

**ELEMENTARY
APPLIED
CHEMISTRY**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649455225

Elementary Applied Chemistry by Lewis B. Allyn

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

LEWIS B. ALLYN

**ELEMENTARY
APPLIED
CHEMISTRY**



The Three I's of Chemistry — Interest, Industry, Individuality

ELEMENTARY APPLIED CHEMISTRY

BY

LEWIS B. ALLYN

DEPARTMENT OF CHEMISTRY, STATE NORMAL SCHOOL
WESTFIELD, MASSACHUSETTS

"For the world was built in order
And the atoms march in tune."

— EMERSON

GINN AND COMPANY

BOSTON · NEW YORK · CHICAGO · LONDON

COPYRIGHT, 1912, BY
LEWIS B. ALLYN

ALL RIGHTS RESERVED

A 9141

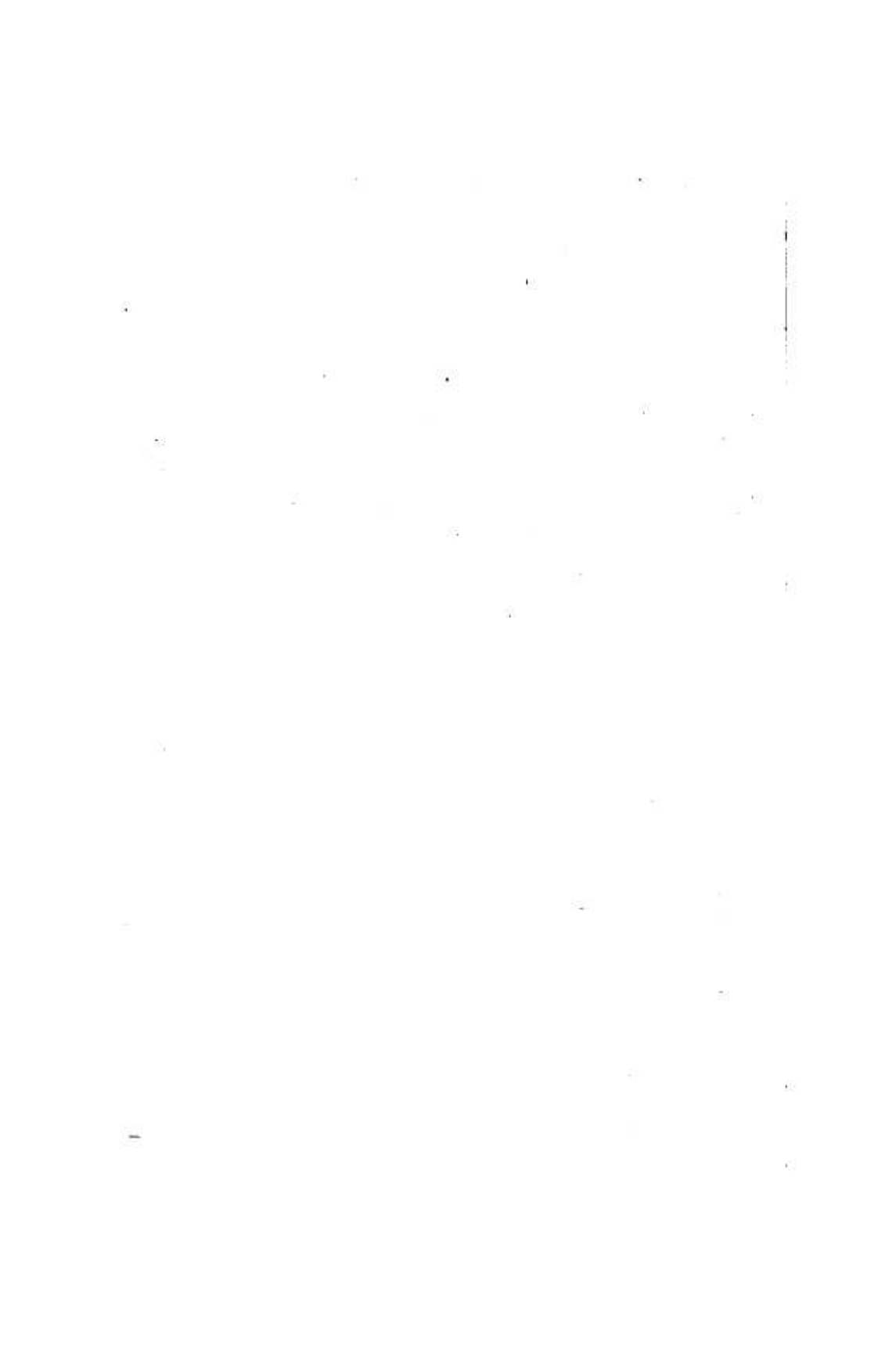
The Athenaeum Press
GINN AND COMPANY - PROPRIETORS - BOSTON - U.S.A.

621.6 5.3.4.

PREFATORY NOTE

The object of the exercises in this book is to create and to foster a real love for and interest in the great science of chemistry, to give the pupil a broader outlook on life, and to cause him to feel that he is a factor in the busy, living world.

These experiments and tests have been of personal value to hundreds of earnest students; possibly they may be of value to you. If you know of some one who would profit by the information you may receive, pass it on.



CONTENTS

SECTION	PAGE
I. FILTRATION	1
II. ACIDS AND ALKALIS	5
III. ALKALIS IN TEXTILE ANALYSIS	7
IV. ACIDS AND ALKALIS IN THE QUALITATIVE ANALYSIS OF SOILS	9
V. DETECTION OF SOME OF THE COMPOUNDS PRESENT IN PLANTS	13
VI. EXERCISES WITH STANDARD SOLUTIONS	16
VII. SANITARY ANALYSIS OF WATER	28
VIII. EXAMINATION OF BAKING POWDER	35
IX. ANALYSIS OF MILK	41
X. EXAMINATION OF ICE CREAM, CHEESE, AND CONDENSED MILK	52
XI. DISTILLATION EXPERIMENTS	54
XII. DETECTION OF COAL-TAR DYE	76
XIII. IDENTIFICATION OF VEGETABLE COLORS	79
XIV. RAFFIA DYEING	81
XV. CHEMISTRY OF STAINS	88
XVI. FOOD PRESERVATIVES	90
XVII. EXAMINATION OF TOOTH POWDERS	95
XVIII. EXPERIMENTS WITH GLUCOSE	97
XIX. EXAMINATION OF HEADACHE POWDERS	102
XX. TESTS FOR ARSENIC	105
XXI. METHOD FOR TESTING PAINT AND OILS	109
XXII. DETERMINATION OF FOOD VALUES	113
XXIII. EXAMINATION OF FLOUR	118
XXIV. SELECTED EXERCISES	121
INDEX	127

10

11

12 13

14

15

16

17

18

19

20

21

22

23 24 25

26

27