VI SUMMARY

1. Three strains of trachoma virus have been isolated and serially passaged in 6 - 8 day old embryonated eggs by inoculation through the yolksac route and incubation at 35°C. Streptomycin was used to decontaminate the specimen and a minimum of three blind passages given for each specimen.

2. Trachoma antigen is purified by fluorocarbon emulsification and differential centrifugation. One (1) part of Genetron 113 proves optimum for the purification of three (3) parts of crude virus suspension; anticomplementary factors and nonviral yolksac elements are removed without impairment of the viral antigen. The optimally purified elementary body antigen is specific for trachoma antibodies and sensitive enough to detect low level antibodies in mild infections without overt disease.

3. The use of Genetron in excess of the optimum amount yields a product which is completely devoid of anticomplementary factors; rather procomplementary but antigenically inactive. Addition of appropriate amount of lecithin to such product restores the antigenicity. Lecithin appears to be an essential component of the viral antigen in complement fixation reaction.
4. Apart from the elementary body antigen, a soluble antigen is associated with the infected yolksac tissue. The soluble trachoma antigen is group specific, reacting with trachoma as well as lymphogranuloma antibodies. It cannot be deposited by high speed centrifugation (10,000 rpm. for 30 min.) but held back completely by the Seitz filter.

5. Of the three laboratory diagnostic procedures evaluated in the present work, complement fixation test using the optimally purified elementary body antigen provides most significant results; it offers a reliable aid in the diagnosis of trachoma.

6. Skin test results bear no relation to the clinical diagnosis or severity of the disease.

7. Diagnosis by inclusion body demonstration is inadequately sensitive.