

Shellfish waste has economic potential

Shellfish wastes, now a disposal problem to seafood processors, one of these days may be the source of materials to wrap food, heal wounds, strengthen paper and cloth, and bond paper, wood and leather.

Interest in chitin and chitosan, one its derivatives, has taken on new dimensions recently as shellfish processors respond to regulations prohibiting the dumping of untreated shellfish waste in the sea.

Chitosan, because it readily

absorbs heavy metals from both fresh and salt water, can be used to treat industrial waste streams which often contain heavy metals.

The scientists also are investigating medical and pharmaceutical applications for chitin and chitosan. Chitosan, Averbach said, may be used in kidney dialysis machines, with the absorptive properties of chitosan membranes removing waste materials from the blood when kidneys are not functioning properly.

Chitin comes from such shellfish as crab, shrimp, lobster, and crayfish. Depending on the species, only 15 to 25 percent of the live weight of these animals is edible. Shellfish processors dispose of the rest by dumping it into the sea or taking it to landfills. But dumping has been outlawed, and land fill operators dislike the waste material because in its raw form decomposes slowly.