

**OUTLINE OF A SHORT COURSE IN  
QUALITATIVE CHEMICAL ANALYSIS  
ARRANGED FOR STUDENTS IN THE  
COLLEGES OF SCIENCE OF THE  
UNIVERSITY OF CALIFORNIA**

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Colleges of Science of the University of California by W. J. Sharwood

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**W. J. SHARWOOD**

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**Qualitative Chemical Analysis**

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STUDENTS IN THE COLLEGES OF SCIENCE  
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UNIVERSITY OF CALIFORNIA

BY  
W. J. SHARWOOD  
*INSTRUCTOR IN CHEMISTRY*

REVISED EDITION

1898

**EDWARD BOOTH**

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## ERRATA.

Page	16,	line	17,	for	$\text{Ca}^{II}(\text{OH})_2$	read	$\text{Ca}^{II}(\text{OH})_2$
"	17,	"	14,	"	$\text{Na}_2\text{HSO}_4$	"	$\text{NaHSO}_4$
"	32,	"	9,	"	$3\text{H}_2\text{O}$	"	$6\text{H}_2\text{O}$
"	44,	"	11,	"	(218)	"	(215)
"	60,	"	14,	"	$\text{SnCl}$	"	$\text{SnCl}_4$
"	64,	"	9,	"	$\text{H}_2\text{TeO}_2$	"	$\text{H}_2\text{TeO}_3$
"	71,	"	9,	"	$\text{HC}_2\text{H}_3\text{O}_2$	"	$\text{HC}_2\text{H}_3\text{O}_3$
"	71,	"	13,	"	$\text{H}_2\text{FeO}_2$	"	$\text{HFeO}_2$
"	79,	"	3,	"	$(\text{NH})_2\text{ClAq}$	"	$\text{NH}_2\text{ClAq}$
"	115,	"	3,	"	<i>powder</i>	"	<i>powdered residue</i>
"	116,	"	10,	"	171	"	117
"	119,	"	4,	"	$(\text{AgIO})$	"	$(\text{AgIO}_2)$
"	124,	"	25,	"	$\text{CO}$	"	$\text{Co}$
"	130,	"	2,	"	138	"	140
"	142,	"	16,	"	357	"	429

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## PREFACE.

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THE course in qualitative analysis here outlined has been followed, with slight variations, by the Freshman classes in the Colleges of Applied Science since 1893. The reduction of the number of hours allotted to this subject has made it seem advisable to spend less time at the outset on a systematic study of the reactions of the several metals and acid radicals, and a larger proportion on actual analytical work following a given scheme for separation and detection. This certainly retains the interest of students and apparently leads to the same end, if care is taken to emphasize the principles on which the methods are based. The notes in Part I on the general principles involved, and in Part 5 on the analytical schemes, are intended to accomplish this result.

The author's thanks are due to Professor Rising, Professor O'Neill and to Mr. J. H. Gray, for advice and suggestions.

W. J. S.

Berkeley, December, 1897.

EDWARD BOOTH

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The reference numbers throughout book indicate paragraphs or sections, the first numeral referring to the part of book in which the paragraph is found.

