



华金环保型浸金剂浓度检测方法

**Sinogold Environmentally Friendly Gold- Leaching Reagent
Concentration Test Method**

Shandong Sino-Gold Mining and Metallurgy Technology Co.,LTD

一、检测所需器皿与试剂 Instruments and reagent required by the analytical test

- 1、50ml 锥形瓶 1 个 1 piece of 50ml conical flask
- 2、1000ml 棕色容量瓶 1 个, 100ml 棕色容量瓶 1 个
1 pcs 1000ml brown flask, 1pcs 100ml brown volumetric flask
- 3、10ml 滴定管 1 支 1pcs 10ml burette
- 4、10ml 移液管 1 支 1pcs 10ml pipette
- 5、胶头滴管 1 支 1 rubber head dropper
- 6、络合剂 A (配制方法: 把一整瓶络合剂加蒸馏水定容于 1000 毫升.注意遮光);
Complexing Agent A (preparation method: put a bottle of indicate to 1000ml by adding distilled water. Pay attention to shade)
- 7、指示剂 B (配制方法: 把一整瓶指示剂加到 100 毫升丙酮(纯度在 98%以上)中. 注意遮光)。
Indicator B (preparation method: add a bottle of indicator to 100ml acetone (with the purity above 98%). Pay attention to shade)

二、检测方法 Test Procedure:

- 1、用 10ml 移液管移取待检测溶液 (LJ) 10ml 至锥形瓶中;
Take 10ml of the solution to be tested(LJ)to the conical flask by 10ml pipette.
- 2、用胶头滴管取指示剂 B 2-4 滴, 加入锥形瓶中;
Take 2 to 4 drops of the indicator B with a rubber head dropper to add into the conical flask.
- 3、将络合剂 A 装入到 10 ml 滴定管中, 并调整液面至 0 刻度, 注意排出滴定管滴嘴处的空气;
Add the complexing agent A into the 10ml burette and adjust the level to 0 scale, pay attention to discharge the air in the nozzle.
- 4、转动滴定管底部旋钮, 将络合剂缓慢滴入锥形瓶中, 边滴定边轻轻摇动锥形瓶, 观察颜色变化; 当锥形瓶中液体开始由黄色变红色时停止滴加, 摇动锥形瓶, 若红色消失, 则应继续缓慢滴加, 直至红色稳定时, 停止滴定, 读出滴定管上液面刻度, 即所耗络合剂的毫升数。

Rotate the burette bottom knob to slowly drop the complexing agent into the conical flask while gently shake the flask to observe the change of color; when the flask liquid starts to turn into red from yellow, stop dropping and shake the flask; if the red disappears, continue to add slowly until the red becomes stable and stop dropping; read the surface scale on the burette, namely, the milliliter of the complexing agent.

- 5、所消耗的络合剂的毫升数除以 2.0 即为绿金环保型选银剂的浓度值。比如消耗络合剂 2.0 毫升，则绿金环保型选金剂的浓度即为千分之一。

You can get Lvjin gold dressing agent concentration by the consumes milliliters of complexing agent dividing 2. for example, if 2ml complexing agent is consumed, the concentration of Lvjin gold selection agent is 1‰.

Sinogold Leaching Reagent Instructions

绿金药剂使用方法

本方法适用于利用堆淋、槽浸及池浸等工艺从各种氧化金矿、焙烧或细磨金精矿、含金尾矿等矿石中回收金。绿金药剂的使用方法与氰化钠的使用方法基本一致，建议矿山企业在生产前进行浸出试验，以确定其最佳使用条件，达到效益最大化。

This method is suitable for recovering gold by using heap leaching, tank leaching and pond leaching from various oxidized gold ore, roasted or fine grinding gold concentrate and tailings which have gold. The usage of the product is basically the same as that of sodium cyanide. It is recommended that mining companies conduct leaching tests before production to determine its best use conditions and maximize benefits.

1. 使用步骤

- (1) 首先用石灰或烧碱对矿堆或矿浆调碱度，将 pH 值调到 10~11。
- (2) 堆浸或池浸时，根据试验确定的最佳浸出浓度，配制一定浓度的提金剂溶液进行喷淋或浸泡。
- (3) 搅拌浸出时，按照试验确定的最佳矿浆浓度、浸金剂浓度、浸出时间等条件，进行浸出。
- (4) 浸出过程中，定期测定浸金剂浓度，当浓度降低时，及时补加浸金剂。

(5) 因矿石的成分及酸碱度不同, 应根据实际矿石量和该矿样实验中得出最佳药剂浓度配药, 按比例投放浸金剂。浸金剂浓度可按本公司提供的方法检测。

1. Steps of application

The first step is to use lime or caustic soda to adjust alkalinity of ore piles or slurry and adjust the pH value to 10-11.

According to the optimal leaching concentration confirmed by the test, prepare a certain concentration of gold leaching reagent solution for spraying or soaking in heap leaching or pond leaching.

During agitation leaching, according to the best slurry concentration, gold leaching reagent concentration, leaching time and other conditions to leach by the test.

During the process of leaching, regularly test the concentration of gold leaching reagent, adding gold leaching reagent in time when the concentration decreases.

The concentration of gold leaching reagent can be tested according to the method provided by our company.

2. 配制方法

(1) 堆淋工艺: 用清水配制成质量浓度 0.03-0.1% 的溶液进行喷淋。

(2) 搅拌浸出工艺: 可以配置成 10%-15% 的溶液添加, 也可直接以固体形式添加到搅拌槽内, 浸出矿浆中的药剂浓度一般范围控制在 0.03-0.1%。

2. Methods of preparation

Heap leaching process: using clean water to prepare solution of 0.03-0.1% concentration to spray.

Agitation leaching: preparing 10%-15% solution to leach and solid gold leaching reagent can be directly added into the agitating tank. The leaching slurry reagent concentration is normally between 0.03-0.1%

3. 加药量的计算方法

加药量 = (起始浓度值 - 贫液浓度值) × 投药池水量

举例: 假设绿金药剂起始浓度值是 0.8% (按水量计), 贫液药剂浓度值是 0.3‰, 贫液池 1000 立方水,

则绿金补药量为: $(0.8-0.3) \times 1000 = 500$ 公斤。

3. Calculation method of gold leaching reagent dosage:

Dosage = (starting concentration - barren liquor concentration) * water volume

Example: suppose the starting concentration is 0.8‰, barren liquor concentration is 0.3‰, barren liquor pond with 1000CBM of water, the gold leaching reagent using dosage $(0.8-0.3) * 1000 = 500\text{KG}$

4. 注意事项

(1) 本药剂为粉状物, 使用过程中注意防尘, 严禁吸入和皮肤接触。一旦吸入要转移到通风处, 吸入新鲜空气, 严重者吸氧, 就医。皮肤接触者要用大量水冲洗, 严重者用生理盐水冲洗, 就医。

(2) 常见 2g/t 以下的金矿石, 绿金药剂浓度一般保持在 0.03-0.1%, 根据不同的矿石品位及有害组分适当调整。药剂用量一般在 100-1500 克/吨矿的范围内。

4. Cautions:

The product is in powder form. Please take care to prevent dust during use. Inhalation and skin contact are strictly prohibited. Moving to a ventilated place once inhaled and breathing in fresh air. Go to the doctor when get serious. Skin contacts should be rinsed with plenty of water and seek medical attention to rinse with saline solution.

For the usual gold ore grade below 2g/t, the reagent concentration normally keeps between 0.03-0.1% and adjust according to the gold ore grade and harmful components. The using dosage of this reagent is normally between 100-1500 g/ton.