

**Copy of a printed table referenced as "Helix contents of globular proteins
ORD [optical rotary dispersion] (Doty 1959). Bio-Physics lectures"**

Contributors

Gratzer, W. B. (Walter Bruno), 1932-

Publication/Creation

February 1963

Persistent URL

<https://wellcomecollection.org/works/dbej56pk>

License and attribution

You have permission to make copies of this work under a Creative Commons, Attribution, Non-commercial license.

Non-commercial use includes private study, academic research, teaching, and other activities that are not primarily intended for, or directed towards, commercial advantage or private monetary compensation. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
<https://wellcomecollection.org>

Excess right-handed helical contents of (f) of various proteins in water

	$-b_0/630$	$a_0^H/650$
Tropomyosin	0.88	0.87
Insulin	0.38	0.57
Bovine serum albumin	0.46	0.58
Ovalbumin	0.31	0.50
Lysozyme	0.29	0.39
Pepsin	0.31	0.26
Histone	0.20	0.30
Ribonuclease	0.16	0.17
Globin (H)	0.15	0.09

Having observed the strong dependence of the configuration of polypeptides on solvent, we began to wonder if the intermolecular components of the helical content of proteins suggested by the experiments could not be altered by altering the solvent. For a solvent that was miscible with water, of comparable polarity and cohesive energy density but with less hydrogen bonding capacity was needed. Our search indicated that 2-chloroethanol was well suited and it was found that the addition of this to aqueous solutions increased the helical content as measured by rotatory dispersion in nearly every case. Some examples are shown in Table II for proteins dissolved in chloroethanol.³⁴

TABLE II

Excess right-handed helical contents of various