

EMS Analytical Labs

Price Sheet updated 06/20/19

Plating Baths- (normal turn-around is between 24 and 48 hours)

Copper (one or two-additives)	\$75.00		
Copper (three-additives)	\$90.00		
Tin sulfate bath	\$60.00	includes analysis of additives by CVS or other methods	
Tin or Tin/lead w/one organic	\$60.00	(msa bath)	
Tin or Tin/lead w/two organics	\$70.00	(msa bath)	
Tin or Tin/lead w/three organics	\$90.00	(msa bath)	
Nickel	\$55.00		
Wood's Nickel Strike	\$30.00		
Cyanide gold	\$50.00	add \$15 for buffer or auxiliary salts	add \$25 for ICP metal
Sulfite gold	\$60.00		
Electroless nickel	\$40.00		
Immersion Gold	\$35.00	add \$15 for nickel and/or copper by AA.	
Palladium catalysts	\$45.00		
Permanganate	\$35.00	by UV analysis	\$50.00 by titration
Glass etch solutions	\$50.00		
Silver Strike	\$40.00		add \$25 for carbonates
Silver Plate	\$50.00		add \$25 for carbonates
Immersion Silver	\$50.00		
Total organic carbon (TOC)	\$55.00		add \$25 if formaldehyde titration is needed
Metallic impurities by AA	\$20.00	per element	
Impurities w/other analysis by AA	\$10.00	per element either in volume or combined with other analysis on the same solution	
Metallic impurities by ICP	\$40.00	per element	
ICP survey	\$150.00	(semi-quantitative analysis of 35 elements including sulfur and phosphorus)	
TotalScan	\$200.00	ICP survey with TOC analysis	
Acid Copper Package	\$225.00	Copper analysis with TOC, trace metals, tensile strength, elongation, and purity	
Brass	\$60.00	(no Hull cell analysis)	add \$25 for carbonates
Bronze	\$60.00	(no Hull cell analysis)	add \$25 for carbonates
Cadmium	\$60.00	(no Hull cell analysis)	add \$25 for carbonates
Copper cyanide	\$40.00		add \$25 for carbonates add \$15 for Rochelle salts
Pyrophosphate Copper	\$50.00		add \$25 for ammonia
Chrome	\$60.00		add \$25 for fluoride
Trivalent chrome	\$50.00		
Zinc-Nickel	\$60.00		add \$25 for carbonates
Solder/Tin purity & composition	\$125.00	includes composition and trace contaminants	
Gravimetric gold assay	\$90.00		
Total Cyanide by distillation	\$75.00		add \$50 to include amenable cyanide
pH only	\$5.00		
Specific gravity (Baume) only	\$10.00		
Chloride by ISE	\$15.00		
Basic titration	\$15.00		
UV analysis (basic, no filtering)	\$25.00		
Hull cell analysis (basic)	\$25.00		

Additive Analysis

CVS on copper bath	\$30.00	per component.
CVS on tin or solder bath	\$35.00	
CVS on Multibond	\$25.00	
Methylene Chloride Extraction	\$30.00	

EMS Analytical Labs

Price Sheet updated 06/20/19

Physical Tests

Tensile & Elongation of Copper	\$75.00	DLA certified, turnaround is 7 working days	
Expedited T&E		add \$50 for a two-day turnaround	
Copper purity	\$50.00	DLA certified	
Peel strength	\$60.00	DLA certified	
Gold Hardness & Purity	\$130.00	add \$40 if we plate it for you	
Gold hardness or Purity	\$65.00	add \$40 if we plate it for you	
Gold Porosity	\$75.00	nitric acid vapor or flowers of sulfur method	
Gold Porosity	\$100.00*	sulfur dioxide/sulfurous acid method	*((\$100 set-up charge + \$25 per lot)
Cross-section analysis	\$75.00	per mount with up to two plugs per mount.	
		Includes digital pictures and thickness measurements	
Nickel Stress analysis (tabs)	\$100.00	includes three repetitions	
Nickel Stress by contractometer	\$100.00		
Nickel or Copper Hardness	\$65.00	add \$40 if we plate it for you	
Single Element in a Deposit	\$60.00	(This includes sulfur or phosphorus as well as metals in a deposit or anode)	
Wet Tape Adhesion test	\$45.00	2 panels are tested.	
Adhesion - bend test	\$25.00		
Salt Fog/Salt Spray Corrosion	\$0.24	per hour \$50 minimum	
Panels for Salt Fog Testing	*	varies by dimensions and alloy	
Coating Weight	\$55.00	3 panels are tested	
Abrasion Test	\$65.00	2 panels are tested	
Hydrogen Embrittlement	\$150.00	for a set of 4. We can also provide notch bars for a price.	
Notch bars for embrittlement	*	varies by spec.	