BIBLIOGRAPHY

of

DIPHTHERIA ANTITOXIN

by

FREDERICK FALCK GRIMMER

A Thesis Submitted for the Degree of

BACHELOR OF SCIENCE
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Behring E., Kitasato, S. 1890

Uber das zustandekommen der Diphtherie-Immunitat und der Tetanus-Immunitat bei Thieren.

Deutsche Med. Woch., 16, p. 1113.(Dispens. U.S.A. 19 ed., p. 1117; ibid., 20 ed., p. 998; ibid., 21 ed., p. 144;

Discusses diphtheria and tetanus immunization by the use of serum.

Behring E. 1893

Uber die Gewinnung, die Eigenschaften und die Leistungsfahigkeit der Blulantitoxine.

Ber. d. Pharm. Ges., 3, p. 279. (Bull. Pharm., 8, p. 78; Proc. A. Ph. A., 42, p. 838;

Describes a method of production and the use of diphtheria antitoxin.

Aronson, H. 1894

Weitere Untersuchungen uber Diphtherie und das Diphtherie-Antitoxin.

Berl. klin. Woch., 31, p. 453; (Am. Jour. Pharm., 90, p. 769; Am. Drugg., 24, p. 318;

A discription of the method of preparing diphtheria antitoxin.

(Editor) 1894

Diphtheria Antitoxin

Am. Drugg., 25, p. 320.

In the spring of this year a final and favorable report upon Behring's anti-diphtheretic serum was issued from the Koch Institute for Infectious Diseases in Berlin.

(Editor) 1894

Diphtheria Antitoxin

Am. Drugg., 25, p. 386.

A discussion of the results obtained from, from where supplied, action of boards of health and the methods of distribution of diphtheria antitoxin.

(Editor) 1894

Behring's new Diphtheria cure.

Bull. Pharm., 8, p. 530.

Gives a brief historical account and discription of the manufacture of diphtheria antitoxin.

(Editor.) 1894

The Antitox Treatment of Diphtheria

Chem. and Drugg., 45, p. 644. Proc. (A. Ph. A. 43, p. 801.

Describes the method of preparation and the results obtained by the use of diphtheria antitoxin in England.

(Editor.) 1894

The New Diphtheria Cure.

Drugg. Cir., 38, p. 217.

Describes the principles of immunizing by diphtheria antitoxin, and results where the product was used.

(Editor.) 1894

Antidiptheric Serum.

Pharm. Jour., 54, p. 278.

Gives Behring's and Ehrlich's opinion as to the value of the serum.

(Editor) 1894

Anti-Diphtheritic Serum

Pharm. Jour., 54, p. 291.

Gives history, method of preparation, and dosage of the serum.

(Editor.) 1894

The Serum Treatment of Diphtheria.

Pharm. Jour., 54, p. 298.

Discusses an article occurring in newspapers, expressing confidence in the work done by the serum.

(Editor.) 1894

Anti-Diphtheritic Serum.

Pharm. Jour., 54, p. 342.

Gives result of an appeal for funds enabling the Pasteur Institute to supply Dr. Roux's anti-diphtheritic serum to all medicinal practitioners who might apply for it.

(Editor.) 1894

Diphtheria Antitoxin

Pharm. Jour., 54, p. 362.

Gives Sir Joseph Listers opinion of diphtheria antitoxin as stated in a letter sent to the newspapers.

(Editor 1894

New Remedies.

Proc., A. Ph. A. 42, p. 699.

The name antitoxin has been applied to two products, the first that of the spirillium of exanthematic typhus, the second that of bacteria in general.

Korte, W. 1894

Mittheilungen uber die Heilserumtherapie der Diphtherie.

Deut. med. Woch. 20, p. 863. (Am. Drugg., 25, p. 392.

Gives data as to results obtained by the use of diphtheria antitoxin.

Kossel, H. 1894

Weitere Beobachtungen uber die Wirksamkeit des Behring'schen Diphtherieheilserums.

Deut. med. Woch., 20, p. 946. (Am. Drugg. 25, p. 391;

Reports on the production of diphtheria antitoxin, and how it should be used in curing diphtheria.

(Schering, & Glatz) 1894

Diphtherie-Antitoxinlosung Schering.

Pharm. Zeit., 39, p. 214. (Am. Drugg., 24, p. 220;

Describes diphtheria antitoxin solution and the solid diphtheria antitoxin as manufactured by the above firm.

Smirnoff, G. A. 1894

Ob iskusstvennom difteritnom antiloksinie.

Arch. biol. nauk, 4, p. 497 (Arch. biol. nauk., p. 504; Ber. Klin. Wochensch., 33, p. 597; Proc., A. Ph. A. 43, p. 802; Nature, 55, p. 597; Pharm. Journ. 57, p. 63; Yr. Bk. Pharm. 34, p. 203; Drugg. Cir., 38, p. 241; Am. Drugg., 25, p. 423; Ibid., 29, p. 73; Ibid., 30, p. 289; Pharm. Jour., 58, p. 368.

Production of diphtheria antitoxin by electrolysing virulent diphtheria broth cultures.

Washbourn, J. W. Goodall E. W., & Chard A. H. 1894

The Antitorin Treatment of Diphtheria.

Brit. Med. Jour., 1894, V. 2, p. 1417. (Pharm. Jour., 54., p. 610;

Reports statistics on the results of the new treatment of diphtheria.

Wassermann, A. 1894

Ueber Concentrirung der Diphtherieantitorine aus der Milch immunisirter Thiere.

Zeits, f. Hyg., 18, p. 235. (Am. Jour. Pharm., 90, p. 781;

Describes a method for concentrating diphtheria antitoxin from the blood stream of animals.

Woodhead S. 1894

The Treatment of Diphtheria.

Pharm. Jour., 54, p. 504.

Gives a method of preparation, history of antitoxin treatment and statistics on diphtheria death rates in England.

Armstrong, M. D. 1895

Objections to the Antitoxin Treatment of Diphtheria.

Drugg. Cir., 39, p. 113.

Believes that the blood serum of diphtheria antitoxin is harmful to man.

(Editor.) 1895

An American Antitoxin Laboratory.

Am. Drugg., 26, p. 227;

Tells of the location of the laboratory, the process of manufacture, and strength of the antitoxin.

(Editor.) 1895

The Sale of Antitoxin in France.

Am. Drugg., 26, p. 269.

Compares the manufacture & sale of diphtheria antitoxin by the New York Health Board with the method of manufacture and distribution of the antitoxin in France.

(Editor) 1895

Antitoxin

Am. Jour. Pharm., 67, p. 153.

Gives history, preparation, properties and the method of administration of Diphtheria Antitoxin.

(Editor.) 1895

The New Treatment for Diphtheria.

Drugg. Cir., 39, p. 2.

A general discussion on the value of diphtheria antitoxin.

(Editor.) 1895

Diphtheria Antitoxine.

Drugg. Cir., 39, p. 25.

Discussion on the value of diphtheria antitoxin.

(Editor.) 1895

The Antitoxin Treatment.

Drugg. Cir., 39, p. 98.

Discusses the merits of diphtheria antitoxin.

(Editor.) 1895

Is Blood Serum Intrinsically Poisonous?

Drugg. Cir., 39, p. 128.

A discussion regarding the possible harm in using diphtheria antitoxin.

(Editor.) 1895

A Dangerous Preservative of Antitoxin.

Drugg. Cir., 39, p. 278.

Discusses the use of phenol as a preservative in diphtheria antitoxin.

(Editor.) 1895

Anti-Diphtheritic Serum.

Pharm. Jour., 55, p. 49.

A few facts concerning the serum from a pharmaceutical view point.

(Editor.) 1895

The Antitoxin Treatment.

Pharm. Jour., 55, p. 111.

Discusses the value of diphtheria antitoxin as a prophylactic.

(Editor.) 1895

Diphtheria Antitoxin in Russia.

Pharm. Jour., 54, p. 954.

Compares Behring's antitoxic serum to that prepared in Russia as to its keeping in cold weather.

(Editor.) 1895

Sale of Diphtheria Antitoxin in Zurich.

Pharm. Jour., 54, p. 1078.

Gives regulations under which the sale of diphtheria antitoxin is placed in Zurich, Switzerland.

(Editor.) 1895

Wirkung des Diphtherieserums.

Pharm. Zeitung, 40, p. 317. (Pharm. Jour., 54, p. 1109;

Of 143 cases of diphtheria in which antitoxin serum was used only 14 ended fatally.

(Editor.) 1895

(The Present Status of the Antitoxin Treatment of Diphtheria.)
University Medical Mag., 8, p. 126. (Am. Jour. Pharm. 67, p. 635;
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Freund, E., Grosz. S. &. Jelinek O. 1895

Uber die Beziehungen zwischen Gerinnung und der Wirkung der Antitoxine.
Cent. f. inn. Med., 16, p. 937. (Am. Jour. Pharm., 90, p. 772;
Gives data on experiments using organic compounds in an attempt to stop the action of toxins.

Gue'rin --, Mace, E. 1895

Sur l'antitoxine diphterique
Comp. rend., 121, p. 311, (Pharm. Jour., 55, p. 178. A. Ph. A. Proc., 44, p. 842; Drugg. Cir., 39, p. 268; Am. Drugg., 27, p. 183.
Discusses the nature of the active constituent of Diphtheria Antitoxin.

Kinyoun, J. J. 1895

The production of Antitoxin.
Am. Drugg., 26, p. 12.
Reports on the method of manufacture of diphtheria antitoxin in Europe.

Martin, S. 1895

Discussion on Diphtheria and its Treatment by Antitoxin.

Brit. Med. Journ. 1895, V. 2, p. 461. (Yr. Bk. Pharm., 32, p. 179;

Gives a short history, method of preparation and the proper method of administration of anti-diphtheritic serum.

Park, W. H. 1895

(Diphtheria Antitoxin.)

Boston Medical and Surgical Journal, ---, ---. (Am. Drugg., 27, p.286;

(Gives a summary of the effects of diphtheria antitoxin treatment.)

Tichomiroff, M. 1895

Uber die Fallung von Toxalbuminen durch Nucleinsaure

Zeits. f. Physiol. Chem., 21, p. 90. (Am. Jour. Pharm., 90, p. 772;

Discusses the toxicity of precipitated toxins, among them being diphtheria toxin.

Wesener, F. 1895

Mittheilungen zur Behandlung der Diphtherie mit Behring'schem Heilserum

Munch. Med. Woch., 42, p. 883. (Proc., A. Ph. A. 45, p. 748; Pharm. Jour. 58, 43;

Discusses the effects of Antitoxic Serum in the treatment of diphtheria.

Wiegand T. S. 1895

(Diphtheria Antitoxin)

Am. Jour. Pharm. 67, p. 120.

In the minutes of the Pharmaceutical Meeting tells of the exhibiting of diphtheria antitoxin, how it differs from the Koch lymph method and the price of the article.

Wright, A. E. & Semple, D. 1895

A Note on the Employment of Diphtheria Antitoxin as a culture Medium for the Diphtheria Bacillus.

British Med. Jour., 1895, V. 2, p. 907. (Pharm. Jour., 55, p. 337;

Describes the use of diphtheria antitoxin as a culture medium for the diphtheria bacillus.

Arloing ---, R. 1896

Einwirkung verschiedener Konservirungsmittel auf Diphtherieheilserum.

Pharm. Zeit., 41, p. 57. (Drugg. Cir., 40, p. 106;

Reports on the influence of various preservatives on diphtheria antitoxin.

Arsonval, A. d' & Charrin, A. 1896

Action de Electricte sur les Toxines Bacteriennes

Comp. rend. hebd. Soc. de Biol., 48, p. 121. (Am. Jour. Pharm., 90, p. 781;

Gives the results of experiments showing that an electric current destroys the diphtheria toxin.

Bokenham, T. J. 1896

"The Relative Strengths of Diphtheria Antitoxic Serums".

Lancet, 1896, V. 2, p. 271. (Pharm. Jour., 57, p. 102;

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Boulger, D. C. 1896

(Antitoxin in London.)

Daily News, ---, p. ---. (Pharm. Jour., 56, p. 331;

(A discussion of the value of diphtheria antitoxin.)

Brieger, L., and Boer, ---. 1896

Ueber Antitoxine und Toxine

Zeits. f. Hyg., 21, p. 259. (Am. Jour. Pharm., 90, p. 770;

Describes a method of production and discusses the chemical properties of antitoxin and toxin.

Browne, L. 1896

(The Antitoxin Treatment of Diphtheria)

Times, ---, p. ---. (Pharm. Jour., 56, p. 292;

(Gives statistics showing the number of deaths due to diphtheria, with & without the antitoxin treatment.)

Browne, L. 1896

(Antitoxin and Diphtheria.)

Daily News, ---. p. ---. (Pharm. Jour., 56, p. 394;

(Discusses the value of diphtheria antitoxin.)

Burroughs, Wellcome & Co. 1896

(Diphtheria Antitoxin)

Lancet, 1896, V. 1, p. 272. (Pharm. Jour., 57, p. 102;

A discussion on the strengths of antitoxins, as tested by editors of Lancet.

de Martini, L. 1896

(Sul comportamento del siero antidifterico filtrato a traverso le candele chamberland.)

La Rif. med., 12, p. ---. (Cent. f. Bakter., 24, p. 360; Am. Jour. Pharm., 90, p. 767;

(Discusses the loss of potency of diphtheria antitoxin upon filtration through a chamberland filter.)

(Editor.) 1896

(Gibier's Double Antitoxin)

Am. Jour. Pharm. 68, p. 163.

Tells of a new antitoxin containing both diphtheria and streptococcus antitoxins.

(Editor.) 1896

Diphtheria Serum in Russia.

Chem. & Drugg., 48, p. 15. (Proc., A. Ph. A. 44, p. 843;

Reports percentages of recovery from diphtheria in a russian hospital when treated with the Serum.

(Editor.) 1896

Antitoxin Fatalities.

Drugg. Cir., 40, p. 98.

A report on deaths due to the use of diphtheria antitoxin.

(Editor.) 1896

Serum in Diphtheria.

Pharm. Jour., 56, p. 232.

Gives statistics proving the success in diphtheria antitoxin treatment in a Berlin hospital.

(Editor.) 1896

The Antitoxin Treatment of Diphtheria.

Pharm. Jour., 56, p. 292; Proc., (A. Ph. A. 44, p. 843;

Gives statistics on the value of Antitoxin in the treatment of Diphtheria.

Gratiot, C. C. 1896

Toxic Effect of Antitoxin

Jour. Am. Med. Assoc. 26, p. 789. (Drugg. Cir., 40, p. 135;

Discusses the toxic effects produced by injections of diphtheria antitoxin.

Lancet Special Commission. 1896

Relative Strengths of Diphtheria Antitoxic Serums.

Lancet, 1896, V. 2, p. 182. (Dispens. U.S.A., 20 ed., p. 1002; ibid., 21 ed., p. 148;

Compares the strength of diphtheria serums, showing that the English manufactured product is lower in antitoxic units than foreign manufactured antitoxins.

Lister, J. 1896

Presidential Address.

Report British Assoc. Advancement of Science, 66, p. 22; (Am. Jour. Pharm. 68, p. 613; Proc. A. Ph. A., 45, p. 748;

Gives a brief history of and the results obtained with Diphtheria Antitoxin.

McClintock, C. T. 1896

Antitoxin

Proc. A. Ph. A., 44, p. 254. (Pharm. Jour., 57, p. 204;

Gives zoological oritin, principles & applications of serum therapy, with anti-diphtheritic serum receiving most of the attention.

Mulford, H. K. 1896

The Preparation of Diphtheria Antitoxic Serum.

Am. Drugg., 29, p. 215.

Gives the method of preparation, preservation, and action of antitoxin as prepared by that firm.

Mulford, H. K. 1896

The Preparation of Diphtheria Antitoxic Serum.

Proc., A. Ph. A., 44, p. 227.

Describes the steps followed in the preparation of Diphtheria Antitoxins, with a discussion of each step.

Palmirski, L. & Orlowski, W. 1896

(Wplywroznych czynnekow fizycznych na surowice przeciwblonicza)

Medycyna Bd., 23, p. ---. (Cent. f. Bakter., 19, p. 916; Am. Jour. Pharm., 90, pp. 766 & 768;

(Discusses the effect of temperature on diphtheria antitoxin.)

Roux, ---. 1896

The Keeping Properties of Anti-Diphtheritic Serum.

Pharm. Jour., 56, p. 77.

States that serum, under present conditions of manufacture, will keep indefinitely.

Shays, G. 1896

The Composition of Diphtheria Antitoxin Serum.

Am. Jour. Pharm. 68, p. 505.

Discusses the general chemical composition of Diphtheria Antitoxin Serum.

Sharp, G. 1896

The Composition of Diphtheria Antitoxin Serum.

Pharm. Jour., 57, p. 113.

Gives the main constituents isolated from diphtheria antitoxin.

Sharp, G. 1896

The Composition of Diphtheria Antitoxin Serum.

Yr. Bk. Pharm., Brit. Pharm. Cong., 33, p. 363.

A discussion on the composition of diphtheria antitoxin serum.

Virchow, H. (J. P.) 1896

The Serum Treatment of Diphtheria.

Pharm. Jour., 56, p. 273.

Gives statistics showing the success of diphtheria antitoxin in cutting the death rate of diphtheria.

Wiegand, T. S. 1896

(Dry Anti-Diphtheric Serum)

Am. Jour. Pharm. 68, p. 50;

In the Minutes of the Pharmaceutical Meeting, describes sample of dry Anti-Diphtheritic Serum sent to the meeting.

------- 1896

(Serum Antidiphthericum Exsiccatum)

D. Med. ztg., ---, p. ---. (Pharm. Centralh., 37, p. 40; Proc. A. Ph. A. 44, p. 843;

(Tells of a new dry form of Diphtheria Antitoxin just introduced.)

Brodie, T. G. 1897

A Preliminary Report of Some Experiments upon the Chemistry of the Diphtheria Antitoxin.

Jour. Path., 4, p. 460. (Yrbk Brit. Pharm. Conf., 35, p. 89; Am. Jour. Pharm., 90, p. 767;

A discussion of experiments dealing with the chemical composition of diphtheria antitoxin.

Bujwid, A. 1897

(Serum Concentration.)

Przeglad lekarski, 36, p. ---. (Cent. f. Bakter, 22, p. 287; Am. Jour. Pharm., 90, p. 768; Drugg. Cir., 42, p. 40; Deut. Med. Woch., 24, p. 28; Am. Drugg., 32, p. 313;

(Reports a method of concentrating serum by freezing.)

Dieudonne, U. 1897

Ueber Diphtheriegift-neutratisirende Wirkungen der Serum-globuline.

Arb. d. Kais. Ges. Amt., 13, p. 293. (Am. Jour. Pharm., 90, p. 769;

Discusses the effects of neutralized diphtheria toxin on serum globulins.

Dzierzgowski, ---. 1897

Zur Frage, Ueber das Verhalten des Diphtherielserums bei der Filtration durch das Chamberland'sche Filter."

Cent. f. Bakter., 21, p. 333. (Am. Jour. Pharm, 90, p. 767;

Discusses the effect of filtration upon diphtheria antitoxin. Claims that filtered antitoxin loses some of its efficiency through loss of albumin during the filtering process.

(Editor.) 1897

The Use of Diphtheria Antitoxin.

Pharm. Jour., 58, p. 476.

Gives data showing the decrease in death rate due to diphtheria after

the introduction of diphtheria antitoxin.

Ernst, H. C, Coolidge, J. N., & Cooke, H. A. 1897

The Effect of Freezing upon the Anti-Diphtheritic Serum.

Jour. Boston Med. Soc., 2 p. 166. (Am. Jour. Pharm., 90, p. 768;

Results of experiments seem to show that the antitoxic property can be removed from one portion of the serum and added to another by freezing, melting and refreezing a number of times.

Gamble, F. W. 1897

Antitoxins.

Pharm. Jour., 58, p. 340.

Discusses the physiological action and the methods of production of diphtheria antitoxin.

Marenghi, G. 1897

Uber die Beziehung zwischen der Ausscheidung des Sticksloffes im Stoffwechsel des Pferdes und der Erzeugung des Diphtherieserums.

Cent. f. Bakter, 21, p. 256. (Am. Jour. Pharm., 90, p. 766;

Discusses the effect of producing diphtheria serum on the blood of the horse producing the serum.

Nikanorow, P. J. 1897

Ueber das Diphtherietoxin und Antitoxin.

Jahresber. u. d. Fort. d. Tier. Chemie., 26, p. 983. (Am. Jour. Pharm., 90, p. 772;

Discusses physically the properties of diphtheria toxin and antitoxin.

Tirard, N. 1897

(Summary of Progress in Past Year.)

Yearb. of Treatment., ---, p. 445. (Pharm. Rev., 15, p. 78; Proc. A. Ph. A. 45, p. 749;

(A summary of the therapeutics of antitoxins for the previous year.)

Belfanti, S., & Carbone, T. 1898

(Composition of Diphtheria Antitoxin.)

Arch. d. Sci. Med., 22, p. 16. (Am. Jour. Pharm.) 90, p. 774;

The original was not available.

Belfanti, S. & Carbone, T. 1898

(Contributo alla convscenza dell' antitossina difterica.)

Archivio par le scienze mediche, 22, p. ---. (Cent. f. Bakt., 23, p. 906; Am. Jour. Pharm., 90, p. 777;

(Discusses the chemical composition of diphtheria antitoxin.)

Camus, M. L. 1898

Resistance aux Temperatures elevees des Vaccins Desseches

Soc. de Biol., 50, p. 235; (Am. Jour. Pharm., 90, p. 769;

Gives the effect of high temperatures upon diphtheria serum.

Corbett, L. 1898

Der Einfluss des Filtrierens auf das Diphtherie-Antitoxin.

Cent. f. Bakter., 24, pp. 386, 415. (Am. Jour. Pharm., 90, p. 767;

Results of experiments showing the effect of filtration on diphtheria antitoxin.

(Editor.) 1898

Paternalism in Government.

Am. Drugg., 32, p. 63.

A discussion of the manufacture and sale of diphtheria antitoxin by the New York Board of Health.

(Editor.) 1898

A Patent on Diphtheria Antitoxin.

Drugg. Cir., 42, p. 181.

Discusses the granting of a papent to Behring by the United States on diphtheria antitoxin.

Ehrlich, P. 1898

Ueber die Constitution des Diphtheriegiftes.

Deutsche Med. Woch., 24, p. 597. (Jour. Am. Med. Assoc., 31, p. 1258: Am. Jour. Pharm., 71, p. 233;

Discusses the composition of diphtheria toxin.

Kronlein, ---. 1898

The Results of Serum-Therapy in Diphtheria.

Phila. Med. Jour., 1, p. 827. (Am. Jour. of Pharm., 70, p. 403;

Demonstrates by statistics that serum treatment is no longer in the stage of empiricism, but rests on a tangible foundation.

Muller, F. 1898

Ueber die Resistenz des Diphtherieheil-serums gegenuber verschieden physikalischen und chemischen Einflussen.

Cent. f. Bakter., 24, p. 316. (Am. Jour. Pharm., 90, p. 766;

Gives the effects of physical and chemical agents on antitoxin.

Szontagh, F. & Wellmann, O. 1898

Vergleichende chemische Untersuchungen uber das normale Pferdeserum und das Diphtherie-heilserum.

Deutsch. Med. Woch., 24, p. 421. (Am. Jour. Pharm., 90, pp. 765, 778;

Gives results of experiments comparing normal horse serum with diphtheria serum.

Cox, G. W. 1899

The Antitoxin Bill.

Drugg. Cir., 43, p. xxx.

A letter discussing the passage of the Collier Bill, which would prevent the New York City Board of Health from selling their surplus stock of vaccine lymph & diphtheria antitoxin at private sale.

(Editor.) 1899

Municipal Manufacture of Pharmaceuticals Unfair to Private Interests and Contrary to Public Good.

Drugg. Cir., 43, p. xxvii.

A discussion on the defeat of the bill in New York state giving the Board of Health of New York City power to sell vaccine lymph & various antitoxins at such prices as the board might seem fit to fix.

(Editor.) 1899

Antitoxin.

Drugg. Cir., 43, p. lx.

A report on the hearing before president of the New York City Board of Health of those who oppose the sale of antitoxin and lymph by the city.

(Editor.) 1899

How Long Will Diphtheria Antitoxin Keep?

Drugg. Cir., 43, p. 177.

Quotes opinions of people who are in the position to know on the question of how long diphtheria antitoxin will keep.

(Editor.) 1899

(Antitoxin.)

Pharm. Jour., 63, p. 67.

Gives a report of work on diphtheria by antitoxin treatment.

(Editor.) 1899

The Anti-Toxin Treatment of Diphtheria.

Pharm. Jour., 62, p. 217.

Reviews reports on experiments with diphtheria anti-toxin.

Freund, E. & Sternberg, C. 1899

Ueber Darstellung des Heilkorpers aus dem Diphtherieheilserum.

Zeits. f. Hyg., 31, p. 429. (Am. Jour. Pharm., 90, p. 769; Am. Jour. Pharm., 90, p. 771;

Discusses the composition of antidiptheric serum.

Hewlett, R. T. 1899

Antitoxins: Their Preparation, Properties, and Administration.

Pharm. Jour., 62, p. 168.

Gives method of preparation, properties of and ways to administer, diphtheria, and tetanus antitoxins.

Honl, J. 1899

(Diphtheria Serum.)

Wien. Klin. Rund., 13, p. ---. (Am. Drugg. 34, p. 195;

(Reports the production of a double serum for diphtheria & streptococcus bacilli.)

Ide, M. & Lemaire, A. 1899

Etude sur la repartition de l'antitorine diphterique dans les groupements albumineux du serum.

Arch. internat. Pharmacoclyn., 6, p. 477; (Am. Jour. Pharm., 90, p. 777;

Discusses the groups of proteins present in diphtheria antitoxin.

Seng, W. 1899

Ueber die qualitativen und quantitativen Verhaltnisse der Eiweiss-koyser im Diphtherieheilserum

Zeits. f. Hyg., 31, p. 516. (Am. Jour. Pharm., 90, p. 767;

Discusses the composition of diphtheria antitoxin.

Astros, L. & Rietsch, M. 1900

Essais D'Extraction De L'Antitoxine Diphtheritique.

Comp. Rend. Soc. de Biol., 52, p. 337. (Am. Jour. Pharm., 90, p. 770;

Describes a method of precipitating diptheria antitoxin by using a solution containing Sodium and Potassium Chlorides.

Atkinson J. P. 1900

The Fractional Precipitation of the Globulin and Albumin of Normal Horse's Serum and Diphtheria Antitoxic Serum, and the Antitoxic Strength of the Precipitates.

Jour. Exp. Med., 5, p. 67. (Pharm. Jour. 65, p. 537;

Gives results of experiments with the fractional precipitation of the globulins of normal horse serum and of diphtheria antitoxic serum.

(Editor.) 1900

Treatment of Diphtheria with Antitoxin.

Am. Jour. Pharm. 72, p. 101.

Tells how successfully diphtheria can be controlled by the use of antitoxin.

England J. W. 1900

On the Pharmacopoeial Recognition of Diphtheria Antitoxin

Am. Jour. Pharm., 72, p. 303.

Considers the theory of action of diphtheria antitoxin, suggests that an assay be adopted and favors the appointment of a committee for its introduction into the U.S.P.

England, J. W. 1900

On the Pharmacopoeial Recognition of Diphtheria Antitoxin.

Proc. A. Ph. A., 48, p. 271. (Am. Jour. Pharm., 73, p. 491; Pharm. Jour., 65, p. 239.

Gives the method of preparation, preservation and use of diphtheria antitoxin; discusses standards for the antitoxin and asks that it be included in the next edition of the U.S.P.

Hess, P. H. & Atkinson, J. P. 1900

Serum-Globulin and Diphtheric Antitoxin.

Jour. Exper. Med., 5, p. 49; (Am. Jour. Pharm., 90, pp. 769 & 778.

A comparative study of the amount of globulin in normal and antitoxic sera, and the relation of the globulins to the antitoxic bodies.

Houghton, E. M. 1900

Immunity and Serum Therapy.

Am. Drugg., 36, p. 201.

A discussion on immunity, discovery of toxins, production of antitoxins and their standardization and the action of antitoxins.

Marshall, C. R. 1900

The Antitoxins.

14 Bull. Pharm., p. 141.

Discusses the manufacture of Antidiphtheritic serum is carried on in the blood of the living horse, from the germ to the finished bulb of product. Also discusses other antitoxins. Discusses also the wonders

achieved by serum therapy in the prevention and cure of certain contagious diseases.

Merck, E. 1900

Re Diphtheria Antitoxin.

Pharm. Jour., 65, p. 200.

Reports the manufacture of concentrated anti-diphtheritic serum 1,000 normal.

Park, Davis & Co. 1900

Re Diphtheria Antitoxin.

Pharm. Jour., 65, p. 224.

Report that they have manufactured an antidiphtheria serum containing 1,250 antitoxin units per c.c.

England, J. W. 1901

Diphtheria Antitoxin and its Recognition by the U.S.Pharmacopoeia.

Proc. A. Ph. A., 49, p. 222. Am. Drugg., 40, p. 6;

Urges Pharmacopoeial recognition of diphtheria antitoxin, for the purpose of regulating quality and dosage of the product.

Lowe, C. B. 1901

Antitoxins.

Proc. Pa. Pharm. Assoc., 24, p. 143. (Proc. A. Ph. A., 50, p. 1084;

In a general talk on antitoxins, discusses the method of preparation and the efficiency of diphtheria antitoxin.

Maben, T. 1901

Standardised Preparations.

Pharm. Jour., 66, p. 268. (Am. Drugg., 38, p. 168.

Describes a process of manufacture of diphtheria antitoxin.

Sayre, L. E. 1901

Shall Diphtheria Antitoxin be Made Official.

Drugg. Cir., 45, p. 160. (Am. Drugg., 39, p. 81;

Discusses the pharmacopoeial recognition of diphtheria antitoxin.

Sayre, L. E. 1901

The Scientific Section of the American Pharmaceutical Association and Diphtheria Antitoxin.

Drugg. Cir., 45, p. 224.

Discusses the action of scientific section of the A. Ph. A. on Diphtheria Antitoxin and gives a translation of the German Pharmacopoeia's text on Diphtheria Antitoxin.

Butjagin, P. W. 1902

Ueber die Veranderungen des Blutes der gegen Diphtherie immuniserten Pferde

Hyg. Rund., 12, p. 1209. (Am. Jour. Pharm., 90, pp. 765 & 778.

Describes changes occurring in the blood during immunization.

Chialdini, M. 1902

(Antidiphtheric Serum)

Gazzetta degli ospedali, 23, p. ---. (Jour. de Pharm. et. Chem. S. 17, p. 30; Pharm. Jour., 70, p. 675; Proc. A. Ph. A., 51, p. 984;

(Reports on the length of time antidiphtheritic serum can be kept.)

(Committee) 1902

(Resolution Regulating Free Distribution of Antitoxin and Vaccine Virus)

Am. Jour. Pharm., 74, p. 513.

By the American Pharmaceutical Association Resolution that the Boards of Health are acting beyond the duties assigned them in manufacturing

selling or giving away, except to the destitute any remedial agents.

(Editor.) 1902

The Recognition of Diphtheria Antitoxin by the Pharmacopoeia

Am. Drugg., 40, p. 34.

Discusses the value of the recognition of diphtheria antitoxin by the pharmacopoeia.

(Editor.) 1902

The Government vs. the Individual

Am. Drugg., 40, p. 300.

A discussion of the manufacture and sale of antitoxins & viruses by the government.

(Editor.) 1902

New York.

Drugg. Cir., 46, p. xlvii.

A discussion on the municipal manufacture of antitoxin.

(Editor.) 1902

Hearing by the Mayor on the Sale of Vaccine and Serum by the City.

Drugg. Cir., 46, p. lxiii.

An Account of the hearing held by the Mayor of New York on the sale of vaccine & serum by the city.

(Editor.) 1902

Municipal Antitoxin.

Drugg. Cir., 46, p. 69.

Tells of a petition by which it is hoped to stop the private sale of antitoxin by the New York City Board of Health.

(Editor.) 1902

Diphtheria and Tetanus.

Pharm. Jour., 68, p. 58.

Tells of deaths due to the use of diphtheria antitoxin which was found to be contaminated with tetanus germs.

Freund, E. & Joachim, J. 1902

Zur Kenntniss der Serunglobuline

Zeits f. Physiol. Chem., 36, p. 407. (Am. Jour. Pharm., 90, p. 776;

A discussion on the constituents present in diphtheria antitox.

Maben, L. 1902

The Official Recognition of Anti-Diphtherial Serum.

Yr. Bk. Brit. Pharm. Conf., 39, p. 453. (Am. Jour. Pharm., 74, p. 572;

Claims that the serum has passed the experimental stage, is recognized by the medical profession and is of sufficient importance to demand official recognition in the British Pharmacopoeia.

Pick, ---. 1902

(Composition of Diphtheria Antitoxin.)

Beitrag path. Chem., 1, p. 362. (Am. Jour. Pharm., 90, p. 779;

The original was not available.

Proscher, ---. 1902

(Antitoxin.)

D. R. P. K., 30, p. 13757. (Am. Jour. Pharm., 90, p. 773;

(Describes attempts to establish the non-protein nature of antitoxin by digesting the serum with trypsin.)

Proscher, ---. 1902

Uber eiweissfreies Diphtherieantitoxin.

Munch. Med. Woch. 1902, 2, p. 1176. (Drugg. Cir., 46, p. 234;

Proves that antitoxins do not belong to the albuminoid class of compounds.

Brieger, L. 1903

(Diphtheria Antitoxin.)

Festschrift f. R. Kock, p. 445. (Am. Jour. Pharm., 90, pp. 773;

The original was not available.

Eccles, R. G. 1903

The Forthcoming Pharmacopoeia.

Am. Drugg., 43, p. 173.

Discusses the antitoxin & serums standards to be included in the next revision of the U.S.P.

(Editor.) 1903

Antitoxin Standards for the Pharmacopoeia.

Am. Drugg., 42, p. 196.

Tells of work done by a Sub-committee of the U.S.P. revision on antitoxin.

(Editor.) 1903

The Sale of City Antitoxin to be Discontinued.

Am. Drugg., 43, p. 21.

Health Commissioner of New York City recommends that the sale of the city's antitoxin to persons outside the city be discontinued.

(Editor.) 1903

Health Department Antitoxin.

Am. Drugg., 43, p. 281.

Gives Health Commissioner's of the City of New York reply to criticism of the supplying of antitoxin.

(Editor.) 1903

Free Milk vs. Free Antitoxin.

Drugg. Cir., 47, p. 223.

An editorial on the distribution of free antitoxin in New York City.

Lindelsheim, ---. 1903

Ausfallung baktericider und globulicider Blutfermente durck Pflanzenschleim

Zeits. f. Hyg., 42, p. 308; (Am. Jour. Pharm., 90, p. 768;

Describes the production of more concentrated serum by precipitating the active ingredients.

Remington, J. P. 1903

Meeting of the Diphtheria Antitoxin Committee.

Am. Jour. Pharm., 75, p. 186.

Reports the names of the members present at the meeting, their discussion on serum tests and preservatives in the serum.

(Editor.) 1904

The Truth about Antitoxin.

Bull. Pharm., 18, p. 45.

Discusses the truth of a report that three manufacturers of serum had combined to form a serum trust.

(Editor.) 1904

Antitoxin Prices.

Am. Drugg., 44, p. 38.

Discusses articles alleging the formation of a trust by the manufacturers of diphtheria antitoxin and an advance in the price of the product.

(Editor.) 1904

The New Jersey Antitoxin Law.

Drugg. Cir., 48, p. 89.

A discussion of the New Jersey Antitoxin Law, which was not passed.

(Editor.) 1904

Statistics on the Use of Diphtheria Antitoxin.

Drugg. Cir. 48, p. 123.

Gives statistics on the use of diphtheria antitoxin in Chicago.

Hewlett, R. T. 1904

Diphtheria Antitoxin.

Pharm. Jour., 73, p. 377. (Proc. A. Ph. A., 53, p. 850.

A short description of the physical and chemical properties of diphtheria antitoxin.

Moll, I. 1904

(Effect of Heat on Serum.)

Beitr. z. Physiol. u. Path. Chem., 4, p. p. 563. (Am. Jour. Pharm., 90, p. 780;

The original was not available.

Pilcher, A. M. 1904

Administration of Antidiphtheritic Serum by Mouth.

Brit. Med. Jour., 1904, V. 2, p. 1751. (Apothek zeitg, 20, p. 155; Am. Jour. Pharm., 77, p. 286;

Reports the administration of diphtheria serum by mouth with good results.

Biltz. W., Much, ---. & Siebert, ---. 1905

(Composition of Diphtheria Toxin and Antitoxin.)

Beitr. z. exper. Therap. von Behring ---, p. ---. (Am. Jour. Pharm., 90, p. 768;

The original was not available.

(Editor.) 1905

Pure Antitoxin: What it involves.

Bull. Pharm., 19, p. 59.

Diphtheria Antitoxin, Gives tests used in its manufacture to insure pure diphtheria antitoxin.

Gibson, R. B. 1905

The Concentration of Antitoxin for Therapeutic Use

Jour. Biol. Chem., 1, p. 161. (N. Y. Med. Jour., 83, p. 92; Drugg. Cir., 50, p. 89; Am. Jour. Pharm., 90, pp. 767, 775 & 780; Dispens. US.A. 19 ed., p. 1120; ibid., 22 ed., p. 148;

Discusses precipitated diphtheria antitoxin as to preparation and its therapeutic advantages.

Hewlett, R. T. 1905

Diphtheria Antitoxin.

Pharm. Jour., 74, p. 34.

Discusses the use of diphtheria antitoxin containing several strains of diphtheria bacilli as well as the toxin.

New York Druggist. 1905

A New Phase of the Public Service Nuisance.

Am. Drugg., 47, p. 43.

Relates his experiences with the Health Board of New York City, when distributing their diphtheria antitoxin.

Pauli, W. 1905

(Electric Charge of Diphtheria Antitoxin.)

Beitr. z. physiol. u. Path. Chem., 7, p. 531, (Am. Jour. Pharm., 90, p. 766;

The original was not available.

Rosenau, M. J. 1905

The Immunity Unit for Standardizing Diphtheria Antitoxin.

Hyg. Lab. Bull., No. 21, p. 11. (Dispens. U.S.A., 19 ed., p. 1118; 20 ed., p. 1000; Am. Jour. Pharm., 78, p. 285;

Describes the methods by which the immunity unit for measuring the strengths of diphtheria antitoxin is obtained, and the principles involved.

Sayre, L. E. 1905

The Official Antitoxin.

Drugg. Cir., 49, p. 222.

Gives reasons for and against the including of diphtheria antitoxin in the U.S.P.

Stewart, W. J. J. 1905

The Value of Antitoxin.

Pharm. Jour., 75, p. 370.

Gives data showing the value of antitoxin in the treatment of diphtheria.

Street, St. Clair. 1905

Antitoxin of Unusual Dosage, in a Case of Scarlet Fever Complicated by Diphtheria.

Med. Rec., 68, p. 819. (Dispens. U.S.A. 19 ed., p. 1121;

Discribes a case in which very large doses of diphtheria antitoxin were used, with success.

(Editor.) 1906

"The Antitoxic Unit," and the National Standard Dispensatory.

Bull. Pharm., 20, p. 3.

Discusses the definitions of an antitoxic unit given by the National Standard Dispensatory.

(Editor.) 1906

Antitoxin in New Jersey.

Drugg. Cir., 50, p. 108.

The Manmouth County Retail Druggist Association, adopts resolution protesting against a bill introduced in New Jersey providing for the erection of a state laboratory for the manufacture of antitoxins.

(Editor.) 1906

Free Antitoxin Advocates Lose in New Jersey.

Drugg. Cir., 50, p. 277.

Governor Stokes, of New Jersey, has vetoed the bill passed by legislature providing for the manufacture and distribution of diphtheria antitoxin by the State Board of Health.

Glaessner, K. 1906

Uber das Verhalten des Blutglobulins beim Immunisirungsvorgange.

Zeits. f. exper. Path., 2, p. 154. (Am. Jour. Pharm., 90, p. 779;

Discusses the effects of immunization upon the blood globulin content.

Moll, I. 1906

Zur Globulinvermehrung der Pracipitinsera.

Zeits. f. exper. Path., 3, p. 325. (Am. Jour. Pharm., 90, p. 780;

Discusses the increase of the globulins in blood after immunization.

Rosenau, M. J. & Anderson, J. F. 1906

A Study of the Cause of Sudden Death Following the Injection of Horse Serum.

Hyg. Lab. Bull., No. 29, p. 7. (Dispens. U.S.A., 19 ed., p. 1122;

Results of experiments seem to show that man may be rendered sensitive to the injection of a strange proteid, and that this explanation

must be considered as well as the status lymphaticus, which has heretofore been assigned as the cause of sudden death following the injection of horse serum.

Banzhaf, E. J., & Gibson, R. B., 1907

The Fractional Precipitation of Antitoxid Serum.

Journ. Biol. Chem., 3, p. 253; (Am. Jour. Pharm., 90, p. 777;

From data presented, conclude that the saturated sodium chloride soluble serum globulins of the higher fractions are uniformly much more potent per gram of proteid in antitoxin than are those precipitated by lower concentrations of ammonium sulfate.

Bechhold, H. 1907

Die elektrische Ladung von Toxin und Antitoxin

Muench. Med. Woch., 54, p. 1921. (Am. Jour. Pharm., 90, p. 766;

Discusses the electric charges of diphtheria toxins & antitoxin giving results of experiments done on each and mixtures of the two.

Brieger, L., & Krause, M. 1907

Neuer Beitrag Zur Konzentrierung der Immunkorper in Diphtherieserum.

Berl. klin. Woch., 44, p. 946. (Am. Jour. Pharm., 90, p. 769;

Gives a new method for concentrating diphtheria serum.

Brunner, J., & Pinkus, S. N. 1907

Beitrage zur Reindarstellung der Antitoxine

Biochem. Zeits., 5, p. 381; (Am. Jour. Pharm., 90, p. 771 & 776.

Describes a method used in preparing pure diphtheria antitoxin.

(Editor.) 1907

Contest Over Antitoxin Award.

Am. Drugg., 50, p. 152.

Reports a contest between three companies over the awarding oa a contract to supply diphtheria antitoxin and vaccine virus.

(Editor.) 1907

Distribution of Free Antitoxin in Chicago.

Am. Drugg., 51, p. 380.

Discusses the method used in Chicago in the distribution of free antitoxin.

(Editor.) 1907

Government Manufacture of Antitoxin.

Drugg. Cir., 51, p. 201.

An editorial on the bill introduced in congress for government manufacture of diphtheria antitoxin.

(Editor.) 1907

Government Manufacture of Antitoxin.

Drugg. Cir., 51, p. 242.

An article on bill introduced by Representative DeArmond of Missouri.

Field, C. W. & Teague O. 1907

The Electrical Charge of Toxin and Antitoxin.

Jour. Exp. Med., 9, p. 86. (Am. Jour. Pharm., 90, p. 766;

Discusses experiments dealing with the electrical charge of toxin & antitoxin. The experiments showed both the toxin and antitoxin to be electro-positive.

Gibson, R. B., & Collins, K. R. 1907

On the Fractionation of Agglutinins and Antitoxin.

Journ. Biol. Chem., 3, p. 238; (Am. Jour. Pharm., 90, p. 780;

Discusses frantionation of agglutinins and antitoxin, giving data on experiments carried out with various animal sera.

Ledingham, J. C. G. 1907

On the relation of the Antitoxin to the Globulin-Content of the Blood Serum During Diphtheria Immunization.

Journ. Hyg., 7, p. 65. (Am. Jour. Pharm., 90, p. 778;

A discussion with charts and results of experiments, on the relation of the antitoxin to the globulin-content of the blood serum during immunization.

Pearson, W. A. 1907

Standardization of Diphtheria Antitoxin.

Proc. Pa. Pharm. Assoc., 30, p. 233. (Proc. A. Ph. A., 56, p. 437; Am. Jour. Pharm., 79, p. 370;

Reviews the subject of obtaining & standardizing diphtheria antitoxin and the importance of its proper preservation, and of keeping a supply ready for any emergency.

Wood, H. C., Sadtler, S. P., & Remington, J. P. 1907

Serum Antidiphthericum U.S.

Disens. U.S.A., 19 ed., p. 1117; Ibid., 20 ed., p. 998; Ibid., 21 ed., p. 144; Ibid., 22 ed., p. 147.

Gives the pharmacopoeial description, history, preparation, preservatives, properties, tests, and uses of diphtheria antitoxin.

Landsteiner, K. & Pauli, W. 1908

(Chemical Charge of Diphtheria Toxin and Antitoxin.)

Wien. Med. Woch., 58, p. 1010. (Am. Jour. Pharm., 90, p. 766;

The original was not available.

Mellanby, J. 1908

Diphtheria Antitoxin.

Proc. Roy. Soc. London, Series B. 80, p. 399. (Am. Jour. Pharm., 90, p. 766;

Discusses the composition of diphtheria antitoxin, the relation of protein similiar to albumin to immunization and advances theory that the production of diphtheria antitoxin is due to an active secretion by the leucocytes.

(Editor.) 1909

Government to Manufacture and Sell Antitoxin.

Am. Drugg., 54, p. 203.

Gives the bill introduced by Representative DeArmond providing for the manufacture and sale of diphtheria antitoxin by the federal government.

Pick, E. P., & Schwarz, O. 1909

Uber die Wirkung von Salzen auf Toxine und Toxin-Antitoxinverbindungen bei Gegenwart von Serumeiweiss.

Biochem. Zeits., 17, p. 491; (Am. Jour. Pharm. 90, p. 769 & 776;

Discuss the effect of various salts upon diphtheria and tetanus toxins & antitoxins, and the method by which immune serum neutralizes toxins.

Zunz, E. 1909

Recherches Sur L'Adsorption Des Toxines Des Lysines et de Leurs Anticorps.

Arch Internat, de Physiol., 8, p. 227. (Am. Jour. Pharm., 90, p. 767;

Gives results of experiments, in which the amount of toxin and antitoxin of diphtheria adsorbed by different substances was determined.

Anderson, J. T. 1910

The Influence of Age and Temperature on the Potency of Diphtheria Antitoxin.

Hyg. Lab. Bull., 66, p. 9, (Pharm. Jour., 85, p. 359; Therap. Gaz., 35, p. 47; Ztschr. d. Allgem. osterr. Apoth-Vereins, 49, p. 100; Pharm. Zentralk., 52, p. 367;

Gives results of experiments on keeping qualities of diphtheria antitoxin, concentrated diphtheria antitoxin and dried diphtheria antitoxin.

(Editor.) 1910

Diphtheria Anti-Toxin.

Pharm. Jour., 85, p. 272.

A discussion of the free distribution of diphtheria anti-toxin.

(Editor.) 1910

Advice as to Storage of Diphtheria Antitoxin.

Pharm. Jour., 85, p. 359.

A discussion as to the length of time diphtheria antitoxin can be kept.

Abderhalden E. 1911

Diphtherieantitoxin

Bilchem. Handlexikon, V. 5, p. 518. (Am. Jour. Pharm. 90, p. 765;

Gives definition of source, physical and chemical characteristics, and the action of diphtheria antitoxin.

Banzhaf, E. J. 1911

The Preparation of Antitoxin.

John Hopkins Hospt. Bull., V. 22, p. 106. (Am. Jour. Pharm., 90, pp. 773 & 777;

Discusses the preparation and the chemical composition of diphtheria antitoxin.

(Editor.) 1911

Municipal Anti-Toxin.

Pharm. Jour., 86, p. 22.

Discusses a proposed plan for the free distribution of diphtheria antitoxin.

De Grottrau 1912

Le serum antidiphterique en potions.

Schweiz. Wschi. f. Chem. u. Pharm., 50, 11. (Yr. Bk. A. Ph. A., 1, 474;

Calls attention to the fact that the sera prepared in Switzerland are not identical in strength with the Roux sera.

"Galenicus" 1912

Res Medicae.

Pharm. Jour., 89, p. 748.

Discusses the success of diphtheria antitoxin in reducing diphtheria mortality.

Gaucher, L. 1912

Sur l'ultrafiltration au collodion.

Bull. d. Sc. Pharm., 19, p. 139. (Am. Jour. Pharm., 90, p. 767;

In a discussion on toxins, antitoxins and collodion filters, he gives data proving that diphtheria antitoxin is retained by a collodion filter.

Ito, T. 1912

Ueber die Konzentration der Serumqualitaten durch Gefrieren und uber den Einfluss hoher Kaltegrade (flussige Luft) auf die Antikorper.

Zeits. f. Immun., 15, p. 97. (Am. Jour. Pharm., 90, p. 768;

Serum repeatedly frozen & thawed, or left standing in the cold, separates into layers, and there is a tendency for certain of the immunity principles to accumulate in the lowest layer.

MacConkey, A. 1912

On the Loss in Potency of Diphtheria Antitoxin when Kept at 36°C.

Jour. Hyg., 12, p. 511. (Am. Jour. Pharm. 90, p. 768;

From experiments concludes that deterioration of diphtheria antitoxin takes place 6 times as fast at 36°C. as in an ice chest.

Sears, C. B. 1912

President's Address.

Drugg. Cir., 56, p. 403.

In an address before the New York State Pharmaceutical Association recommends that steps to be taken to prevent abuse of the free toxin distribution.

Behring, S. 1913

Immunisation against Diphtheria.

Lancet, 91, V. 1, p. 1626. (Yr. Bk. Brit. Pharm., Conf. 50, 235;

Describes and gives uses of his prophylactic against diphtheria.

(Editor.) 1913

No More Free Administration of Antitoxin in This City.

Drugg. Cir., 57, p. 165.

New York City discontinues the free administration of diphtheria antitoxin.

(Editor.) 1913

Free Antitoxin Again in This City.

Drugg. Cir., 57, p. 649.

New York City offers the free diphtheria antitoxin after Sept. 1,

between the hours 9 a.m. & 2 p.m.

(Editor) 1913

New Antidote to Diphtheria.

Pharm. Jour., 90, p. 609.

Discusses a new serum consisting of a mixture of diphtheria toxin and antitoxin.

Kissling, K. 1913

Funfte Mitteilung uber von Behrings Diphtherie-Vakzin.

Deut. Med. Woch., 39, p. 2500. (Jour. Am. Med. Assoc., 62, p. 418; Am. Jour. Pharm. 86, p. 135;

Reports on results obtained with Behring's vaccine in the immunization of children.

Mixsell, R. B. 1913

(Use of Diphtheria Antitoxin.)

Calif. State Jour. Med., pp. 297. (J. Am. M. Assoc., 61, p. 992; Yr. Bk. A. Ph. A., 2, p. 476;

(Intravenous administration of antitoxin in young children is perfectly safe when done with skill and care.)

Zunz, E. 1913

Recherches sur l'adsorption des toxines, des lysines et de leurs anticorps par l'acide silicique.

Zeits. f. Immun., 19, p. 326. (Am. Jour. Pharm., 90, p. 768;

Discusses the adsorption of toxins, lysins and their antibodies, including diphtheria toxin and antitoxin by silicic acid.

Anderson, J. F. 1914

(Antitoxin Dosage.)

Jour. Am. Med. Assoc., 63, p. 862. (Yr. Bk. A. Ph. A., 3, p. 617;

Small doses of antitoxin given early are of more value than large doses given later.

Behring, E. V. & Hagemann, R. 1914

Uber das Diphtherieschutzmittel„TA".

Berl. klin. Wochnschr., 51, p. 917. (Jour. Am. Med. Assoc., 62, 1998; Yr. Br. A. Ph. A., 3, p. 617;

Behring's mixture of toxin & Antitoxin is described and the field for its application outlined.

(Editor.) 1914

The Proper Dosage of Diphtheria Antitoxin.

Jour. Am. Med. Assoc., 63, p. 2134. (Yr. Bk. A. Ph. A., 3, p. 617;

The large doses of 100,000 units of diphtheria antitoxin given sometimes are unnecessary.

Groer, F. & Kassowitz, K. 1914

Studien uber die normale Diphtherieimmunitat des Menschen.

Zeits. f. Immunitates., 22, p. 447. (Am. Jour. Pharm., 90, p. 767;

Discusses the nature of the normal human protective substance against diphtheria, especially in the new-born. Compares the immune substance of umbilical cord blood with immune antitoxin.

Kinyoun, J. J. 1914

Cost of Diphtheria Antitoxin.

Jour. Am. Med. Assoc., 63, p. 862. (Yr. Bk. A. Ph. A., 3, p. 616;

An estimation of the cost of diphtheria antitoxin just after the precipitating method was introduced.

Park, W. H. 1914

Diphtheria Antitoxin.

Jour. Am. Med. Assoc., 63, p. 863. (Yr. Bk. A. Ph. A., 3, p. 617;

Only a single dose of antitoxin is required to cure the disease.

Park, W. H. & Zingher, A., & Serota, M. H. 1914

Active Immunization in Diphtheria and Treatment by Toxin-Antitoxin.
Jour. Am. Med. Assoc., 63, p. 859. (Dispens. U.S.A., 22 ed, p. 1142;
Gives results obtained in active immunization using toxin-antitoxin.

(Remington J. P. Chairman) 1914

Abstract of Proposed Changes with New Standards and Descriptions.
Jour. Am. Pharm. Assoc., 3, pp. 984, 1100, & 1563; (Yr. Bk. Brit. Pharm. Conf., 52, p. 318;
Suggested modifications to the monograph on Serum antidiphthericum in the U.S.P.

Woody, S. S. 1914

The use of Antitoxin in Diphtheria.
Jour. Am. Med. Assoc., 63, 861; (Yr. Bk. A. Ph. A., 3, p. 617;
Claims that diphtheria antitoxin as generally used is given in too small doses.

Banzhaf, E. J., & Framulener, L. W. 1914-15

(Collected Studies.)

Bureau of Laboratories, N. Y., 8, p. 208. (Am. Jour. Pharm., 90, p. 776;

The original was not available.

Banzhaf, E. J., Suguira, K. & Falk, K. G. 1914-15

(Collected Studies.)

Bureau of Laboratories, N. Y., 8, p. 213. (Am. Jour. Pharm., 90, p. 778;

The original was not available.

Glenny, A. T. & Walpol, G. S. 1915

Detection and Concentration of Antigens by Ultrafiltration.

Biochem. Jour., 9, p. 299. (Am. Jour. Pharm., 90, p. 767;

Describes a process of ultrafiltration for the concentration and purification of diphtheria toxin.

Ostromisslenski, I. I. 1915

(Diphtheris Antitoxin.)

Journ. Russ. Phys. Chem. Soc., 47, pp. 263 & 301. (Journ. Chem. ---., 107, p. 751; Am. Jour. Pharm., 90, p.781;

The original was not available.

Schorer, E. H. 1915

Intravenous Injection of Diphtheria Antitoxin in Children.

Am. J. Dis. Child., 9, p. 59. (J. Am. Med. Assoc., 64, p. 368; Yr. Bk. A. Ph. A., 3, p. 394;

Results obtained by intravenous injection of diphtheria antitoxin are compared to those obtained by subcutaneous injection.

Taylor, W. W. 1915

Toxins & Antitoxins.

Chemistry of Colloids, P. 309. (Am. Jour. Pharm., 90, p. 767;

Discusses the type of reaction occurring between toxins and antitoxins.

Heinemann, P. G. 1916

The Refinement and Concentration of Antitoxins.

Journ. Infect. Dis., 19, p. 431. (Am. Jour. Pharm., 90, p. 781;

Describes a new method for refining and concentrating antitoxins.

Rakuzin, M. A. 1916

(Optical Activity of Albumins.)

J. Russ. Phys. Chem. Soc., 8, p. 1251. (Am. Jour. Pharm., 90, p. 778;

The original was not available.

Rakuzin, M.A. 1916

(Composition of Diphtheria Antitoxin.)

J. Russ. Phys. Chem. Soc., 48, p. 465. (Am. Jour. Pharm., 90, p. 770;

The original was not available.

Crawford, A. C. & Andrus, C. L. 1917

Some Experiments on the Chemical Reactions of Diphtheria Antitoxins.

Am. Jour. Pharm., 89, p. 158; (Yr. Bk. A. Ph. A., 6, p. 474;

Report experiments on data to determine the reaction of diphtheria antitoxin with various reagents and if it could be separated from the globulins.

Crawford, A. C. & Foster, M. G. 1918

The Chemistry of Diphtheria Antitoxin--A Review.

Am. Jour. Pharm., 90, p. 765. (Yr. Bk. A. Ph. A., 7, p. 541;

Report the reactions of Diphtheria Antitoxin with various reagents.

Meyer, K. F., Hurwitz, S. H. & Taussig, L. 1918

Albumin-Globulin Ratio in Antitoxic Immunity.

Journ. Inf. Dis., 22, p. 1; (Am. Jour. Pharm., 90, p. 780;

Although serum globulins increase markedly during the course of immunization with diphtheria, tetanus & botulism toxins, no constant relationship is demonstrable between the percentage increase in the serum globulin and the antitoxic potency of the serum.

Dubuorg, ---. & Guenard, ---. 1920

(The Use of Diphtheria Antitoxin.)

Jr. de Med. Bordeaux, 91, p. 81. (J. Am. Med. Assoc., 74, p. 1130; Pharm. Jour., 104, p. 545;

(A comparison of mortality due to diphtheria before and after the introduction of diphtheria antitoxin.)

(Editor.) 1921

Diphtheria Antitoxin and Diphtheria Bacilli

Jour. Am. Med. Assoc., 76, p. 41. (Yr. Bk. A. Ph. A., 10, p. 545.

Says that Diphtheria Antitoxin has no value as a prophylactic against the disease.

Glenny, A. T. & Allen. K. 1921

The testing of Diphtheria Toxin & Antitoxin by Intracutaneous Injection into Guinea-Pigs.

Jour. Path. & Bact., 24, p. 61. (Dispens. U.S.A., 22 ed., p. 1145;

Describes a method used in testing diphtheria toxin and antitoxin.

Park, W. H., Schroder, M. C. & Zingher, A. 1923

The Control of Diphtheria.

Am. Jour. Pub. Health, 13, p. 23. (Dispens. U.S.A., 22 ed., p. 1143.

Gives a history of diphtheria immunization in New York City.

Schmidt, ---. 1923

Sur Le Titrage du Serum Antidiphterique.

Comp-rend., 88, p. 105. (Dispens. U.S.A., 22 ed., p. 1144)

Describes a method for determining the antigenic value of diphtheria toxin.

Anderson, J. F. & Lloyd, G. F. 1924

Effect of Freezing on Diphtheria Toxin-Antitoxin Mixtures.

Jour. Am. Med. Assoc., 82, p. 1679. (Yr. Bk. Brit. Pharm. Conf., 61, p. 51.

Report their results of experiments on the effects of freezing on diphtheria Toxin-antitoxin mixtures.

Kirkbride, M. B. & Dow, J. E. 1924

Observations on the Effect of Freezing on Diphtheria Toxin-Antitoxin Mixtures.

Jour. Am. Med. Assoc., 82, p. 1678. (Yr. Bk. A. Ph. A., 13, p. 132; Yr. Bk. Brit. Pharm. Conf., 61, p. 51;

Report that freezing diphtheria toxin-antitoxin mixtures seemed to decrease the toxic power of the preparation slightly.

White, B. & Robinson, E. 1924

Effect of Exposure to Low Temperatures on Diphtheria Toxin-Antitoxin Mixture.

Jour. Am. Med. Assoc., 82, p. 1675. (Yr. Bk. A. Ph. A., 13, p. 132; Yr. Bk. Brit. Pharm., Conf., 61, p. 51;

Report that exposure of toxin-antitoxin mixtures to temperatures of 10 F. or less for periods of 6 hours or more causes the separation of the antitoxin from the toxin.

Berthelot, A. & Ramon, G. 1925

(Sur les agents de transformation des toxines en anatoxïnes.)

Repert. pharm., 36, p. 108; (Compt. rend. Acad. sci., 180, p. 340; Yr. Bk. A. Ph. A., 14, p. 122;

(Reports the changing of toxins into anatoxins by the use of heat & formaldehyde.)

Ramon, G. 1925

Sur L'Anatoxine Diphterique et sur les Anatoxines en General.

Ann. Inst. Pasteur, 39, p. 1. (Jour. Soc. Chem. Ind., 44, p. 226; Yrbk. A. Ph. A., 14, p. 132; Yrbk. Brit. Pharm. Conf., 62, p. 229;

Describes the use of diphtheria toxin treated with formaldehyde for the hyperimmunization of horses.

Besredka, A. 1926

De L'Emploi Des Serums Therapeutiques Chez Le Cobaye, Sous Forme De Creme, Par La Voie Cutanee.

Compt. Rend. Soc. Biol., 95, p. 1228. (Pharm. Jour., 118, p. 693; Yr. Bk. A. Ph. A., 16 & 17, p. 533;

Reports the successful use of diphtheria antiserum in ointment form.

Glenny, A. T. Pope, C. G., Waddington, H., & Wallace, U. 1926

Immunological Notes.

Jour. Path. & Bact., 29, p. 31. (Dispens. U.S.A., 22 ed., p. 1144;

Gives the antigenic values of toxin-antitoxin precipitate of Ramon, precipitated toxoid and toxoid precipitated by potassium alum.

Ramon, G. 1926

(Anatossina.)

Pediatria, 33, p. 1312. (Am. J. Diseases of Children, 32, 285;

Gives the method of production & uses of Anatossina)

(Editor.) 1927

Diphtheria Toxoid.

Am. Jour. Pharm., 99, p. 189.

Describes a new product Diphtheria Toxoid manufactured by H. K. Mulford Co.

(Editor.) 1927

Diphtheria Toxoid

Drugg. Cir., 71, p. 352.

Gives a short discription of the product and by whom it is manufactured

Horn, D. W. 1927

An Observation Upon Diphtheria Immunes.

Am. Jour. Pharm., 99, p. 482. (Yr. Bk. A. Ph. A., 16 & 17, p. 176.

Tells of the differences between immunized contacts and non-immunized contacts.

Wadsworth, A. B. 1927

Production and Standardization of Diphtheria Antitoxin.

Standard Methods, 1 ed., p. 340. (Dispens. U.S.A., 22 ed., p. 148;

Describes the method used in production and the standardization of diphtheria antitoxin in the New York State Department of Health.

Watson, A. F. & Langstaff, E. 1927

Precipitation of Diphtheria Toxoid

Biochem. Journ., 21, I, p. 426. (Chem. & Drugg., 106, p. 744;
Yr. Bk. A. Ph. A., 16 & 17, p. 523;

Reports the results of experiments in the precipitation of diphtheria toxoid with ammonium sulfate.

Abt, G. 1928

Sur La Purification de la Toxine Diphterique au Moyen Bes Precipites de Phosphates de Charx.

Ann. Instit. Pasteur, 42, p. 1336; (Squibb Abstr. Bull., 1, p. 4; Yr. Bk. A. Ph. A., 16 & 17, p. 762;

Describes a method of purifying diphtheria toxin by means of phosphate of lime precipitation.

(Editor.) 1928

Diphtheria Toxoid.

Jour. Am. Med. Assoc., 91, p. 321. (Yr. Bk. A. Ph. A., 16 & 17, p. 762;

Gives the method of preparation, how administered, and sizes of diphtheria anatoxin on the market.

(Editor.) 1928

Diphtheria Toxoid.

Jour. Am. Med. Assoc., 91, p. 883. (Yr. Bk. A. Ph. A., 16 & 17, p. 763;

Gives the method of preparation of diphtheria toxoid, and the size packages in which it is marketed.

Glenny, A. T. Pope, F. G. & Waddington, H. 1928

The Stability of Schick Toxin.

Jour. Path. & Bact., 31, p. 133. (Am. Jour. Hyg., 22, p. 511.

Gives a summary of the factors influencing the stability of dilutions of diphtheria toxin used in the Schick test.

Locke, A. & Main, E. R. 1928

Investigation of Proposed Colorimetric Method for Filtration of Diphtheria Toxins.

Jour. Am. Med. Assoc., 90, p. 259. (Quart. Journ. & Yr. Bk. Pharm., p. 151;

A proposed calorimetric method for standardization of diphtheris toxins proved useless.

Ramon, G. 1928

Sur La Stabilite Des Proprietes De L'Anatoxine Diphterique.

Compt. rend. soc. biol., 98, p. 1504. (Squibb Abstr. Bull., 1, 25, 5; Yr. Bk. A. Ph. A., 16 & 17, p. 761;

Reports on the stability of diphtheria anatoxin, under all conditions.

Rhoads, P, S. 1928

Commercial Preparations of Diphtheria Toxin-Antitoxin.

Jour. Am. Med. Assoc., 90, p. 254. (Quart. Jour. & Yr. Bk. Pharm., 1, p. 151;

The potency of commercial preparations vary; for best results the potency must be carefully controlled.

Cecil, R. L. 1929

Diphtheria.

Textbook of Medicine, 2 ed., p. 103. (Dispens. U.S.A., 22 ed., p. 151;

If patients having diphtheria are treated with antitoxin within the first twenty-four hours of the disease nearly every patient can be saved.

(Editor.) 1929

Anatoxin.

Am. Drugg. 80, October, p. 104.

Gives a discription of Toxoid produced by H. K. Mulford Co., of Philadelphia.

Glenny, A. T. 1930

Insoluble Precipitates in Diphtheria and Tetanus Immunization.

Brit. Med. Jour., 1930, 2, p. 244. (Lancet, 115, 1, p. 1068;

The immunity produced by the precipitate, formed by addition of alum to toxoids, is greater than that produced by toxoid alone.

Harrison, W. T. 1930

The Immunizing Value of Diphtheria-Toxin-Antitoxin Mixture and of Diphtheria Toxoid.

Public Health Report, No. 33, p. 1883. (Dispen. U.S.A., 22 ed., p. 1145.)

Gives results of experiments comparing the immunizing value of the toxin-antitoxin and of the toxoid.

Johan, B., & Tomcsik, J. 1930

Uber die Aktive mit Diphtherie-Anatoxin in Ungarm.

Klin. Wochenschr. 1930, V. 2, 1868. (Am. Jour. Hyg., 22, p. 511;

Discusses results obtained in Hungary by immunization with Diphtheria Anatoxin.

Nesbit, O. B. 1930

(Diphtheria Immunization.)

Jour. Ind. State Med. Assoc., 23, p. 479. (Squibb Abstr. Bull., 3, p. A-1003; Yr. Bk. A. Ph. A., 19, p. 119;

(Gives statistical information regarding immunization against diphtheria in Gary, Ind., since 1919.)

Ramon, G. 1930

L. Anatoxine Diphterique Dans Son Application a L'Immunisation Active De L'Homme Et A La Prophylaxie de La Diphterie.

Ann. In. Past., 45, p. 291. (Dispens. U.S.A., 22 ed., p. 1144;

Describes a method of immunizing with diphtheria anatoxin, and gives figures proving the value of the use of anatoxin.

Schmidt, S. 1930

Influence De Divers Sels Sur La Stabilite de La Toxine Diphterique.

Compt. rend. soc. biol., 103, p. 93. (Squibb Abstr. Bull., 3, A-160; Yr. Bk. A. Ph. A. 19, p. 77;

Compares the stability of diphtheria antitoxin to the toxin, the antitoxin proving more stable toward various chemical agents.

Schmidt, S. 1930

Influence De Divers Sels Sur La Stabilite De La Toxine Diphtherique.

Compt. rend. soc. biol., 103, p. 95. (Squibb Abstr. Bull., 3, A-161; Yr. Bk. A. Ph. A., 19, p. 78;

The effect of various sodium salts on the stability of diphtheria toxin.

Schmidt, S. 1930

Sur La Stabilite De La Toxine Diphtherique.

Compt. rend. soc. biol., 103, p. 104. (Squibb Abstr. Bull., 3, p. 161; Yr. Bk. A. Ph. A., 19, p. 78;

Gives results of experiments on the stability of diphtheria toxin when heated.

Schmidt, S. 1930

L'Epreuve De L'innocuite Des Anatoxines Purifiees et Hyperconcentrees.

Compt. rend. soc. biol., 105, p. 329. (Squibb Abstr. Bull., 3, p. A-1179; Yr. Bk. A. Ph. A., 19, p. 106;

Tests for the innocuousness of diphtheria toxoid.

Schmidt, S. 1930

Sur L'Emploi Des Anatoxines Purifees et Hyperconcentrees Dans La Prophylaxie Antidiphterique De L'Homme.

Compt. rend. soc. biol., 105, p. 337. (Squibb Abstr. Bull., 3, p. A-1179; Yr. Bk. A. Ph. A., 19, p. 118;

A discussion of the steps that would seem to be most reasonable on the basis of animal experiments to be taken in the antidiphtherial immunization of humans with purified anatoxins.

Bunney, ---. 1931

(Schick Test Solution in Diphtheria.)

Immunology, Jan, p. 71. (Dispens. U.S.A., 22 ed., p. 1146;

(Describes a Schick Test Solution which retains its potency in diluted form for a number of months.)

Fraser, D. T. 1931

The Technique of a Method for the Quantitative Determination of Diphtheria Antitoxin by a Skin Test in Rabbits.

Trans. Royal Soc. Canada, 25, Sect. V, Biol. Sc., p. 175. (Am. Jour. Hyg., 22, p. 511;

Describes in detail a method for determining the strength of diphtheria antitoxin by a skin test in rabbits.

Glenny, A. T., & Barr, M. 1931

Alum-Toxoid Precipitates as Antigens.

Jour. Path. & Bact., 34, p. 118. (Am. Jour. Hyg., 22, p. 511.

Alum-toxoid precipitates have a very high antigenic content.

Glenny, A. T. & Barr, M. 1931

The Precipitation of Diphtheria Toxoid by Potash Alum.

Jour. Path. Bact., 34, p. 131. (Lancet, 115, 1, p. 1068;

Gives results of experiments on the method of preparation of precipitated toxoid.

Glenny, A. T. Buttle, G. A., & Stevens, M. F. 1931

Rate of Disappearance of Diphtheria Toxoid Injected Into Rabbits and Guinea-Pigs: Toxoid Precipitated with Alum.

Jour. Path. & Bact., 34, p. 267. (Am. Jour. Hyg., 22, p. 511;

Experiments show that the increased antigenic efficiency of alum toxoid is due to the resulting slow absorption and elimination.

Grundy, E. 1931

The Rational Dosage of Diphtheria Antitoxin.

Brit. Med. Jour., 1931, V. 2, p. 1132. (Squibb. Abstr. Bull., 5, p. 33; Yr. Bk. A. Ph. A., 20 & 21, p. 398;

Discusses the average dose and the method of administering diphtheria antitoxin.

Moerch, J. R. 1931

Purification et Concentration du Serum Antidiphterique.

Compt. rend. soc. biol., 108, p. 549. (Squibb Abstr. Bull., 4, p. A-1591; Yr. Bk. A. Ph. A., 20 & 21, p. 81;

Describes a method of purification and the concentration of diphtheria antiserum.

Schmidt, S. 1931

Sur La Production De La Toxine Diphterique.

Compt. rend. soc. biol., 106, p. 308. (Squibb Abstr. Bull., 4, p. A-290; Yr. Bk. A. Ph. A. 20 & 21, p. 79;

Gives a method of producing Diphtheria Toxoid.

Schmidt, S. 1931

Sur Le Mode De Preparation Des Toxines et Anatoxines Diphteriques Purifiees et Hyperconcentrees.

Compt. rend. soc. biol., 107, p. 327. (Squibb Abstr. Bull., 4, p. 822; Yr. Bk. A. Ph. A., 20 & 21, p. 82;

Gives a method of preparing diphtheria toxin.

Tasman, A. & Pondman, A. B. F. A. 1931

Zur Reinigung des Diphtherietoxins und Anatoxins.

Z. Imun Forsch., 72, p. 245. (Physiol. Abstr., 17, p. 80; Yr. Bk. A. Ph. A., 20 & 21, p. 340;

Describe a method of purification of diphtheria toxin & toxoid.

Fitzgerald, J. G., & Defries, R. D., Fraser, D. T., Moloney, P. J. 1932 & McKinnon, N. E.

Experiences with Diphtheria Toxoid In Canada.

Am. Jour. Pub. Hlth, 22, p. 25. (Dispens. U.S.A., 22 ed., p. 1144;

Discusses the results obtained in Canada by the use of diphtheria toxoid.

Harrison, W. T. 1932

Advantages of Toxoid in Diphtheria Prophylaxis.

Am. Jour. Pub. Health, 22, p. 17; (Squibb Abstr. Bull., 5, p. A-264, Yr. Bk. A. Ph. A., 20 & 21, p. 398;

Gives a brief review of the development of toxoid and toxin-antitoxin immunization with an evaluation of each method.

Pope, C. G. & Smith, M. L. 1932

The Routine Preparation of Diphtheria Toxin of High Value.

Jour. Path., 35, p. 573. (Squibb. Abstr. Bull., 5, p. 1027; Yrbk. A. Ph. A., 20 & 21, p. 339;

Gives a method of preparation of diphtheria toxin.

Saunders, J. C. 1932

Observations on the Use of Alum-Toxoid as an Immunising Agent Against Diphtheria.

Lancet, 110, 2, p. 1047. (Lancet, 115, 1, p. 1068.

From observations concludes that alum-toxoid is superior to toxin-antitoxin in the prevention of diphtheria.

Smith, M. L. 1932

The Precipitation of Diphtheria Toxoid by Metallic Salts and the Antigenic Value of the Precipitates so Formed.

Jour. Path. & Bact., 35, p. 663. (Am. Jour. Hyg., 22, p. 511;

Reports the results of experiments, that diphtheria toxoid can be precipitated from solution by salts of most metals having insoluble hydroxides, by some phosphates and by various gelatinous precipitates. The washed precipitates are in general better antigens than the original toxoid.

Stodel, G. & Bourdin, A. 1932

Relation entre le pouvoir toxique et le pouvoir antigene des toxines diphteriques.

Compt. rend., 194, p. 1687. (Squibb Abstr. Bull., 5, A-717; Yr. Bk. A. Ph. A., 20 & 21, p. 363;

(Discusses the relation of the toxic and antigenic power of diphtheria toxin.)

Wells, D. M., Graham, A. H. & Havens, T. C. 1932

Diphtheria Toxoid Precipitated with Alum.

Am. Jour. Pub. Hlth., 22, p. 648. (Am. Jour. Hyg., 22, p. 511;

Give a method of preparation and the advantages of Precipitated Toxoid.

Belin, M., Mutermilch, S. & Salamon, E. 1933

Action De Diverses Substances Protectrices Sur La Resistance de La Toxine Diphterique A L'action De La Chaleur et du Vieillissement.

Compt. rend. soc. biol., 112, p. 847. (Squibb Abstr. Bull., 6, p. A-900; Yr. Bk. A. Ph. A., 22, p. 88;

A report on experiments investigating the protective action of several substances on the resistance of diphtheria toxin to heat and aging.

Gershenfeld, ---. 1933

(Diphtheria Antitoxin.)

Bacteriology and Sanitary Science, ---, ---. (Dispens. U.S.A. 22 ed., p. 149;

The original was not available.

Havens, L. C. & Wells, D. M. 1933

Precipitated Diphtheria Toxoid.

J. Infectious Diseases, 53, p. 138; (Squibb Abstr. Bull., 6, p. A-1051, Yr. Bk. A. Ph. A., 22, p. 87;

Describe the preparation of and the antigenic activity of diphtheria anatoxin.

Hottinger, A. & Toepfer, ---. 1933

Uber den Wert Der Serumtherapie bei Diphtherie, insbesondere bei der malignen, toxischen form.

Zeits. f. Kinderhulk, 54, p. 505. (Squibb Abstr. Bull., 6, p. 918; Yrbk. A. Ph. A., 22, p. 149;

Discusses the ergotropic, unspecific action of proteins in horse blood in the healing of diphtheria.

Leonard, G. F. & Holm, A. 1933

Purification of Diphtheria Toxoid.

Jour. Infec. Diseases, 53, p. 376. (Squibb Abstr. Bull., 7, p. A-9; Yrbk. A. Ph. A., 23, p. 72;

Discuss the methods of purifying diphtheria toxoid, and compare the immunizing value of crude and precipitated toxoids.

Marble, M., Dimitriu, O. & Stefanesco, V. 1933

Role de L'Acetate De Sodium Dans la Production de La toxine Diphterique.

Compt. rend. soc. biol., 113, p. 487. (Squibb Abstr. Bull., 6, p. A-918; Yr. Bk. A. Ph. A. 22, p. 88;

Discusses the effect of sodium acetate upon the production of diphtheria toxin.

Park, W. H. & Williams, A. W. 1933

Diphtheria Bacillus.

Pathogenic Microorganisms, 10 ed., p. 411. (Dispens. U.S.A. 22 ed., p. 151;

Gives method of production, use, when it should be administered and the dangers of giving injections of diphtheria antitoxin.

Park, W. H. & Williams, A. W. 1933

Exotoxin and Antitoxin.

Pathogenic Microorganisms, 10 ed., p. 190. (Dispens. U.S.A. 22 ed., p. 151;

Describes a method of standardizing diphtheria antitoxin.

Ramon, G. 1933

Sur La Production de la Toxine Diphterique de Valeur Antigene Intrinseque Elevee.

Compt. rend. soc. biol., 112, p. 8. (Squibb Abstr. Bull., 6, p. A-193; Yr. Bk. A. Ph. A., 22, p. 88;

Gives a method of Production of diphtheria toxin.

Ramon, G., Timbal, G. & Nelia, P. 1933

Resultats Obtenus Dans La Vaccination Antidiphterique au Moyen de Deux Injections D'une Anatoxine Naturellement Riche en Unites Antigenes.

Compt. rend. soc. biol., 112, p. 543. (Squibb Abstr. Bull., 6, p. A-262; Yr. Bk. A. Ph. A., 22, p. 113;

Discusses immunization to diphtheria by using preparations containing more anatoxic units, and fewer injections.

Saunders, J. C. 1933

The Reactions with Alum-Toxoid in Diphtheria Prophylaxis.

Lancet, 111, 1, p. 791. (Lancet, 115, 1, p. 1068;

Discusses experiments in which the effects of different alum-toxoid serums, varying in dilutions and percentage of alum, are used.

Schmidt, S. 1933

(Diphtheria Toxin)

Dansk. Tids. Farm., 7, p. 1. (Yr. Bk. A. Ph. A., 22, p. 87; Quart. Journ. & Yr. Bk. Pharm., 6, p. 248;

(Discusses the action of certain organic compounds on diphtheria toxin.)

Schmidt, S. 1933

(Diphtheria Anatoxin.)

Dansk Tidss. Farm., 7, p. 123. (Quart. Jour. & Yr. Bk. Pharm., 7, p. 153;

(Discusses the preparation of and results obtained with diphtheria anatoxin and aluminum hydroxide.)

Baker, J. N. & Gill, D. G. 1934

Precipitated Toxoid as an Immunizing agent Against Diphtheria.

Am. Jour. publ. Hlth, 24, p. 22. (Lancet, 115, 1, p. 1068;

Give results and general reactions obtained with a single injection of 1 c.c. of precipitated toxoid.

(Editor.) 1934

Diphtheria Toxoid, Alum Precipitated (Refined)

New & Non-official Remedies, 1934, p. 393. (J. Am. Med. Assoc., 102, p. 605; Quart. Jour. & Yr. Bk. Pharm., 7, p. 742;

Gives method of purification, actions, uses and dosage of refined diphtheria toxoid, alum precipitated.

Keller, A. E. & Leathers, W. S. 1934

Alum-Precipitated Diphtheria Toxoid.

Jour. Am. Med. Assoc., 103, p. 478. (Lancet, 115, 1, p. 1068;

The results obtained following the injection of 1 dose of 1 c.c. of alum-precipitated diphtheria indicate that immunity to diphtheria may be produced rapidly.

Mc. Ginnes, G. F. & Stebbins, E. L. 1934

Immunity to Diphtheria and Response to Artificial Immunization of Children in Rural Virginia.

Am. Jour. Public Health, 24, p.319. (Am. Jour. Hyg., 22, p. 511;

A study on natural immunity to diphtheria and the results obtained with artificial immunization in Rural Virginia.

Mc. Ginnes, G. F. & Stebbins, E. L. 1934

Experience with Alum Precipitated Toxoid in Virginia and Observations on the Reaction Following the Use.

Am. Jour. Publ. Hlth., 24, p. 1141. (Lancet 115, 1, p. 1068;

One dose of alum precipitated toxoid of a potency of 12.5 flocculating units per c.c. or greater produces over 90% immunity in known Shick positive individuals. Reactions following the administration of alum precipitated toxoid are not of sufficient severity to limit its use.

Monroe, J. D., & Volk, V. K. & Park, W. H. 1934

Evaluation of Diphtheria Toxoid Preparations and Methods of Immunization.

Am. Jour. Pub. Hlth., 24, p. 342. (Am. Jour. Hyg., 22, p. 511; Squibb Abstr. Bull., 7, p. 480; Yrbk. A. Ph. A., 23, p. 99;

From results of experiments concludes that toxoids are preferable to toxin-antitoxin because they produce a higher degree of immunity in a shorter time.

Walker, A. A. 1934

One Dose Alum Toxoid in Diphtheria Immunization.

Jour. Am. Med. Assoc., 103, p. 227. (Lancet, 115, 1, p. 1068; Dispens. U.S.A., 22 ed., p. 1144; Squibb Abstr. Bull., 7, p. 955; Yrbk. A. Ph. A., 23, p. 99;

Gives a brief history of alum toxoid and results obtained by its use.

Young, C. C., Bunney, W. E., Crooks, N. Cummings, G. D. & Forsbeck, F. C. 1934

The Significance of the Schick Test in the Adult.

Am. Jour. Public Health, 24, p. 835. (Dispens. U.S.A., 22 ed., p. 1146;

Describe observations made in a study on the relationship between the Schick reaction, antitoxin concentration, antigenic stimulation and age in male adults.

Zinsser, ---. & Bayne-Jones, ---. 1934

(Horse Serum Sensitivity.)

Textbook of Bacteriology, ---., p. ----. (Dispens. U.S.A. 22 ed., p. 150;

The original was not available.

Andrieu, G. & Tourniaire, A. 1935

Sur une Cuti-Reaction a La Toxine Diphterique.

Compt. rend. soc. biol., 119, p. 35. (Squibb Abstr. Bull., 8, p. A-924; Pharm. Abstr. 1, p. 270;

A report on the use of pure diphtheria toxin in determining susceptibility to diphtheria.

Bunney, W. E. 1935

Use of Intradermal Injections of Toxin-Toxoid Mixtures in Diphtheria Immunization.

Am. Jour. Pub. Health, 25, p. 623. (Pharm. Abstr. 1, p. 153;

Discusses the use of Toxin-Toxoid mixture as a Shick test preparation.

(Committee) 1935

(Regulations for Diphtheria Toxoid Sale.)

Proc. Am. Drug. Manufacturers Assoc., 24, p. 326; (Pharm. Abstr., 2, p. 3; Squibb Abstract Bull., 8, p. 1371.

Recommendations for the regulation of manufacture and sale of diphtheria toxin-antitoxin, diphtheria toxoid, & alum precipitated toxoid.)

(Editor.) 1935

Diphtherie-Formol-Toxoid, S. S. Dresden.

Pharm. Zentralh., 76, p. 180. (Pharm. Abstr., 1, p. 144;

Gives a description, and uses of Diphtheria Formol-Toxoid S S Dresden.

(Editor.) 1935

Diphtherie-Toxin-Antitoxin-Gemisch neutral „T. S. S. Dresden".

Pharm. Zentralh., 76, p. 181. (Pharm. Abstr., 1, p. 144;

(Discusses Diphtheria-Toxin-Antitoxin-Gemische neutral T. A. S. S. Dresden.)

(Editor.) 1935

Antitoxin Found O.K. by Federal Health Authorities.

Science News Letter, Febr., p. 121.

Diphtheria antitoxin manufactured by the Gilliland Laboratories, has been proved satisfactory by the National Institute of Health.

Farago, F. 1935

Ueber das Schicksal und die Wirksamkeit des Anatoxin-Prazipitaldepots im Organismus.

Z. Immunforsch., 86, p. 191. (Lancet, 115, 1, p. 1068;

Discusses the action of precipitated toxoid after it has entered the body.

Fargo, F. 1935

Immunization Against Diphtheria.

Am. Jour. Hyg., 22, p. 495. (Lancet, 115, 1, p. 1068;

Gives a method of preparing precipitated Toxoid and the results of experiments in immunization with the product.

Goldie, H. 1935

Purification et Concentration de la Toxine et de L'Anatoxine Diphteriques au Mayen du 2-Amino-Naphtalene-3-6-8- Trisulfonate de Soude.

Compt. rend. soc. biol., 119, p. 518. (Squibb Abstr. Bull., 8, p. A-924; Pharm. Abstr., 1, p. 269;

Reports a method of purification and concentration of diphtheria anatoxin.

Haine, J. E. 1935

The Use of Alum-Precipitated Toxoid in Diphtheria Immunization.

Brit. Med. Jour., 1935, 2, p. 896. (Lancet, 115, 1, p. 1068;

Gives the method of administration and the results obtained from the use of Alum-Precipitated Toxoid.

Healey, C. 1935

The Antigenic Value of Various Preparations of Diphtheria Toxoid.

Jour. Am. Med. Assoc., 105, p. 1182. (Pharm. Abstr., 2, p. 537;

Tests show the U.S. commercial toxoid is lower in antigenic value than the French preparation.

Isabolinski, M. Judenitsch, W., & Lewzow, I. 1935

Ueber die einmalige Immunisierung gegen Diphtherie mit prazipitiertem Anatoxin.

Z. Immunforsch., 85, p. 218. (Lancet, 115, 1, p. 1068;

Give results of experiments using precipitated toxoids which were precipitated by different reagents.

Jarotzky, A. T. 1935

A New Method of Treatment for Diphtheria with Antitoxic Serum.

Med. Rec., 141, p. 125. (Pharm. Abstr., 1, p. 45;

Gives in detail a new method of treatment of diphtheria with antitoxic serum, by injecting serum daily until all symptoms completely disappear.

Jungblut, C. W., & Zwemer, R. L. 1935

Inactivation of Diphtheria Toxin in Vivo & in vitro by crystalline Vitamin C.

Proc. Soc. Exptl. Biol. Med., 32, p. 1229. (Pharm. Abstr., 1, p. 153;

Reports the inactivation of diphtheria toxin by injections of vitamin C.

Kositza, L. 1935

Diphtheria Immunization.

Jour. Pediat., 7, p. 662, (Lancet, 115, 1, p. 1068;

A report of diphtheria immunization for a period of 11 years by the Los Angeles City Health Department.

Lav, D. G. 1935

(Alum Precipitated Toxoid.)

Chinese Med. Jour., 49, p. 340. (Squibb Abstr. Bull., 8, p. 799; Pharm. Abstr. 2, p. 3. Dispens. U.S.A., 22 ed., p. 1144; Lancet 115, 1, p. 1068;

Reports on immunization experiments using alum precipitated toxoid containing 9LF units per c.c.)

Leach, C. N. 1935

(Precipitated Toxoid.)

China Med. Jour., 49, p. 771. (Lancet, 115, 1, p. 1068;

The original was not available.

Moloney, P. J. & On, M. D. 1935

Purification of Diphtheria Toxoid.

Biochem. J., 29, p. 1525. (Squibb Abstr. Bull., 8, p. A-1289;

Pharm. Abstr., 2, p. 3;

Describe methods of purifing diphtheria toxoid.

Naughten, M., White, J. H. & Foley, A. 1935

Prevention of Diphtheria by the "One Shot" Method.

Brit. Med. Jour., 1935, 2, p. 898. (Lancet, 115, 1, p. 1068;

Results of experiments show that alum-Precipitated Toxoid is an immunizing agent of a very high degree against diphtheria.

Povitsky, O. R. & Eisner, M. 1935

Merthiolate Versus Phenol as a Preservative for Diphtheria Toxoids--Diluted and Undiluted at Icebox and Room Temperatures.

Jour. Immunol., 28, p. 209. (Pharm. Abstr. 1, p. 96;

Report the results of a study upon the relative value of merthiolate and phenol as a preservative of diphtheria toxoids.

Underwood, E. A. 1935

The Diphtheria Toxoid-Reaction (Moloney) Test: Its Applications and Significance.

Jour. Hyg., 35, p. 449. (Pharm. Abstr., 2, p. 124;

A discussion of the applications and significance of the Moloney Test including charts and data.

Underwood, E. A. 1935

Immunization against Diphtheria by Means of a Single Dose of Alum-Precipitated Toxoid.

Lancet, 113, V. 1, p. 137. (Pharm. Abstr., 1, p. 96; Quart. Jour. & Yrbk. Pharm., 8, p. 582;

Gives the results of experiments in which Alum-Precipitated Diphtheria Toxoid was used in immunization.

Volk, V. K. 1935

Diphtheria Immunization by One Injection.

Am. Jour. Public Health, 25, p. 430. (Dispens. U.S.A., 22 ed., p. 1144;

Results obtained indicate the superiority of alum precipitated toxoid as an immunizing agent.

Cutter, I. S. 1936

The Victory Over Diphtheria.

Chicago Daily Tribune, October 31, p. 12.

Discusses the method of curing and preventing diphtheria.

Hanzlik, P. J. & Terada, B. 1936

Protective Measures in Diphtheria Intoxication.

Jour. Pharmacol, 56, p. 269. (Pharm. Abstr., 2, p. 274;

Reports results obtained in treating experimental intoxication with digitalis, congo red alone or with digitalis or pituitary extract, sodium sulfocyanate and cevitamic acid.

Jones, F. G. 1936

Duration of Immunity following Diphtheria Prophylaxis.

Jour. Immunol., 30, p. 379. (Pharm. Abstr., 2, p. 340;

Discusses the length of immunity following immunization with diphtheria toxin-antitoxin mixture, toxoid, and alum precipitated toxoid.

Pansing, H. H., & Shaffer, E. H. 1936

Detailed Study on Diphtheria Immunization.

Am. Jour. Publ. Hlth, 26, p. 786. (Lancet, 115, 1, p. 1068;

Give results obtained on immunizing groups with 1 dose of alum Precipitated Toxoid.

Parish, H. J. 1936

Immunization Against Diphtheria with Alum-Precipitated Toxoid. (A.P.T.)

Brit. Med. Jour., 1936, 1, p. 209. (Lancet, 115, 1, p. 1068;

Describes experiment comparing the "one-shot" and the 2 dose methods in a residential and nursery school in which the natural immunity rates were low.

Prochazka, J. 1936

La Diphterie Chez les Enfants Immunises par l'Anatoxine.

Rev. d'Hyg, 58, p. 201. (Brit. Med. Jr., 1936, V. 1, p. 108A; Pharm. Abstr., 2, p. 431;

Records data obtained on diphtheria cases among people who have been immunized.

Shafton, A. L. 1936

Reactions From Alum Toxoid.

Jour. Pediat., 8, p. 676. (Lancet, 115, 1, p. 1068;

Reports that frequent abscess formation follows the use of alum toxoid in children 8 years and over.

Chesney, G. 1937

Immunization Against Diphtheria with Alum-Precipitated Toxoid.

Brit. Med. Jour., 232, p. 807. (Quart. Jour. & Yr. Bk. Of Pharm., 10, p. 279;

Gives results of immunization of 1200 children with alum-precipitated toxoid.

Cutter, S. 1937

Let's Banish Diphtheria.

Chicago Daily Tribune: September 18, p. 12.

Tells how diphtheria may be prevented.

Jensen, C. 1937

Diphtheria Immunization.

Pharm. Jour., 138, p. 410.

Discusses a new method of immunization using both subcutaneous and intranasal administration.

Saunders, J. C. 1937

Alum-Precipitated Toxoid In Diphtheria Prevention.

Lancet, 115, 1, 1064. (Quart. Jour. & Yrbk. Pharm., 10, p. 279.

Compares the results of the single injection method of immunization qith alum-precipitated toxoid compared to other methods of immunization.

Wood, H. C. Jr. & LaWall, C. H. 1937

Toxinum Diphthericum Detoxicatum.

Dispens. U.S.P., 22 ed., p. 1142.

Gives the pharmacopoeial description history, preparation, preservatives, properties, tests and uses of diphtheria toxoid.

Wood, H. C. Jr. & LaWall, C. H. 1937

Toxinum Diphthericum Diagnosticum.

Dispens. U.S.P., 22 ed., p. 1145.

Gives the pharmacopoeial description, history, preparation, preservatives, properties, tests and uses of Diphtheria Toxin for the Schick Test.

Cutter, I. S. 1939

Where Has Diphtheria Gone?

Chicago Daily Tribune, March 14, p. 8.

In an anticle on the cure & prevention of diphtheria, gives a brief history of diphtheria antitoxin, toxoids and toxin-antitoxin mixture.

(Editor.) ----

No More Diphtheria

Tile and Till, ---. p. 93.

Gives a history of diphtheria, the antitoxin, the toxoid, the toxin-antitoxin and of the alum precipitated diphtheria toxoid. Tells of ways to suggest immunization to parents.

Madsen, T. ----

(Effect of Temperature on Antitoxic Serum)

Krause, R., & Levaditi, C. "Handbuch d. Immunitatsforschung," V 2, p. 110. (Am. Jour. Pharm., 90, p. 768.

The original was not available.

Pick, E. P. ----

(Methods used in Experiments and Dialysis of Diphtheria Antitoxin.)

Krause, R. & Levadite, C., Handbuch d. Immunitatsforschung, V. 1, p. 534. (Am. Jour. Pharm., 90, p. 767;

The original was not available.

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(The) Am(erican) Jour(nal of) Pharm(acy) 1-109; 1825-1937

New Rem(edies) 1-12; 1872-1883

Pharm(aceutical) Abstr(acts) 1-2; 1935-1936

Pharm(aceutical) Jour(nal) 1-138; 1841-1937

Pharm(aceutical) Record 3-15; 1883-1893

Proc(eedings of the) A(merican) Ph(armaceutical) A(ssociation) 1-59; 1851-1911

Quart(erly) Jour(nal) & Y(ea)r-B(oo)k (of) Pharm(acy) 1-10; 1928-1937

Y(ea)r B(oo)k (of the) Ph(armaceutical) A(ssociation) 1-23; 1912-1934

Y(ea)r-B(oo)k (of the British) Pharm(aceutical) Conf(erence) 4-64; 1867-1927

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Coxe, J. R. (The) Am(erican) Dispens(atory) 1 ed., 1806; 6 ed., 1825; 7 ed., 1827; 8 ed., 1830; 9 ed., 1831;

King, J. & Lloyd, J. U. (The) Am(erican) Dispens(atory) 6 ed., 1864; 8 ed., 1872; 10 ed., 1875; 15 ed., 1881; 16 ed., 1889; 18 ed., 1898;

Stille, A. & Maisch, J. M. (The) Nat(ional) Dispens(atory) 1 ed., 1879; 2 ed., 1879; 3 ed., 1884; 5 ed., 1894;

Wood, G. B. & Bache, F. (The) Dispens(atory of the) U(nited) S(tates of) A(merica) 1 ed., 1833; 2 ed., 1834; 3 ed., 1836; 4 ed., 1839; 5 ed., 1843; 6 ed., 1845; 7 ed., 1847; 8 ed., 1849; 9 ed., 1851; 10 ed., 1854; 11 ed., 1858; 12 ed., 1865; 13 ed., 1870; 14 ed., 1879; 15 ed., 1883; 16 ed., 1892; 17 ed., 1894; 18 ed., 1899; 19 ed., 1907; 20 ed., 1918; 21 ed., 1926; 22 ed., 1937;

UNITED STATES PHARMACOPOEIA
(O-XI) (1820-1930)

and

NATIONAL FORMULARY
(I-VI) (1888-1935)

HISTORY

of

DIPHTHERIA ANTITOXINE

Serum Antidiphthericum

Antidiphtheric Serum

Diphtheria Antitoxin

A fluid separated from the coagulated blood of a horse equus cabal-/ lus Linne, immunized through the inoculation of diphtheric toxin./ It should be kept in sealed glass containers, in a dark place, at tem-/peratures between 4.5° and 15°C. (40° and 59°F.)

A yellowish or yellowish-brown, transparent or slightly turbid liquid, odor-/ less or having a slight odor due to the presence of the antiseptic used as a pre-/servative.

Specific gravity: 1.025 to 1.040 at 25°C. (77°F.)

Antidiphtheric Serum gradually loses its power, the loss in one year varying / between 10 percent and 30 percent. Each container should be furnished with / a label or statement, giving the strength of the Antidiphtheric Serum, expressed / in antitoxic units, the name and percentage by volume of the antisceptic used / for the preservation of the liquid (if such be used), the date when the Anti-/diphtheric Serum was last tested, and the date beyond which it will not have / the strength indicated on the label or statement.

The standard of strength, expressed in units of antitoxic power, should be / that approved or established by the United States Public Health and Marine / Hospital Service. /

Average Dose. 3000 units /

Immunizing dose for well persons--500 units./

Serum Antidiphthericum

Antidiphtheric Serum

Ser. Antidiph. - Diphtheria Antitoxin

A fluid, having a potency of not less than 250 antitoxic units per / mil, separated from the coagulated blood of the horse, equus caballus / Linne (Fam. Equidae), or other large domestic animal, which has been / properly immunized against diphtheria toxin. It must be kept in / sealed glass containers in a dark place, at a temperature between 4.5° / and 15°C. /

A yellowish or yellowish-brown, transparent or slightly turbid liquid, with / sometimes a slight granular deposit; nearly odorless, or having an odor due to / the presence of an antiseptic used as a preservative.

Antidiphtheric Serum gradually loses in potency, the loss in one year varying / between 10 per cent, and 30 percent. The serum must come from healthy / animals, must be sterile, must be free from toxins or other bacterial products, and / must not contain an excessive amount of preservation (not more than 0.5 per / cent of phenol or cresol, when either of these is used), and the total solids must not / exceed 20 percent. Serum of a lower potency than 250 units per mil must / not be sold or dispensed. Only such Sera may be sold or dispensed as have / been prepared and propagated in establishments licensed by the Treasury of the United States.

The United States law requires that each container of Serum sold or dispensed / by licensed establishments shall bear upon the label, in addition to the name / of the Serum, the name, address and license number of the manufacturer, and / the date beyond which the product cannot be expected to yield its specific / results. The label must also contain the laboratory number of the Serum / and the total number of antitoxic units claimed for the contents of the container.

The standard strength, expressed in units of antitoxic power, shall be that / established by the United States Public Health Service.

Average Dose--Hypodermic, 10,000 units. Protective, 1000 / units.

Serum Antidiphthericum Purificatum

Purified Antidiphtheric Serum

Ser. Antidiph. Purif.--Anticliphtheric Globulins, Concentrated Diphtheria Anti-/toxin, Diphtheric Antitoxin Globulins, Refined and Concentrated Diphtheria / Antitoxin

A solution in physiological solution of sodium chloride of certain anti-/toxic substances obtained from the blood serum or plasma of the horse, / equus caballus Linne (Fam. Equidae), or other large domestic

animal, / which has been properly immunized against diphtheria toxin. After / the serum or plasma from the immunized animal has been collected the / antitoxin-bearing globulins are separated from the other constituents / of the serum or plasma and dissolved in water, and sufficient sodium / chloride is then added to make a solution containing from 0.6 to 0.9 / percent of the salt. It has a potency of not less than 250 antitoxic / units per mil. It must be kept in sealed glass containers in a dark / place, at a temperature between 4.5°C. and 15°C.

A transparent or slightly opalescent liquid, with sometimes a slight granular / or ropy deposit, nearly odorless, or having an odor due to the presence of the / antiseptic used as a preservative. The liquid is sometimes more or less viscous./ The serum must come from healthy animals, must be sterile, must be free from / toxins or other bacterial products, and must not contain an excessive amount / of preservative (not more than 0.5 percent of phenol or cresol, when either of these is used), and the total solids must not exceed 20 percent, Serum of / a lower potency than 250 units per mil must not be sold or dispensed.

Purified Antidiphtheric Serum must comply with the requirements for / loss of potency, control, labeling, and standard for potency under Serum / Antidiphthericum.

Average Dose.--Hypodermic, 10,000 units. Protective, 1000 / units.

Serum Antidiphthericum Siccum

Dried Antidiphtheric Serum

Ser. Antidiph. Sicc.--Dried Diphtheria Antitoxin

Dried Antidiphtheric Serum is obtained by the evaporation of either / Antidiphtheric Serum or Purified Antidiphtheric Serum in a vacuum / over sulphuric acid or other desiccating agent, or by passing over it a / current of warm air freed from bacteria. It has a potency of not less / than 4000 units per gramme. It must be kept in hermetically sealed, / amber-colored glass containers free from air, at a temperature between / 4.5° and 15° C., preferably in a dark place.

The Dried Serum is either in the form of orange or yellowish flakes or small / lumps, or as a yellowish-white powder, without odor. The Serum is soluble in / nine parts of distilled water, but the solution is opalescent and slightly viscous; / it may be dissolved more readily in larger amounts of distilled water or physio-/logical solution of sodium chloride. Immediately before use the Serum must / be dissolved in recently boiled and cooled distilled water under the most rigid / aseptic conditions. The solution must be used immediately and if there should / be any serum or solution remaining, it must be discarded. Dried Antidiphtheric / Serum if kept as directed does not lose in potency, as does the liquid serum.

It must comply with the requirements for control and labeling under Serum / Antidiphthericum and the standard of strength, expressed in

units of antitoxic / power, shall be that established by the United States Public Health Service.

Average Dose - Hypodermic, 10,000 units. Protective, 1000 / units.

Antitoxinum Diphthericum

Diphtheria Antitoxin

Antitox. Diph. - Serum Antidiphthericum Purificatum U.S.P. IX, Purified Anti-/diphtheric Serum, Concentrated Diphtheria Antitoxin, Refined Diphtheria / Antitoxin, Antidiphtheric Globulins./

Diphtheria Antitoxin is an aqueous solution of certain antitoxic sub-/stances obtained from the blood serum or plasma of an animal of the / genus equus, which has been properly immunized against diphtheria / toxin. After the serum or plasma from the immunized animal has been / collected, the antitoxin-bearing globulins are separated from the other / constituents of the serum or plasma and dissolved in water. Sodium / chloride and a preservative are then added and the solution is filtered / through a bacteria-excluding filter. It has a potency of not less than / 350 antitoxin units per c.c. /

Description and physical properties. --A transparent or slightly opalescent liquid, / with sometimes a slight granular deposit, of a faint brownish, yellowish or / greenish color, nearly odorless, or having an odor due to the presence of the / antisceptic used as a preservative. Diphtheria Antitoxin must come from / healthy animals, must be sterile, free from toxins, and must not contain an / excessive amount of preservative (not more than 0.5 per cent of phenol or 0.4 / per cent of cresol, when either of these is used) and the total solids must not / exceed 20 per cent. /

Diphtheria Antitoxin must be prepared in an establishment liscensed by the / Secretary of the Treasury of the United States. The requirements for labeling / are that the outside label must bear the name Diphtheria Antitoxin and the mini-/mum number of units in the package, the lot number of the antitoxin, the name, / address and license number of the manufacturer, and a statement of the / date beyond which the minimum potency may not be maintained. This date / is one year from date of issue from the manufacturing establishment if an / excess of 20 per cent over the minimum potency has been placed in the con-/tainer, two years for a 30 per cent excess, three years for a 40 per cent excess, / or four years for a 50 per cent excess. /

The strength shall be expressed in units of antitoxic power, and the unit / shall be that of the standard Diphtheria Antitoxin distributed by the Hygienic / Laboratory of the United States Public Health Service. /

Diphtheria Antitoxin must be dispensed in the unopened glass containers in / which it was placed by the manufacturing establishment, and it should be / preserved at a temperature between 4.5° and 20°C.,

preferably at the lower limit. /

Average Dose - Curative, 10,000 units. Protective, 1000 units.

Antitoxinum Diphthericum

Diphtheria Antitoxin

Antitox. Diph. - Purified Antidiphtheric Serum, Concentrated Diphtheria / Antitoxin, Refined Diphtheria Antitoxin, Antidiphtheric Globulins. /

Diphtheria Antitoxin is a sterile aqueous solution of antitoxic sub-/stances obtained from the blood serum or plasma of a healthy anumal / of the genus equus, which has been immunized against diphtheria / toxin. After the serum or plasma from the immunized animal has / been collected, the antitoxin-bearing globulins are separated from the / other constituents of the serum or plasma and dissolved in freshly / distilled water. Sodoim Chloride and a preservative are then added / and the solution is filtered through a bacteria-excluding filter. Diph-/theria Antitoxin has a potency of not less than 500 antitoxic units per c.c. /

Description and physical properties--A transparent or slightly

opalescent liquid, / of a faint brownish, yellowish, or greenish color, nearly odorless, or having an / odor due to the presence of a preservative; it may have a slight granular / deposit. Diphtheria Antitoxin must be free from toxins, and must not / contain an excessive proportion of preservative (not more than 0.5 per cent / of phenol or 0.4 per cent of cresol, if either of these is used) and its total / solids must not exceed 20 per cent. /

Diphtheria Antitoxin must be prepared in an establishment licensed for / the purpose by the Secretary of the Treasury of the United States.

The potency of the Antitoxin shall be expressed in antitoxic units, and the / unit shall be that of the standard Siphtheria Antitoxin distributed by the / National Institute of Health of the United States Public Health Service.

The outside label must bear the name Diphtheria Antitoxin and indicate / the minimum number of antitoxic units in the package, the manufacturer's lot number of the Antitoxin, the name, address, and the license number of / the manufacturer, and the date beyond which the minimum potency of / contents, as declared on the label, may not be maintained. This date is / one year from the date of issue from the manufacturing establishment if at / that time the Antitoxin placed in the container had an excess of 20 per cent / over the declared minimum potency, two years for a 30 per cent excess, / three years for a 40 per cent excess, or four years for a 50 per cent excess.

Storage--Preserve Diphtheria Antitoxin at a temperature between 2° and 10°C., / preferably at the lower limit. It must be dispensed in the unopened glass / container in which it was placed by the manufacturer.

Average Dose--By parenteral injection, Therapeutic, 10,000 units. / Prophylactic, 1000 units.

Toxinum Diphthericum Detoxicatum

Diphtheria Toxoid

Toxin. Diphtheric. Detox. - Diphtheria Anatoxin, Anatoxin-Ramon

Diphtheria Toxoid is a sterile aqueous solution of the products of / growth of the diphtheria bacillus (Corynebacterium diphtheriae) so / modified by special treatment as to have lost the ability to cause toxic / effects in guinea pigs but retaining the property of inducing active / immunity. The toxicity of the Diphtheria Toxoid shall be so low that / five times the dose for the adult human does not cause either local or / general symptoms of diphtheria poisoning in a guinea pig within thirty / days after its injection into the animal. The antigenic value shall / be such that the initial dose for the human shall protect at least 80 per / cent of guinea pigs, six weeks after injection, against five minimum / lethal doses each of diphtheria test toxin. Some specimens are con-/centrated and purified by precipitating and washing the active

portion / of the detoxified material. Such concentrated and purified specimens / must be capable, when injected into guinea pigs, of inducing the pro-/duction of diphtheria antitoxin of such potency as is prescribed by the / National Institute of Health of the United States Public Health Service. /

Description and physical properties--a clear, brownish-yellow or decidedly turbid / liquid having a faint, broth-like odor or an odor due to the presence of a pre-/servative. Unconcentrated specimens must be clear./

Diphtheria Toxoid must be prepared in an establishment licensed for the / purpose by the Secretary of the Treasury of the United States. /

The outside label must bear the name Diphtheria Toxoid, the manufac-/turers lot number of the Toxoid, the name, address, and license number of / the manufacturer, and a statement of the date beyond which the Toxoid / may not be expected to retain the potency prescribed by Governmental / Authority. /

Storage--Preserve Diphtheria Toxoid at a temperature between 2° and 10° C. / preferably at the lower limit. It must be dispensed in the unopened glass / container in which it was placed by the manufacturer. /

Average Dose--By hypodermic injection, prophylactic, 1 c.c. /

Toxinum Diphthericum Diagnosticum

Diphtheria Toxin for the Schick Test Toxin.

Diphtheric. Diagnost. - Schick Test Toxin

Diphtheria Toxin for the Schick Test is a solution of the toxic products / of growth of the diphtheria bacillus (Corynebacterium diphtheriae)./

Description and physical properties--a transparent liquid which should be / adjusted to suitable concentration, at the time of administration, by dilution / with physiological solution of sodium chloride or other diluent so that one - / fiftieth of the minimum lethal dose of Diphtheria Toxin for the Schick Test / is contained in 0.1 cc. The minimum lethal dose of Diphtheria Toxin for the / Schick Test is defined as the smallest amount of toxin that will cause the death within ninety-six hours of a guinea pig weighing between 250 and / 280 Gm. after subcutaneous administration. The product must be sterile. / Diphtheria Toxin for the Schick Test must be prepared in an establishment / licensed for the purpose by the Secretary of the Treasury of the United States. /

The outside lab el must bear the name Diphtheria Toxin for the Schick / Test, the manufacturer's lot number of the Toxin, the name, address, and / the license number of the manufacturer, and a statement of the date beyond which the Toxin may not be expected to retain the potency prescribed by / governmental authority. /

Storage--Preserve Diphtheria Toxin for the Schick Test at a temperature between / 2° and 10°C., preferably at the lower limit. It must be

dispensed in the / unopened glass container in which it was placed by the manufacturer.

Average Dose - For determining susceptibility (Schick Test), / intracutaneous, 0.1 cc. of the dilution, representing one-/fiftieth of the minimum lethal dose.

SUMMARY OF U.S.P. and N.F. DATA of DIPHTHERIA ANTITOXIN

When official:

U.S.P. 1900, '10, '20, '30.

Official Latin Title:

Serum Antidiphthericum, U.S.P. 1900; '10.

Serum Antidiphthericum Purificatum, U.S.P. 1910.

Serum Antidiphthericum Siccum, U.S.P. 1910.

Antitoxinum Diphthericum, U.S.P. 1920; '30.

Official English Title:

Antidiphtheric Serum, U.S.P. 1900; '10.

Purified Antidiphtheric Serum, U.S.P. 1900.

Dried Antidiphtheric Serum, U.S.P. 1910.

Diphtheria Antitoxin, U.S.P. 1920; '30.

Official Abbreviation:

Ser. Antidiph. U.S.P. 1910.

Ser. Antidiph. Purif. U.S.P. 1910.

Ser. Antidiph. Sicc. U.S.P. 1910.

Antitox. Diph. U.S.P. 1920, '30.

Official Synonym:

Diphtheria Antitoxin U.S.P. 1900; '10.

Antidipheric Antitoxin Globulins, U.S.P. 1910.

Concentrated Diphtheria Antitoxin, U.S.P. 1910, '20, '30.

Diphtheric Antitoxin, Globulins, U.S.P. 1910.

Refined and Concentrated Diphtheria Antitoxin, U.S.P. 1910.

Dried Diphtheria Antitoxin, U.S.P. 1910.

Serum Antidiphthericum Purificatum, U.S.P. IX, U.S.P. 1920.

Purified Antidiphtheric Serum, U.S.P. 1920; '30.

Refined Diphtheria Antitoxin, U.S.P. 1920; '30.

Antidiphtheric Globulins, U.S.P. 1920; '30.

Scientific Name:

Equus caballus Linne, U.S.P. 1900.

Equus caballus Linne (Fam. Equidae), U.S.P. 1910.

Equus, U.S.P. 1920; '30.

Official Method of Preparation:

U.S.P. 1910; '20; '30.

Official Description:

U.S.P. 1910; '20; '30.

Official Dose:

3000 units immunizing dose,for well persons 500 units U.S.P. 1900.

Hypodermic 10,000 units. Protective, 1000 units U.S.P. 1910.

Curative 10,000 units.

Protective 1000 units U.S.P. 1920,

By parenteral injection.

Therapeutic 10,000 units.

Prophylactic, 1,000 units, U.S.P. 1930.

Official Preparations:

SUMMARY OF U.S.P. and N.F. DATA of DIPHTHERIA TOXIN

When Official:

U.S.P. 1930.

Official Latin Title:

Toxinum Diphthericum Diagnosticum, U.S.P. 1930.

Official English Title:

Diphtheria Toxin for the Schick Test, U.S.P. 1930.

Official Abbreviation:

Toxin. Diphtheric. Diagnost., U.S.P. 1930.

Official Synonym:

Schick Test Toxin, U.S.P. 1930.

Scientific name:

(Corynebacterium diphtheriae), U.S.P. 1930.

Official Method of Preparation: ---

Official Description:

U.S.P. 1930.

Official Dose:

For determining susceptibility (Schick Test), intracutaneous,

0.1 c.c. of the dilution, representing one-fiftieth of the minimum lethal dose.

Official Preparations: ----

SUMMARY OF U.S.P. AND N.F. DATA OF DIPHTHERIA TOXOID

When Official:

U.S.P. 1930.

Official Latin Title:

Toxinum Diphthericum Detoxicatum, U.S.P. 1930.

Official English Title:

Diphtheria Toxoid, U.S.P. 1930.

Official Abbreviation:

Toxin. Diphtheric. Detox., U.S.P. 1930.

Official Synonym:

Diphtheria Anatoxin.

Anatoxin-Ramon, U.S.P. 1930.

Scientific name:

(Corynebacterium diphtheriae), U.S.P. 1930.

Official Method of Preparation:

Official Description:

U.S.P. 1930.

Official Dose:

By hypodermic injection prophylactic, 1 c.c. U.S.P. 1930.

Official Preparations: ----

Approved W O Richtmann

Prof of Pharmacognosy.