

**BIODEGRADATION DE LA TRAME ORGANIQUE DES COQUILLES DE  
MOLLUSQUES EN MILIEU MARIN : ACTION DES MICROORGANISMES  
ENDOLITHES (1)**

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**SUMMARY**

The organic matrix of dead Mollusk shells do not accumulate on a large scale in marine sediments from 0 to 5000 meter deep (at least in "normal" sedimentary conditions). All organic components of extracrystalline sheaths are quickly weathered, at first, presumably by extracellularly secreted hydrolytic enzymes of microorganisms living in the upper layers of sediments, then by microborers and chasmolithic organisms living in close contact with those organic sheaths. We verified that these organisms are able to secrete the enzymes needed to hydrolyse the organic complexes screened within calcified crystallites of Mollusk shells, and that the enzymes (chitinase and preteolytic enzymes) are actually secreted within weathering shells.

So we can conclude that there is little probability that shelly sands and gravels constitute huge "biogenic polymers" traps. All these polymers are generally hydrolysed during the first diagenetic events and thus are used as energy source by many detritus feeders, limivorous organisms and indirectly by suspension feeders living at sediment-water interface.

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