Cu Ni Co Extractants

We focus on R&D metal extraction reagents, our major products as below:

1. P204 (D2EHPA or HDEHP) extractant. This is used for first step to remove impurity for laterite nickel ore.
2. DY319 high efficiency nickel cobalt co-extraction extractant for battery recycling, can take out nickel and cobalt together from Lithium battery electrolyte.
3. DY272 Nickel cobalt separation extractant, it can take cobalt out from nickel cobalt solution, then leave pure nickel.
4. DY984N/DY973N/DY902/DY5640 copper solvent extraction reagent.
5. P507 non-ferrous metal extractant for copper, zinc, cobalt-nickel, cadmium, gold-silver, platinum group metals, rare earths and so on.
6. DY377 efficient nickel and diamond separation extractant.
7. DY366 Scandium extractant.
8. DY316 Lithium extractant.

Our R & D team always follow the market needs, not only developed nickel extractants in laterite Nickel ore, Rare earth extractants, Lithium extractants, Vanadium extractants, Beryllium extractants, Rare precious metals (Platinum Iridium Osmium Ruthenium, Palladium and Rhodium) extractants, but also work on Nuclear spent fuel extractants and related extractants in the field of waste battery recycling, always keep on the forefront of industry development.

Our Copper Solvent Extraction Reagent
laboratory test result

http://www.metalleaching.com Email: jeven@metalleaching.com
Mob: +86-16621111278
Add: Building C, No. 888, Huanhu west 2nd road, Lingang of China (Shanghai) Pilot Free Trade Zone

Specification and Performances:

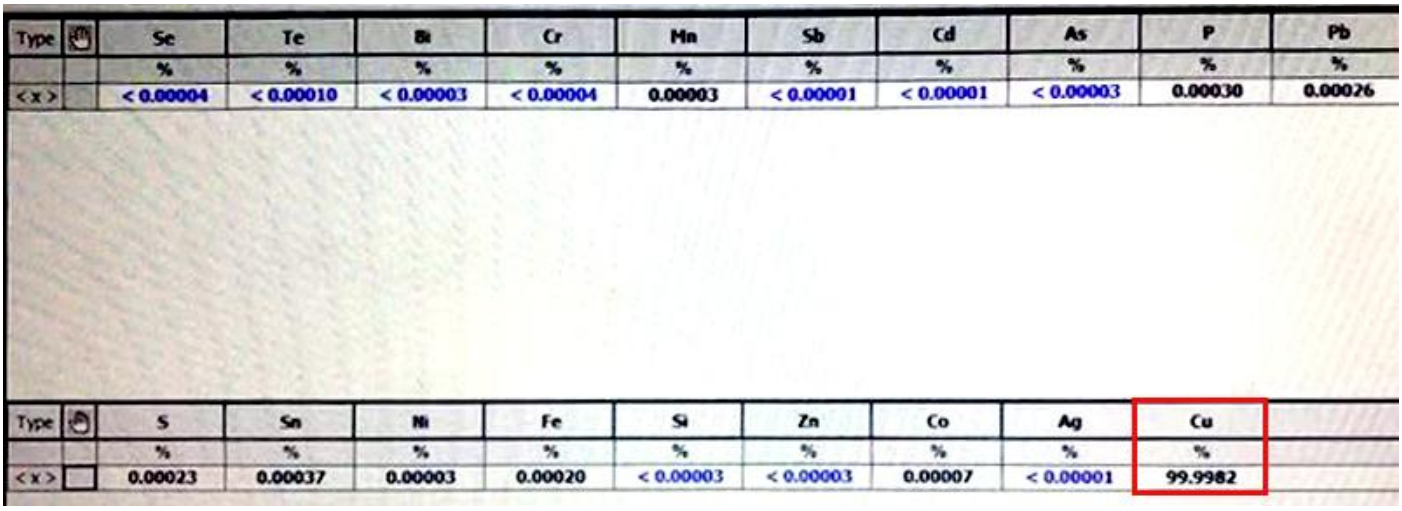
Item	DY88	DY988N	DY973N	DY902
Appearance	Brown oil liquid	Brown oil liquid	Brown oil liquid	Amber oil liquid
Density (25°C)	0.91-0.93	0.91-0.93	0.91-0.93	0.95-0.97
Flash temperature	≥62°C (PMCC)	≥62°C (PMCC)	≥62°C (PMCC)	≥62°C (PMCC)
Solubility of copper-carried organic (25°C)	≥30 g/L Cu	≥30 g/L Cu	≥30 g/L Cu	≥30 g/L Cu
Copper saturation capacity 10% (V/V)	4.8-5.1 g/L Cu	5.1-5.4 g/L Cu	5.4-5.7 g/L Cu	5.6-6.2 g/L Cu
Extraction kinetics	≥90% (60s)	≥95% (30s)	≥95% (30s)	≥95% (30s)
Extraction isothermal point (Organic)	≥3.8 g/L Cu	≥4.4 g/L Cu	≥4.7 g/L Cu	≥4.7 g/L Cu
Extraction isothermal point (Aqueous)	≤2.2 g/L Cu	≤1.6 g/L Cu	≤1.3 g/L Cu	≤1.3 g/L Cu
Phase Stripping time of extraction	≤70s	≤70s	≤70s	≤60s
Stripping kinetics	≥96% (30s)	≥95% (30s)	≥95% (30s)	≥95% (15s)
Stripping isothermal point (Organic)	≤0.6 g/L Cu	≤1.7 g/L Cu	≤2.0 g/L Cu	≤2.3 g/L Cu
Stripping isothermal point (Aqueous)	≥33.2 g/L Cu	≥32.7 g/L Cu	≥32.7 g/L Cu	≥32.4 g/L Cu
Stripping Phase time	≤80s	≤80s	≤80s	≤60s
Copper Net Transfer	3.2 g/L Cu	2.7 g/L Cu	2.7 g/L Cu	2.4 g/L Cu
Cu/Fe selectivity	≥2000	≥2000	≥2300	≥2500

Compound copper extraction reagent of Ketoxime and Aldoxime can be used alone or mixed with LIX984N, LIX973N, M5640, M5774, CP-150 and N902 in any ratio.

You can be free to add our reagent to your reagent in any ratio.

In practice, to produce one ton cathode copper, the consumption of Aldoxime will be more than 10kg, but Compound Aldoxime & Ketoxime (DY988N) will be less than 3kg. We have copper leaching plant in Zambia, the consumption of DY988N is 2 kg to produce one ton copper cathode. The purity of copper cathode can be nearly 99.999%.

http://www.metalleaching.com Email: jeven@metalleaching.com
Mob: +86-16621111278
Add: Building C, No. 888, Huanhu west 2nd road, Lingang of China (Shanghai) Pilot Free Trade Zone



Type	Se	Te	Bi	Cr	Mn	Sb	Cd	As	P	Pb
	%	%	%	%	%	%	%	%	%	%
<x>	< 0.00004	< 0.00010	< 0.00003	< 0.00004	0.00003	< 0.00001	< 0.00001	< 0.00003	0.00030	0.00026

Type	S	Sn	Ni	Fe	Si	Zn	Co	Ag	Cu
	%	%	%	%	%	%	%	%	%
<x>	0.00023	0.00037	0.00003	0.00020	< 0.00003	< 0.00003	0.00007	< 0.00001	99.9982

Laboratory test process:

a. Dilute copper extraction reagent: Base the Cu^{+} content of PLS (Lixivium liquid), add suitable No.260 solvent oil to dilute the organic. Such as the content of copper is 5 g/L, if we use DZ988N, the copper net transfer is 2.7 g/L, 0.27 g/100ml, 5/0.27=18.5, so the organic should be dilute to 19%. (Laboratory tests usually use 100 ml).

b. Pour the prepared organic phase into PLS: according to the volume rate of 1:1, and fully mix it over 3 minutes, then record the time to stand the phase till it is separated, you will know the phase separation time. Then pour out the inorganic solution.

c. Pour 180g/L H_2SO_4 into the left organic phase at a rate of 2:1-4:1 (V:V), and mix it for 3 minutes, then record the back extraction time, we will get pure $CuSO_4$. The reverse extracted organic phase can be used again.

If the calculated concentration is more than 20%, please change the phase ratio of organic phase to aqueous phase=2:1.

Please click here to view the operation video: https://www.youtube.com/watch?v=-mQ8iWH1LUo

How to make sure our reagent is workable in your plant:

Do above laboratory separately to compare the extraction ability, phase separation time and situation with your using reagent; Take your using organic phase, mix with our organic (V/V, 1:1), then do above laboratory test to check the extraction ability, phase separation situation, and confirm whether it has untoward effect. If above tests are all normal, it means that both reagents can be mixed to use together.

Please refer these processes to do others laboratory test.

http://www.metalleaching.com Email: jeven@metalleaching.com
Mob: +86-16621111278
Add: Building C, No. 888, Huanhu west 2nd road, Lingang of China (Shanghai) Pilot Free Trade Zone

上海启朗实业有限公司

SHANGHAI QILANG INDUSTRIAL CO., LTD

http://www.metalleaching.com Email: jeven@metalleaching.com
Mob: +86-16621111278
Add: Building C, No. 888, Huanhu west 2nd road, Lingang of China (Shanghai) Pilot Free Trade Zone