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Publisher: Taylor & Francis

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Transactions of the Royal Society of South Africa

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/ttrs20>

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Published online: 08 Apr 2010.

To cite this article: J. Steph. van der Lingen (1917) NOTE ON THE IONISATION PRODUCED BY DEGENERATING NERVE-MUSCLE PREPARATIONS, Transactions of the Royal Society of South Africa, 6:1, 25-27, DOI: [10.1080/00359191709520171](https://doi.org/10.1080/00359191709520171)

To link to this article: <http://dx.doi.org/10.1080/00359191709520171>

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NOTE ON THE IONISATION PRODUCED BY DEGENERATING
NERVE-MUSCLE PREPARATIONS.

By J. STEPH. VAN DER LINGEN.

(Read May 17, 1916.)

When organic matter degenerates certain chemical changes take place, and thus molecular and atomic disintegration may occur.

In order to discover whether ionisation is produced during this process the following experiment was carried out.

A nerve-muscle preparation was placed on a glass slide immediately above a disc which was connected to the leaves of an electroscope (see Fig.). The carrier was suspended in a bell jar by a glass tube which passed through the cork.

Another glass tube terminated immediately over the preparation, so that a current of air could be pumped over the preparation.

In order to stimulate the muscle two electrodes were attached to the carrier, the connecting wires passing through the glass tube.

To prevent the air-current from escaping through this tube the outside end was closed by clamping a piece of rubber tubing attached to it.

OBSERVATIONS.

(1) The rate of discharge of the electroscope before the preparation was placed on the carrier was recorded.

(2) The rate of discharge when the preparation was placed on the carrier was recorded.

(3) The rate of discharge during, and immediately after, stimulation was recorded.

In observations (1), (2), and (3) no appreciable difference was found.

The preparation was then left *in situ* for six hours, and the observations repeated.

In (3) the muscle showed no response to stimulation.

In (2) the discharge was in excess of (1).

After passing a strong current of air over the muscle there was no appreciable discharge for five minutes, after which a gradual discharge set in.

These observations were repeated after one day.

The rate of discharge increased, *i. e.* it was greater than after six hours.

On the second and third days the discharge seemed to have attained its maximum.

We hope to confirm these results by a systematic study in the near future.

In conclusion we wish to thank Dr. Beattie for placing the apparatus at our disposal.