

## An immunological assay for detection and enumeration of thermophilic biomining microorganisms

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A specific, fast, and sensitive nonradioactive immunobinding assay for the detection and enumeration of the moderate thermophile *Thiobacillus caldus* and the thermophilic archaeon *Sulfolobus acidocaldarius* was developed. It employs enhanced chemiluminescence or peroxidase-conjugated immunoglobulins in a dot or slot blotting system and is very convenient for monitoring thermophilic bioleaching microorganisms in effluents from industrial bioleaching processes.