

## Hydrometallurgical Laboratory

Hydrometallurgical process applications are competing actively with the more traditional pyrometallurgical processing routes. Tighter **environmental** regulations and increasing **energy** prices make the hydrometallurgical treatment of specific ore types more attractive and sustainable.

The extractive metallurgy group of XPS consists of resourceful engineers and experienced technicians. Supported by a well equipped hydrometallurgical laboratory, the extractive metallurgy team **aims** to adapt your existing processes to new feed materials, to raise your impurity tolerance levels, and to ascertain the highest possible throughput and product/metal quality.



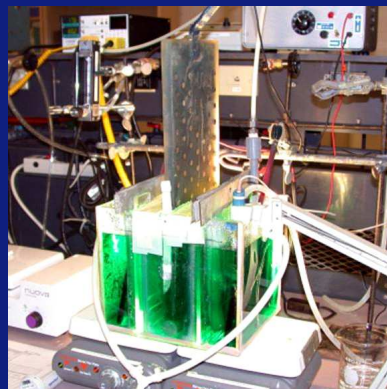
## Key Capabilities...

**High temperature pressure leaching** can be performed in different types and sizes of autoclaves which are set-up in our autoclave laboratory. Highly skilled operators supported by a fully automated control system ensure safe, high quality test work and reliable results suitable for initial process design.

**Atmospheric leaching**, both batch and continuous, is performed in the hydrometallurgical laboratory that is equipped to set-up complex and fully customised lab-scale flow sheet simulations. Heap leaching can also be simulated when using column leaching in a combination with ore agglomeration, if required.

**Electrochemistry** is also practised in our Extractive Metallurgy group at XPS. There are installations to perform lab-scale experimental work for electroplating, electrochemical dissolution and electrolyte conditioning. Potentiostat cyclic voltammetry and impedance spectroscopy allows us to monitor the passivation and slime formation on anode/cathode surfaces at different current densities. Electrolytic deposition (refining or winning) and corrosion studies are included in our project portfolio.

Practical examples of hydrometallurgical process development are **heap leaching** of limonite ore, the **electroplating** of nickel crowns and the **pressure oxidation** leaching of a base-metal sulphide concentrate. Available bench-scale autoclave volumes and construction materials are 2 litres (Ti), 8 litres (Ti), 30 litres (Ti) and 4 litres (Hastelloy C-276).



## Contact Us...

[Address] Xstrata Process Support Group, 6 Edison Road, Falconbridge, Ontario, P0M 1S0, Canada  
[Phone] +1 (705) 699 3400 [Fax] +1 (705) 699 3431 [E-Mail] [extractive@xstrataprocesssupport.ca](mailto:extractive@xstrataprocesssupport.ca)