The two components were separated in the electrophoretic cell and bioassays showed that the moving component contained all the anticoagulant activity. The biologically active substance was stable, as tested over a period of several months, in the salt solution employed in the electrophoretic separation. It showed an activity in solution of 900–1000 Roche anticoagulant units[3] per mg. (neutral sodium salt basis).

At an ionic strength of 0.02, a 0.1% solution of the sodium salt of heparin, in acetate buffer at *p*H 6.9, migrated as a single component. This is in agreement with the results obtained by chargaff, Ziff and Moore.[4]

Previously described preparations[5] of chondroitinsulfuric acid and mucoitinsulfuric acid were examined in the electrophoretic apparatus. One per cent. solutions in phosphate buffers of ionic strength 0.2 and *p*H near neutrality were used. The chondroitinsulfuric acid was found to be composed of approximately equal amounts of stationary and moving components, while the mucoitinsulfuric acid was composed of a stationary component (40%) and two moving components (41% and 19%). The mobilities were less than that of heparin at the same *p*H.

Further work is in progress on the separation and characterization of these fractions.

(4) E. Chargaff, M. Ziff and D. H. Moore, *J. Biol. Chem.*, **139**, 383 (1941); *cf.* also O. Wilander, *Skand. Arch. Physiol.*, **81**, suppl. 15, 20 (1939).

(5) M. L. Wolfrom, D. I. Weisblat, J. V. Karabinos, W. H. McNeely and J. McLean, THIS JOURNAL, **65**, 2077 (1943).

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NOTICE

The Conversion Factor for kX Units to Ångström Units

X-Ray wave lengths have been expressed in X units. The X unit is defined in terms of the calcite spacing and is nearly 10^{-11} cm., but is now known to differ from 10^{-11} cm. by about 0.2%. During the last twenty-five years X-ray diffraction workers have expressed X-ray wave lengths and crystal dimensions in terms of a unit which was 1000 X units, but instead of calling it 1000 X units have erroneously called it an Ångström unit. In recent years, the X-ray diffraction groups have agreed to use the term kilo X unit (abbreviated kX) in place of the incorrectly used Ångström unit, until agreement was reached on the best conversion factor to use for converting from kX to Ångström units. Agreement on the factor has now been reached.

As secretary of the American Society for X-ray and Electron Diffraction, I have been instructed to call the attention of American X-ray workers to the following announcement which appeared in the January, 1947, issue of the *Journal of Scientific Instruments*. Because of its importance it is here reproduced in its entirety.

"At the annual conference of the X-ray Analysis Group of the Institute of Physics in July, 1946, it was announced that agreement had been reached concerning the factor for converting measurements in kX units to Ångström units. The factor agreed upon, after consultation with the American Society for X-ray and Electron Diffraction and Prof. Siegbahn was 1.00202. This factor is probably correct to 0.003%. Since wave lengths in X-units have been measured to an accuracy of 0.001%, the wave lengths in Ångström units can be taken as accurate to 0.004% in general.

"The following is a list of values of wave lengths in Ångström units of certain emission lines and absorption edges in common use. The column headed $K\alpha$ gives the mean value of $K\alpha_1$ and $K\alpha_2$, $K\alpha_1$ being allowed twice the weight of $K\alpha_2$.

"Current values of the physical constants, such as those quoted by Birge in the 1941 volume of the Physical Society's *Reports on Progress in Physics*, should be used in conjunction with these wave lengths. In particular density ρ is given by the equation

$$\rho = 1.66020\ \Sigma A/V$$

where ΣA is the sum of the atomic weights of the atoms in the unit cell, and V is the volume of the unit cell in A^3.

	$K\alpha_1$	$K\alpha_2$	$K\alpha$	$K\beta_1$	Absorption edge
Cr	2.28962	2.29352	2.2909	2.08479	2.0701
Mn	2.10174	2.10570	2.1031	1.91016	1.8954
Fe	1.93597	1.93991	1.9373	1.75654	1.7429
Co	1.78890	1.79279	1.7902	1.62073	1.6072
Ni	1.65783	1.66168	1.6591	1.50008	1.4869
Cu	1.54050	1.54434	1.5418	1.39217	1.3802
Zn	1.43510	1.43894	1.4364	1.29520	1.2831
Mo	0.70926	0.71354	0.7107	0.63225	0.6197
Rh	.61326	.61762	.6147	.54559	.5341
Pd	.58545	.58982	.5869	.52052	.5090
Ag	.55941	.56381	.5609	.49701	.4855

"It is recommended that in any published work the values of the wave-lengths used should be explicitly stated."

W. L. BRAGG, *Chairman*
X-Ray Analysis Group of the
Institute of Physics (England)

ELIZABETH ARMSTRONG WOOD, *Secretary*
American Society for X-Ray
and Electron Diffraction
Bell Telephone Laboratories
Murray Hill, N. J.

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