Isolation of nor-Adrenaline from the Adrenal Gland
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In recent years it has been demonstrated that a factor with the physiological properties of synthetic L-nor-adrenaline\(^1\) occurs as a regular constituent of adrenergic nerves\(^2\) and apparently plays an important role as chemical nerve transmitter\(^3\).

With biological and colorimetric tests it has been demonstrated to occur in various organs and tissues\(^2\), adrenal medulla\(^4\)\(^-6\) and medullary tumors\(^7\). However, so far nor-adrenaline never seems to have been isolated and identified from natural sources\(^8\).

We now wish to report the isolation of L-nor-adrenaline from cattle adrenals where it occurs together with L-adrenaline in the approx. proportions 1:4. The mixture of these bases was isolated from the crude protein free extract with the aid of ion exchangers\(^9\).

The bases were then separated with counter-current distribution between 0.02 \(N\) HCl and phenol. After extraction of the phenol with ether pure L-nor-adrenaline was isolated as the crystalline base by addition of ammonia.

\[ C_9H_{11}O_2N \text{ (169.18)} \]
Calc. C 56.79  H 6.56  N 8.28
Found * 56.37, 56.22 * 6.40 6.46 * 7.93

The ultraviolet absorption spectra and the x-ray powder diffraction patterns of the isolated product and of a synthetic specimen were indentical\(^10\).

When compared with the colorimetric method of Euler and Hamberg\(^11\) and in biological tests (cat’s blood pressure, hen’s rectal caecum) the samples were also found identical.

A full report will be published in Acta Physiol. Scand.

8. In a private communication to one of us (U.S.v.E.) Dr. M. L. Tainter has informed us that Dr. B. F. Tullar has isolated L-nor-adrenaline from commercial adrenalin preparations.
10. We are indebted to Dr. E. Steenbagen for the x-ray diffractions measurements.

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New Books


The scope of this Encyclopedia is described in the preface: "It is neither a dictionary nor a handbook, nor is it a series of technological monographs… for the benefit of advanced specialists… Rather it is designed to present the entire field of chemical technology for profes-
sional chemists and chemical engineers
who may wish to know the methods that
are employed in a special field, often out-
side that of their immediate experience.
It is intended both for those working in
industry and for those in universities and
other research institutions.

The complete work will consist of 10
volumes, each of about 960 pages, and will
appear at the rate of 2 or 3 volumes a
year. Till now, two volumes have been
completed, although only the first has as
yet reached the office of this Journal.

In order to avoid excessive splitting up
and repetition, an attempt has been made
to collect the material under a few rather
comprehensive headings, either represent-
ing groups of substances or processes; for
this reason each volume contains only
about 100 articles. The search for a given
compound or process is facilitated by a
large number of cross references.

In the first volume, the number of
authors is almost as large as that of
articles, and most of them are active
industrial chemists. The work of collect-
ing and coordinating all these articles must
have been quite impressive.

The majority of the articles refer to
names of substances or of groups of sub-
stances, such as acetic acid, acetylene
alcohol (s), alkali metals (where, by the
way, the recent discovery of Cs minerals
in Sweden is not mentioned), alkaloids,
alloys, aluminum, amino, resins and
plastics, and ammonia. Such articles
generally begin with a short historical
introduction and with the most important
physical and chemical properties of the

The technical processes are often elucidated by drawings
and flow sheets; I have not, however, been
able to find a single photograph. The
data on prices and production volumes
naturally stress American conditions.

Among the functional groups of sub-
stances we find abrasives, adhesives, and
anesthetics (what, no xylocaine? Don’t let
that happen in the next edition!); among
the processes are absorption, adsorption
(with theoretical introduction by P. H.
Emmett of the BET team), alkylation,
amination by reduction, and ammonolysis.

Alkali and chlorine is the heading of
a long article treating in addition the
production of sodium carbonate. Of stray
articles we may mention analytical
chemistry (where the section on quan-
titative analysis is written by E. B.
Sandell); acid-base systems, acoustical
building materials, air conditioning and
allergens.

The editors admit without blushing
that the nomenclature presents an interesting
mixture of such names as are approved
by the International Union of Chemistry
and such as the IUC does its best to stamp
out. This applies to both organic and in-
organic names. When the Encyclopedia
reaches P, I shall be quite curious to see
whether KCl is called muriate of potash
or potassium chloride.

This encyclopedia will certainly be
found very useful by many chemists in the
Scandinavian countries, too. Its use-
fulness is enhanced by numerous references
following most articles.

Lars Gunnar Sillén.