

X-ray diffraction exposures and graphs relating to RNA research referenced as 'RNA'

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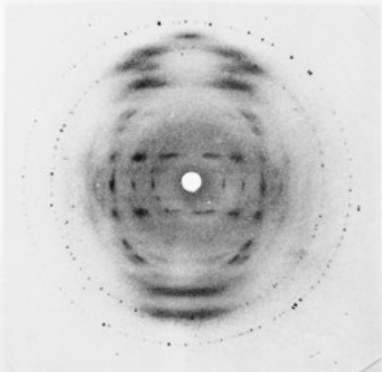
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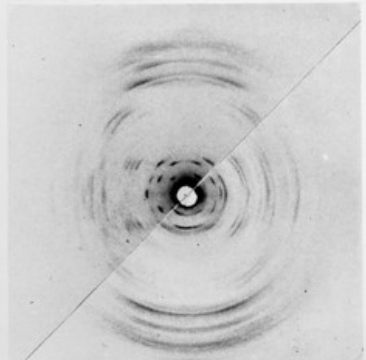
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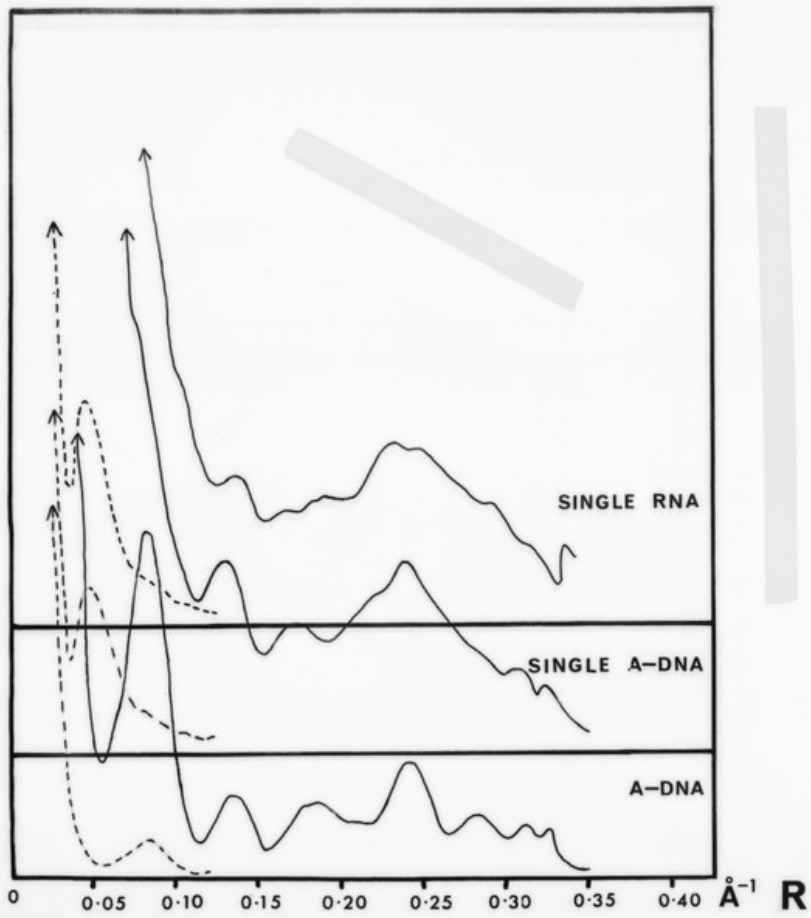


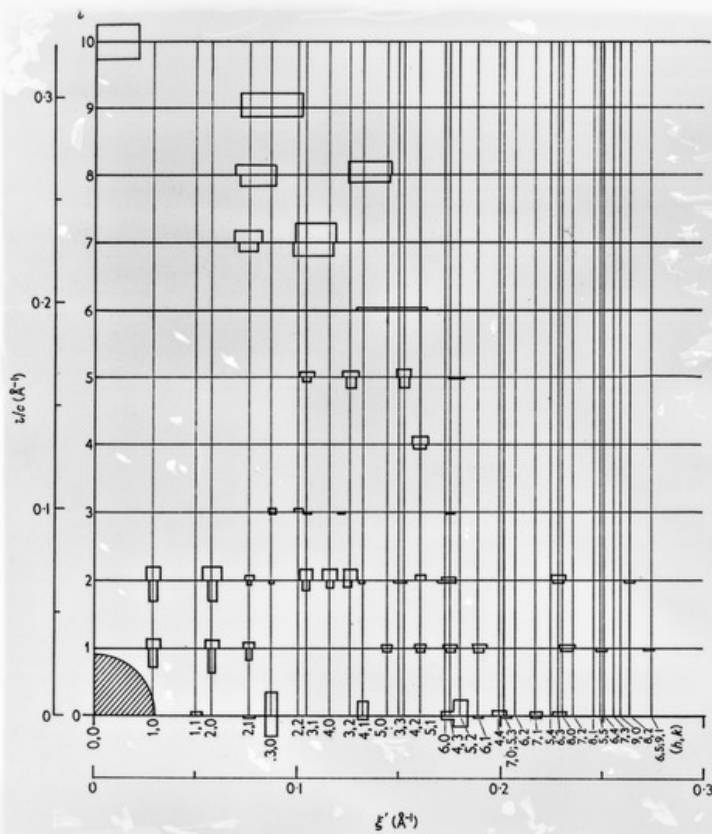
(a)



(b)

(a) X-Ray diffraction photograph (type I) given by sodium RNA (sample no. 21) of rice dwarf virus at 75% relative humidity. The fibre axis is tilted approximately 15' from the vertical. The spotty rings are due to NaCl powder and were used for determining accurately the specimen-to-film distance.
(b) X-Ray diffraction patterns given by sodium RNA of rice dwarf virus at 75% relative humidity. Upper left-hand, type II given by sample no. 20; lower right-hand, type III given by sample no. 18.





Reciprocal lattice rotation diagram of rice dwarf virus RNA. The rectangles represent approximate widths and intensities of reflections observed. The reflections have been indexed on a hexagonal lattice with $a = 40.0 \text{ \AA}$ and $c = 30.5 \text{ \AA}$. The reflections given on the upper side of each layer line are those observed in a type I photograph and those given on the lower side of each layer line are observed in a type II photograph. The shaded area corresponds to the shadow of the beam stop.

5255 5335

5263

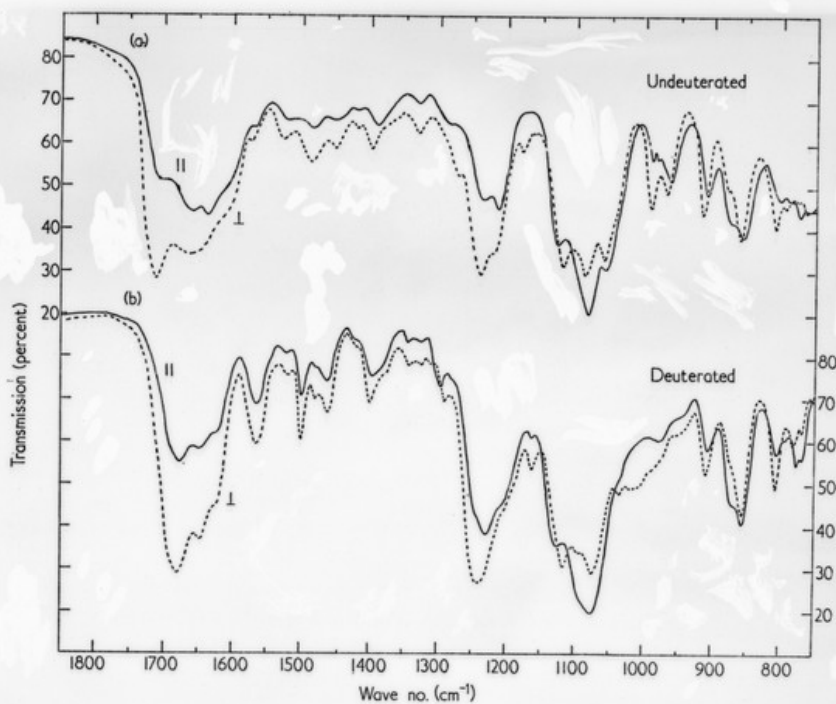


Fig. 1. Infrared absorption spectra of oriented films of sodium salt of rice dwarf virus RNA in the region 1850 to 750 cm^{-1} . (a) Undeuterated, at 75% relative humidity; (b) deuterated, at 75% relative humidity. Full line, electric vector of the incident radiation is parallel (\parallel) to the fibre axis. Broken line, electric vector of the incident radiation is perpendicular (\perp) to the fibre axis.

where θ is the angle between the helix axis and the transition moment, and g is a parameter which is the ratio of the intensities of the two helices in that part of the spectrum. The absorption maximum is at 1550 cm^{-1} .