order to carry precious minerals to the surface of the slurry, there has to be sufficient amount of froth in the slurry, and the bubble structure has to be stable. Frothers are the surfactants that generate froth.

As LapisChem we provide frothers, particularly MIBC for mining processes.



## pH Regulators

The pH of the slurry in the flotation process effects the performance of other reagents. Thus in order to maintain efficient mineral processing, the pH must be modified with acid or base depending on the characteristic of minerals and other selected reagents.

As LapisChem we provide extensive range of acid and base products as pH regulator.

Sulphamic Acid 99.5%

Soda Ash Light 99%

Soda Ash Dense 99%

Sulphuric Acid 98%

Hydrochloric Acid 32%

Phosphoric Acid %85

Caustic Soda/Sodium Hydroxide 32%

Caustic Soda/Sodium Hydroxide 99% (Flakes)

## Modifiers

Modifiers are the reagents that are used to change the characteristics of a mineral so that the interaction between mineral and collector may take place. They effect performance through providing the interface that both collector and mineral may relate to.

Sodium Silicate

Guar Gum

Dextrin

Starch Derivatives



## Focus of LapisChem in Mining Business

- ✓ Boosting productivity
- ✓ Increasing metal recovery
- ✓ Increasing concentrate grade
- ✓ Decreasing reagent consumption
- ✓ Cost-effective, economic solutions
- ✓ Delivering operational and financial benefits to mining facilities through our extensive chemical expertise
- ✓ Contributing sustainable mining through our extensive product range

Correct product application in froth flotation process, increases metal recovery and productivity whilst decreasing reagent consumption. Thus the agent selection in froth flotation process is vital in order to maintain sustainable mining operations.

As LapisChem, we focus on increasing valuable metal recovery and productivity in mining industry through our wide product range and contributing to sustainable mining with cost effective solutions.

