20 g of retenequinone is dissolved in 200 ml of concentrated sulphuric acid. To the dark green solution is added 15 g of sodium azide in small portions over a period of 10 minutes during which the temperature rises to 70—80°. The reaction mixture is diluted with 800 ml of water, and the solution is kept at 60—70° for one hour. The phenanthonride is filtered off by suction and is dried at 100°. The product formed has a m.p. of 200—205°, and the yield is almost quantitative. After one recrystallisation with charcoal from 500 ml of benzene a product melting at 220° (corrected) is obtained in a yield of about 60%.

The investigation of the reaction is being continued.


Received September 2, 1953.

Liquefaction of Endolymph from Sharks by Hyaluronidase

C. E. JENSEN and THURE VILSTRUP

Physico-chemical Institute of the University, and the University Clinic of Oto-rhinolaryngology, Copenhagen, Denmark

On account of the great similarity between vitreous humor from the eye and the endolymph of the inner ear we have investigated whether the latter like the former might contain hyaluronic acid. We have made the following experiments on the endolymph from about twenty sharks (Ascanthus vulgaris).

One ml of the endolymph was incubated with a trace of testicular hyaluronidase (Schering) at room temperature for 72 hours. After some hours the jelly began to liquify. After 72 hours the viscosity of the fluid which prior to the addition of enzyme was very high, was close to that of water. This experiment was repeated with the same result. In a further trial endolymph liquified within 4 hours. A sample without enzyme did not change its consistence within the same time.

As the enzym is known to be highly specific this result proves that the endolymph contains hyaluronic acid or at least a substance closely related to that acid.

We thank professor J. A. Christiansen for permission to use the facilities of the Physico-chemical Institute.

Financial support from Det teknisk-videnskabelige forskningsraad is gratefully acknowledged by C. E. Jensen.


Received September 2, 1953.