

by Prof. Beyerinck, Prof. Hoogewerff and Mr. ter Meulen prepared pure indican from leaves of *Polygonum tinctorium*, cultivated by Prof. Beyerinck, and from indican solutions received from Mr. Hazewinkel. Indican crystallises out of an aqueous solution with 3 mol. H₂O, probably in rhombic crystals, melting at 51° and decomposing, when heated, to a higher temperature with the formation of violet vapours; it tastes bitter and is optically active, exerting a left-handed rotation. Over sulphuric acid *in vacuo* it loses its water of crystallisation; its melting point is then 100°-102°. It dissolves pretty readily in water, methyl alcohol, ethyl alcohol and acetone, and very slowly in benzole, carbon disulphide, ether or chloroform. It is represented by the formula C₁₄H₁₇NO₆, corresponding to the formula proposed by Marchlewski. The result obtained was 56.7 per cent. C, 5.8 per cent. H, 4.7 per cent. N; the molecular weight was determined cryoscopically. On decomposition with HCl and oxidation with air, indican yielded indirubin and indigotine. No difference was observed between indican out of *Indigofera* leaves and that obtained from *Polygonum* leaves. Further investigations were promised.—The following papers were also presented for publication in the *Proceedings*: On a special case of Monge's differential equation, by Prof. W. Kapteyn.—On the locus of the centres of hyperspherical curvature for the normal curves of *n*-dimensional hyperspace, by Prof. Schoute.—On the power of resistance of the red-blood corpuscles, by Mr. Hamburger.—(1) On behalf of Mr. J. D. van der Waals, junr., a paper on equations, containing functions for different values of the independent constant; (2) on behalf of Dr. J. Verschaffelt, a paper on the critical isotherm and the densities of saturated vapour and liquid in the case of isopentane and carbonic acid, by Prof. van der Waals.—On the 14-monthly period of the motion of the earth's pole, with determinations of the azimuth of the meridional signs of the Leyden Observatory in the years 1882-1896, by Prof. H. G. van de Sande Bakhuizen, on behalf of Mr. J. Weeder.—Prof. Hoffman presented for publication in the *Transactions* a paper, entitled "Zur Entwicklungsgeschichte der Sympathicus."

DIARY OF SOCIETIES.

THURSDAY, MAY 10.

ROYAL SOCIETY, at 4.30.—On the Diffusion of Gold in Solid Lead at the Ordinary Temperature: Sir W. Roberts-Austen, F.R.S.—On Certain Properties of the Alloys of Gold and Copper: Sir W. Roberts-Austen, F.R.S., and Dr. T. K. Rose.—Experiments on the Value of Organic Sensation as Contributory to Emotion: Prof. Sherrington, F.R.S.—On the Brightness of the Corona of April 16, 1893. Preliminary Note: Prof. Turner, F.R.S.—The Radio-Activity of Uranium: Sir W. Crookes, F.R.S.

ROYAL INSTITUTION, at 3.—A Century of Chemistry in the Royal Institution: Prof. J. Dewar, F.R.S.

MATHEMATICAL SOCIETY, at 5.30.—Special Meeting.—The Differential Equation whose solution is the Ratio of Two Solutions of a Linear Differential Equation: M. W. J. Fry.—A Congruence Theorem relating to Eulerian Numbers and other Coefficients: Dr. Glaisher, F.R.S.—Linear Substitutions Commutative with a given Substitution: Dr. L. E. Dickson.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—A Frictionless Motor Meter: S. Evershed.

IRON AND STEEL INSTITUTE, at 10.30.—Ingots for Gun Tubes and Propeller Shafts: F. J. R. Carrulla.—The Manufacture and Application of Water-Gas: Carl Dellwik.—The Equalisation of the Temperature of Hot Blast: Lawrence Gjers and Joseph H. Harrison.—The Manganese Ores of Brazil: H. Kilburn Scott.—The Utilisation of Blast-furnace Slag: Ritter Cecil von Schwarz (Liège).

FRIDAY, MAY 11.

ROYAL ASTRONOMICAL SOCIETY, at 8.—On the Alleged Rotation of the Spiral Nebula M 51 Canum Venat: H. H. Turner.—Observations of Minor Planets at Windsor, New South Wales: John Tebbutt.—The Duration of the Greater Sun-spot Disturbances for the Years 1881 to 1899: Rev. A. L. Cortie.—Note on Measures by Prof. Barnard of Two Standard Points on the Moon's Surface: S. A. Saunder.—Micrometrical Measures of Double Stars: W. Coleman.—Diagrams for Planning Photographic Observations of Eros: A. R. Hinks.

PHYSICAL SOCIETY, at 5.—Discussion of Prof. Lodge's Paper on the Controversy concerning Volta's Contact Force.—The Heat of Formation of Alloys: Mr. J. B. Taylor.—On the Want of Uniformity in the Action of Copper-Zinc Alloys on Nitric Acid: Dr. Gladstone, F.R.S.—An Electromagnetic Experiment, and Experiments illustrating the Aberration called Coma: Prof. S. P. Thompson, F.R.S.

MALACOLOGICAL SOCIETY, at 8.—On a New Species of *Despoena*, Newton (*Proserpina*, Gray): with Notes on some Allied Forms: E. R. Sykes.—On some New Mollusca from the Philippines: G. B. Sowerby.—On some Lamellibranch Remains occurring in a Sandstone from the Malay Peninsula: R. Bullen Newton.

SATURDAY, MAY 12.

ROYAL INSTITUTION, at 3.—South Africa: Past and Future: Dr Alfred P. Hillier.

MONDAY, MAY 14.

SOCIETY OF ARTS, at 8.—The Incandescence Gas Mantle and its Use: Prof. Vivian B. Lewes.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Nature and Man in British New Guinea: Prof. A. Haddon, F.R.S.

TUESDAY, MAY 15.

ROYAL INSTITUTION, at 3.—Brain Tissue considered as the Apparatus of Thought: Dr. Alex Hill.

ANTHROPOLOGICAL INSTITUTE, at 8.30.

ROYAL STATISTICAL SOCIETY, at 5.—Municipal Finance and Municipal Enterprise: Sir H. H. Fowler.

WEDNESDAY, MAY 16.

SOCIETY OF ARTS, at 8.—A National Repository for Science and Art: Prof. Flinders Petrie.

ROYAL METEOROLOGICAL SOCIETY, at 4.30.—The Wiltshire Whirlwind of October 1, 1899: the late G. J. Symons, F.R.S.—The Variations of the Climate of the Geological and Historical Past and their Causes: Dr Nils Ekholm.

ROYAL MICROSCOPICAL SOCIETY, at 7.30.—Exhibition of Microscopic Pond Life.—At 8.—On the Lag in Microscopic Vision: E. M. Nelson.

THURSDAY, MAY 17.

ROYAL SOCIETY, at 4.30.

ROYAL INSTITUTION, at 3.—A Century of Chemistry at the Royal Institution: Prof. J. Dewar, F.R.S.

ZOOLOGICAL SOCIETY, at 4.30.—The Freshwater Fishes of Africa: G. A. Boulenger, F.R.S.

SOCIETY OF ARTS (Indian Section), at 4.30.—The Industrial Development of India: J. A. Baines.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Alternating Current Induction Motors: A. C. Eborall.

CHEMICAL SOCIETY, at 8.—Chlorine Derivatives of Pyridine. VI. The Orientation of some Aminochloropyridines: W. J. Sell and F. W. Dootson.

FRIDAY, MAY 18.

ROYAL INSTITUTION, at 9.—The Structure of Metals: Prof. J. A. Ewing, F.R.S.

EPIDEMIOLOGICAL SOCIETY, at 8.30.

SATURDAY, MAY 19.

ROYAL INSTITUTION, at 3.—South Africa: Past and Future: Dr. Alfred Hillier.

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