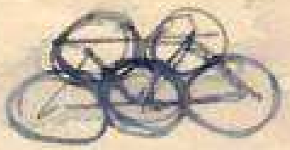
DOC 1

Nucleic Acid



(1)

26 November 1952.

Astbury says eq. spacing 16.2Å. a_0 = 18.7Å
Average diam. 19.6Å
(including interstice)

$16.2^2 \cdot 2/\sqrt{3} = 303$ Å^2.

R.W. = 330. Density 1.62 ∴ M.V. = 338 Å^3.

∴ 1.12 Å per residue.

Observed 3.34 Å.

Perhaps we have a triple-chain structure!

Size of molecule. Yesterday (25 Nov. 1952) in a biology seminar Robley Williams showed a slide of sodium ribonucleate and said that the small fibrils have diameter ~ 15Å.

I asked the size, and he repeated 15Å, and discussed the difficulty of measuring such small objects. Polystyrene spheres with

? diameter ~250Å were ~20 times larger.

Only one diameter; ∴ cylindrical.

∴ 1.1Å per residue.

See also Haurowitz book: gives references for 18Å to 20Å diameter.