

# SURGICAL SUTURES FROM FISH GUT COLLAGEN



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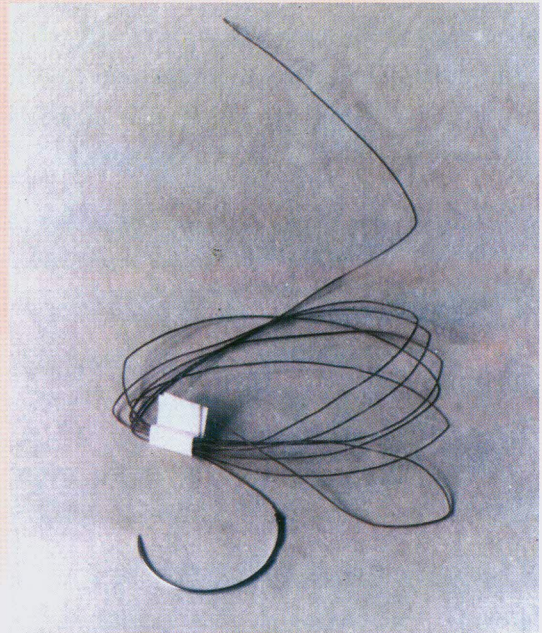
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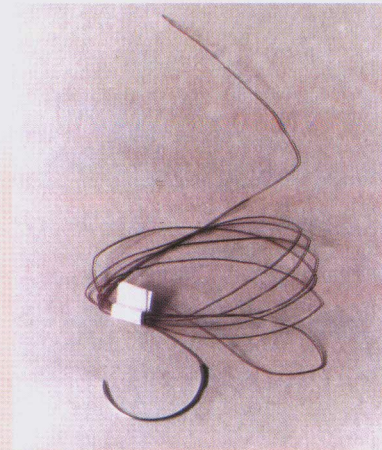
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## **Surgical sutures from fish gut collagen**



*Surgical Sutures developed from fish gut collagen*

A novel method for the preparation of absorbable surgical sutures from fish gut has been developed at CIFT, Cochin. The development is a significant achievement in the light of the following facts:

- ❖ Fine grade surgical sutures are monopoly products of one or two multinational companies.
- ❖ Currently, the cost of a fine grade absorbable suture is around 500 to 800 rupees.
- ❖ Absorbable fine grade sutures are essential for micro-surgeries and ophthalmic surgeries.

Production of sutures involves a low cost technology. The method involves extraction of gut from live fish. The impurities and soluble proteins are removed to give pure collagen. The collagen fibres so prepared are twisted, cross linked and bodied to give fine threads of collagen. They are surface smoothened, cut to size and packed in isopropanol. The packed sutures are sterilised to give absorbable surgical sutures. By this method a fish weighing  $\frac{1}{2}$  kg to 1 kg can give 4 to 5 sutures costing 2500 to 3000 rupees.

The sutures produced by this method are evaluated for tenacity, absorbability, freedom from abnormal tissue reactions, if any, and shelf life. Based on the tests conducted at CIFT, Cochin and Haffkine Institute, Mumbai, the Drug Controller of India approved a protocol for human trials. Trials carried out at the Government Medical College, Trichur, Kerala have revealed that the fish gut sutures are equally good in performance as the commercially available sutures of similar grade. Based on these trials the fish gut sutures are now cleared for commercial production and human use.

The laboratory level technology for production of surgical sutures from fish gut is available for commercial exploitation from CIFT