a non-resonating carboxylic group containing compound of very low acid strength.

Acid	K	$5+\log K$	n
Non-resonating carboxyl group	$\frac{1}{2}\times 10^{-10}$	0·00	1
Benzoic acid	$6{\cdot}27\times 10^{-5}$	0·80	3
Salicylic acid	$1{\cdot}05\times 10^{-3}$	2·02	6
2 : 6 acid	6×10^{-3}	3·8	12

A hypothetic salicylic acid, having $n = 3$ (neglecting the Kekulé resonance), would have an acid strength approximately equal to that of benzoic acid. The actual salicylic acid ion has $n = 6$ with three additional structures resulting from hydrogen bonding, and the di-ortho acid an additional six structures, making $n = 12$. An equation such as the following may be suggested:

$$5 + \log K = a(n - 1),$$

with $a = 0{\cdot}36$. So far as is known, no other attempt has been made to link up these acid strengths quantitatively. Others will, it is to be hoped, improve on it.

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April 21.

[1] Jenkins, *J. Chem. Soc.*, 1447 (1940).
[2] Branch and Yabroff, *J. Amer. Chem. Soc.*, **56**, 2568 (1934); Baker, W., NATURE, **137**, 236 (1936).

X-ray Wave-lengths : Notation

It appears that future confusion could be avoided, and a considerable amount of space saved, if there were some short way of showing that a particular measurement was referred to the Siegbahn scale, and not intended to be absolute. Adoption of the suggestion of Lipson and Riley[1], that inaccurate measurements should be given in Ångstrøms and accurate ones in X-units, seems undesirable for two reasons. First, it might give the impression that the absolute accuracy of X-ray measurements is of the order of 0·1 per cent, not 0·001 per cent. Secondly, it is tacitly agreed among crystallographers that a unit about the size of the Ångstrøm is much handier than the X-unit. May I suggest that measurements based on the Siegbahn scale be denoted by 'kX.'? The symbol is short, and expresses fairly obviously that the measurement is in thousands of X-units. Thus the lattice parameter of iron (to use Lipson and Riley's example) would be expressed as 2·86 kX. or 2·8604 kX., the increase in accuracy not requiring a change in the unit.

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May 3.

[1] Lipson and Riley, NATURE, **151**, 502 (1943).

Control of Chemical and Mineral Products

As some aspects of the proposals made in my recent speech to the Parliamentary and Scientific Committee appear to have been misunderstood[1], may I clarify the matter in the following?

(1) It was envisaged that the rope of security would be many-stranded. We cannot rely on any one method as sufficient in itself.

(2) The only specific proposal I made was that the implications of technical disarmament should be studied in detail in advance.

(3) As an example I tried to establish a *prima facie* case for the inclusion of nitrogen products control by the United Nations among the topics to be studied.

(4) In the course of (3), I stated that, in my opinion, the arrangements would necessarily be such that *at no stage* would Europe, including Germany, be deprived of nitrogen products required for agriculture and peaceful industry.

In a subsequent memorandum to the Parliamentary and Scientific Committee, the whole emphasis was laid on the need for detailed investigation of the problem and I am quite satisfied with the outcome.

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[1] See NATURE, April 24, p. 455.

The Royal Aircraft Establishment, Farnborough

CRITICISM has been recently made of the work of the Royal Aircraft Establishment at Farnborough, Hants. This institution was known during the War of 1914–18 as the Royal Aircraft Factory and prior to that as the Balloon Factory where, in 1905, Mr. S. F. Cody began glider experiments on the adjacent common. Chemists in the Royal Aircraft Establishment still use the door on which can be traced the wording, Balloon School, and the laboratories were once used by women who pieced together goldbeater skins for making the linings of balloons and the early airships. These laboratories were used during 1914–19 by Lord Cherwell (then Dr. Lindemann) and by Dr. F. W. Aston.

In all fairness to the large scientific and technical staffs in the Establishment, much excellent work has been done, is being done, and we trust will continue to be done, with ever-increasing scope. In the past there has been a steady stream of trained men, whether trade or engineering apprentices or staff, from the R.A.E. into important posts in the aircraft industry.

Looking back over twenty-five years of work in the Royal Aircraft Establishment, I do feel that my colleagues have contributed something substantial and important to aeronautical science and incidentally to pure science in the form of scientific papers on combustion, rheology, metallurgy and corrosion, etc. To attract and keep the best staff, it is obviously necessary, as indicated in the sixteenth report of the Select Committee on National Expenditure, that there be better remuneration and better prospects for the scientific and technical personnel. The chief designer, Royal Aircraft Establishment, is being established as an Assistant III (Carpenter Scale) and his salary is but a three figure one. A similar state of affairs applies to the chief metallurgist or head chemist, and this low remuneration and status exist towards the close of a long, useful career.

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