

Chemical Properties

This taxonomic category is an outlier in that it does not conform to the tier 1 (chemical parameters) and tier 2 (substances) structure. However, it was included in the taxonomic scheme to capture physical/chemical phenomena indicative of compounds that can serve important biochemical or physiological roles (e.g., light absorption, electrochemical properties...). Measurements of those chemical properties can point to the presence of life even if the compounds are unknown (the physical/chemical phenomena can sometimes be measured remotely without the need for compositional analyses). For example, absorption of light within specific regions of the solar spectrum could be indicative of a substance that can capture and convert light energy into chemical energy, akin to biological pigments such as chlorophyll.