

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649444427

Arsenic by J. Alfred Wanklyn

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd. Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

J. ALFRED WANKLYN

ARSENIC

Trieste

BY THE SAME AUTHOR

84

3

- MILK-ANALYSIS: A Practical Treatise on the Exsultation of Milk and its Derivatives, Crean, Butter, and Cheese. By J. A. WANELEN. Second Edition. Crown Svo, 58.
- WATER-ANALYSIS: A Treatise on the Examination of Potable Water. By J. A. WARELEN and R T. CHAP-MAN. Tuchi Edition, entirely rewritten. 12th Thousand. Crown Svo, 56.
- ATR-ANALVSIS: A Practical Treatise. By J. A. WARKETT and W. J. COPER, With Appendix on Illuminating Gas. Second Edition, Crown Svo. 58.
- BREAD-ANALYSIS: A Practical Treatise on the Examination of Flour and Bread. By J. A. WANKLYN and W. J. COOPER. Second Edition. Crown Syc, 55.
- SEWAGE ANALYSIS: A Practical Treatise on the Examination of Sewage and Efficients from Sewage. By J. A. WANKLYN and W. J. COOPER, including also a Chapter on Utilization and Purification. Crown Svo, 7s. 6d.

LONDON

KEGAN PAUL, TRENCH, TRÜBNER & CO., LTD.

1

PATRENOSTER HOUSE, CHARING CROSS ROAD, W.C.

 \mathbf{r}

.

ARSENIC

BY

PROFESSOR J. ALFRED WANKLYN, M.R.C.S.

CORRESPONDING MEMBER OF THE ROTAL BAVARIAN ACADENY OF SCIENCES, 1989 HONORARY MEMBER OF THE UNIVERSITY OF RUNDERGH ORENICAL BOCIETY FURMERLY FUELIC ATALES FOR ECCHINHAM, MIGH WYCONDE, PRTERBOROUGH, AND SHERWSBURY LECTURER ON CHEMISTRY AND PHYSICS AT SI. GRORG'S HOSPIZAL PROFESSOR OF CHEMISTRY IN THE LONDON INSTITUTION DEMONSTRATOR OF CHEMISTRY IN THE DAILORENCY OF EDINBURGH, 1550

 \mathcal{C}

LONDON

KEGAN PAUL, TRENCH, TRÜBNER & CO. L[™] PATERNOSTEB HOUSE, CHARING CROSS ROAD 1991

rida an

The rights of translation and of reproduction are reserved

5.

Printed by BALLANTYNE, HANSON & Co. At the Ballantyne Press

32

LANELBRARY

1231 7W2 1901

PREFACE

In the preface to a book like that which is now placed before the English readers, a little personal detail is not altogether uncalled for. The author is now an old English chemist who has been recognised as a chemist —at any rate in France and Germany—for forty-three years. Reference to such authorities as Poggendorff's Biographical Dictionary, published about the year 1862, will disclose the name of the author, and the English reader (if he should happen to be able to read German) may learn how it came to pass that the author of this book came to be looked upon as a chemist in the year 1858.

The author was brought up to the medical profession, served an old-fashioned apprenticeship in Manchester, and duly presented himself for examination, and passed the College of Surgeons in London in the year 1856. At that date the author occupied the humble, but very responsible position of private assistant to Frankland, the well-known eminent chemist. The popular excitement over the then recent Palmer case was at its height, and accusations of having

41822

۱

PREFACE.

poisoned for the sake of the insurance money were rife. One such case of suspected poisoning led to the sending of the supposed poisoned remains to Frankland at the Owens' College laboratory. Experience then acquired turned the attention of the author to the detection of poisons, and, in the fulness of time, after the lapse of more than forty years, this book issues forth.

÷

THE LABORATORY, NEW MALDEN, SURREY, 25th February 1901.

vi

CONTENTS

										P	AGE
PREFACE	2		22	10	(i)	58		2	() 2	1	v
INTRODUCTIO	N	(4)	32	20	S 2	0¥	13	38	2		1

CHAPTER I.

CHEMISTRY OF ARSENIC.

Section 1Arsenic in General, Arse	enic in	the	Free	or	
Metallic State		8 10	S.	•2	7
Section 2 Arsenious and Arsenic Act	ids and	their	Salta		15
Section 3 The Chloride and the Hyd	iride of	Arser	ic .		26
Section 4 Organo-Metallic Compoun	ds of A	rsenic			29
Section 5 Kakodylic Acid and its Sa	lts .				35

CHAPTER II.

DETECTION AND MEASUREMENT OF ARBENIC.

Section 1Marsh's Test	<i>9</i> 0	12	15	68	12	1.51	20	39
Section 2Reinsch's Test	Υ.	. N		, W.,		84	•	58
Section 3General Testing	and	I Esti	imati	on of	Arse	nic		68
Section 4-Special Organo-	Met	allic (Condi	tionc	f Ars	enic,	kc.	75

CHAPTER III.

THE MANCHERTER EPIDEMIC OF ARSENICAL POIBONING AND THE LESSONS TO BE LEARNT FROM IT . . . %

N

8