

hood having good draught is at hand. The quantity directed for titration is entirely too much; not much more than 1 cc. of concentrated acid should be taken.

Acidum Sulphuricum Aromaticum.—The time required for hydrolysis of the ethylsulphuric acid can be greatly shortened by heating with an excess of N/1 alkali.

Acidum Sulphurosum.—It is advisable to weigh the acid in a glass-stoppered flask large enough for the titration and containing enough water to prevent loss of sulphur dioxide by volatilization.

Acidum Tartaricum.—Arsenic is considered to be a possible contamination by some authorities. The U. S. P. Gutzeit test may be used for detecting excessive quantities.

Acidum Trichloroaceticum.—The melting point may be expected to vary from the official figures (52°); the German Pharmacopœia gives 55° , the Swiss 56° . As this acid is extremely hygroscopic, a melting point determination with any degree of accuracy is impracticable. It should not leave more than 0.05 per cent. of residue on volatilization. The ferric chloride identity test should be omitted, as the pure acid gives no color. In addition to the U. S. P. tests, the ferrous sulphate test, made in the usual way, should not give a reaction for nitric acid and silver nitrate should show not more than slight traces of hydrochloric acid.

(To be continued.)

LISTER AND LISTERISM.

A man who leaves his name in his native language as the description of an art which has saved millions of lives in his lifetime is rare in human history, and such a man was Joseph Lister, the discoverer of the antiseptic system of treatment in surgery. He was the son of Joseph Jackson Lister, F. R. S., a distinguished microscopist and a member of the Society of Friends. His birthplace was Upton in Essex, and after his elementary education at Friends' schools he completed his classical and mathematical studies at University College, London, graduating as B. A. Lond. in 1847. He continued at the college as a medical student, and became M. B. Lond. and F. R. C. S. Eng. in 1852. After a short period at University College Hospital as a resident surgeon he visited Edinburgh, taking with him a letter from Professor Sharpey, then of world-wide reputation, to Professor Syme, who held the Surgery chair in the Edinburgh University, and the visit became a sojourn in Scotland of about a quarter of a century, during which he had discovered and perfected the antiseptic system of surgical treatment, filled the chairs of Surgery in Glasgow University (1860-69) and in Edinburgh University (1869-77), and became known throughout the civilized world as a distinguished surgeon and one of the greatest benefactors to humanity. In 1856 he married Agnes, the daughter of Professor Syme, and became an extra-mural lecturer in surgery of the Edinburgh Medical School, which he retained until his appointment to the Glasgow chair. He was a chemist and histologist of no mean ability, and was quick to appreciate the significance of Pasteur's work on fermentation, which led to the observation that that process and putrefaction are the result of micro-organisms living upon the organic matter which ferments or putrefies. Hitherto

the processes were regarded as chemical changes, inevitable as effervescence when a carbonate and an acid are mixed. It was Lister who linked together Pasteur's researches on fermentation that had gone wrong owing to foreign germs, with the "surgical fever," which at that time was the scourge of hospitals, and he patiently experimented until he proved that by the application of germicidal protection to wounds they healed "by first intention" far more frequently than by the old and recognized methods. His discovery was announced in 1865, but several years elapsed before there was much recognition of the value of his discovery—the methods were crude and the antiseptic preparations clumsy and complicated. Lister applied himself to the improvement of methods and preparations, pharmacists in Glasgow and Edinburgh helping him. In 1869 he succeeded his father-in-law in the Edinburgh chair, and then the antiseptic treatment began to be better appreciated, while graduates from Edinburgh carried the *rationale* of the treatment to all parts of the world. As it came to be more commonly used, Lister had helpers in its improvement, not the poorest helpers being the critics. We need not elaborate the progress of Listerism; today it means the performance of surgical operations under germless or aseptic conditions, and it means for the human race successful surgical treatment of diseases which were invariably fatal forty years ago, because of the putrefaction which followed the surgeon's knife. Lister was called to King's College, London, in 1877, and remained there until 1893 as Professor of Clinical Surgery, meanwhile having a lucrative practice as a consultant. He had many academic and scientific honors, became a Baronet in 1883, and a Baron of the United Kingdom in 1897, the latter honor being for the first time conferred on a medical practitioner, and he was one of the first to receive the Order of Merit from King Edward VII., whom he had attended when he was operated upon for appendicitis by Sir Frederick Treves. He influenced pharmacy in so far as Listerism has called for new chemical and galenical preparations. This ancient class of preparations was changed by Lister calling for a protective basis which he found in the paraffins. The demand for antiseptic dressings has created a new pharmaceutical industry, and Lord Lister was as interested in these minor developments of his discoveries as he was in the operative side. His election in 1893 as an honorary member of the Pharmaceutical Society of Great Britain was a tribute not only to his fame as a surgeon, but his accomplishments in chemical research. He was a frequent guest of the Society during his active years, and it is well when the world pays tribute to his life's work that we pharmacists should remember that pharmacists worked with him in his discovery, and that he was the first to acknowledge their services to him.—*Chemist and Druggist* (London).

THE NEAR-SIGHTEDNESS OF THE CYNIC.

"Happiness is the voice of optimism, of faith, of simple steadfast love. No cynic or pessimist can be really happy. A cynic is a man who is morally near-sighted—and brags about it. He sees the evil in his own heart, and thinks he sees the world. He lets a mote in his eye eclipse the sun. An incurable cynic is an individual who should long for death—for life cannot bring him happiness, and death might. The keynote of Bismarck's lack of happiness was his profound distrust of human nature."—*William George Jordan*.