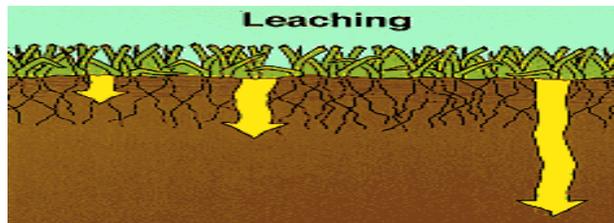


LEACHING



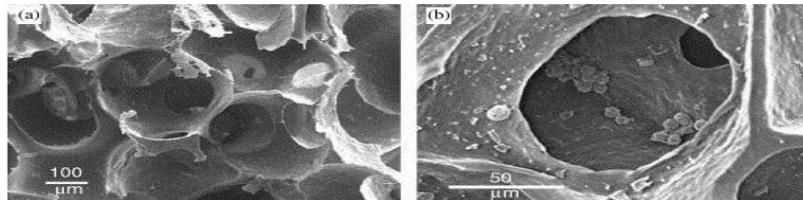
Leaching is a physical process of mass transfer that occurs when a “liquid solvent” passes through a “solid” producing the illusion of a “soluble component” (solute) in that solid.



As a physical process it continually occurs in nature, for example when a soil layer is washed with water, dissolving salts and almost any solid form in humid climates. This transportation of solids may cause the soil to become more acidic and possibly causing toxicity and nitrates seeping into lower layers in the subsurface.



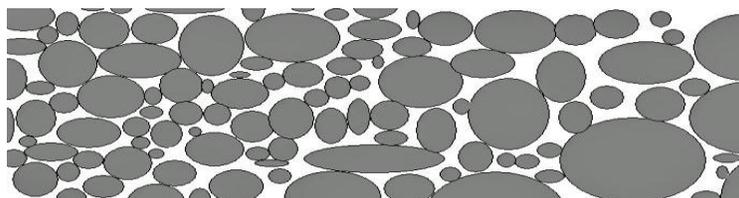
Leaching can also be done intentionally with the purpose of extracting one or more solutes from a given solid. To do an effective leaching process, there must be an intimate contact between the “solvent” and the “solute” content in the solid.



During leaching, factors should be considered as the “type of solvent” that must solubilize the solute with the highest possible coefficient of mass transfer.



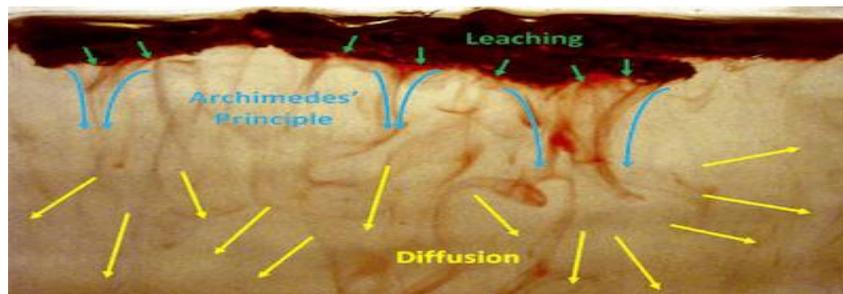
The “process temperature” is another factor which can increase the solubility of the solute by faster extraction, and “size of the solid particle”, in which should be considered factors such as the porosity of the solid and the solution percolating through the solid.



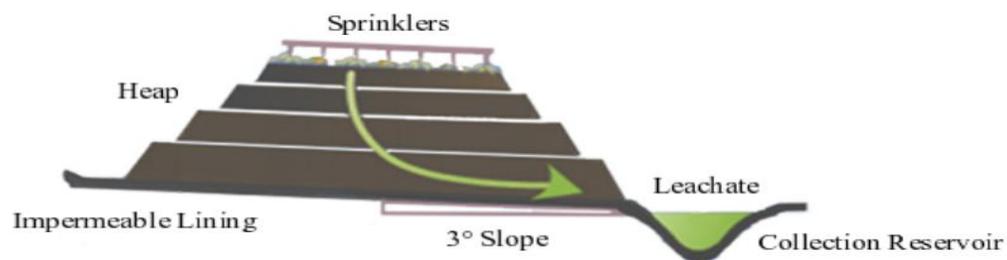
In the food industry, leaching can be used to obtain sugar from beets using hot water, vegetable oils from seeds with organic solvents, dyes, alcohol, and countless chemical processes within the pharmaceutical industry to prepare potions, metallurgical and agribusiness products.



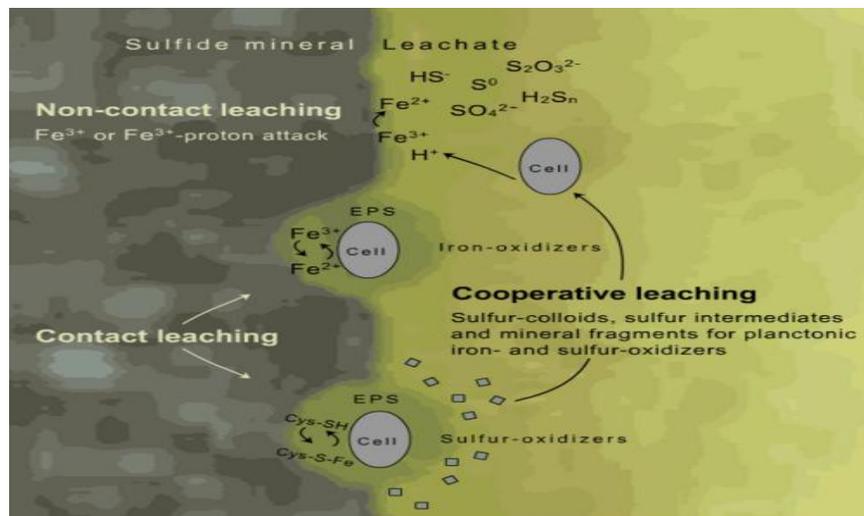
Even everyday processes such as the preparation of a soluble coffee or tea use the concept of the leaching process.



In the mining industry, leaching is a simple, effective and clean process that can be applied to extract precious metals like gold and silver using basic solutions with cyanide concentrations. Base metals such as copper lead and zinc using acid solutions. Even to harness radioactive minerals such as uranium content can be recovered through a leaching process.



Leaching process can also be assisted with microorganisms that function as catalysts (bioleaching).



Source: <http://www.artinaid.com/2013/04/leaching/>