

# Cemvita

Soap Lake represents distinctive ecosystems distinguished by their elevated alkaline pH levels (ranging from 9 to 11) resulting from substantial bicarbonate/carbonate concentrations, as well as high salinity and substantial sulfurous compound content. As a consequence of these unique characteristics, the inhabitants of these environments are highly specialized. Cemvita has successfully identified numerous bacteria in both the sediment and water of these locations, which possess the ability to utilize sulfurous compounds as energy sources for carbon dioxide respiration. Due to the unique characteristics of these ecosystems, preserving Soap Lake is of paramount importance for a) biodiversity conservation of an array of extremophilic organisms that have adapted to the harsh and highly alkaline conditions; b) offering valuable opportunities for scientific research providing insights such as understanding of global carbon cycling.