

**CASEIN, ITS  
PREPARATION AND  
TECHNICAL UTILISATION**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649169054

Casein, its preparation and technical utilisation by Robert Scherer

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](http://www.triestepublishing.com)

**ROBERT SCHERER**

**CASEIN, ITS  
PREPARATION AND  
TECHNICAL UTILISATION**



U  
she.

# CASEIN

*Its Preparation and  
Technical Utilisation*

BY

ROBERT SCHERER

TRANSLATED FROM THE GERMAN BY

CHAS. SALTER

SECOND ENGLISH EDITION, REVISED AND ENLARGED

WITH ELEVEN ILLUSTRATIONS

LONDON

SCOTT, GREENWOOD & SON

"THE OIL AND COLOUR TRADES JOURNAL" OFFICES

8 BROADWAY, LUDGATE, E.C.

1911

*[The sole right of translation into English rests with Scott, Greenwood & Son.]*

157390 Engineering  
29.11.20. 97587

*First German Edition . . . . . 1905*  
*First English Edition . . . . . 1906*  
*Second English Edition, revised and enlarged . . . 1911*

## PREFACE.

FOR many years the sole use of milk curd was as a foodstuff, and it is only through the scientific researches of the past few decades into the albuminoid substances that attempts have been made to utilise this body technically.

It is therefore easy to understand that our knowledge of this important product should be still somewhat imperfect, especially as regards its manifold applications: communications on the subject in the technical press are rare, and it consequently seemed desirable to the author to prepare a work dealing with this material. The first part treats of the preparation of curd from milk—in all cases by the decomposition of the suspended casein compound by the aid of acid or a ferment,—and its purification and drying. Following this, will be described the application of the casein paints and painting, the production of putties, plastic masses, etc., and finally its use in modern nutrient preparations.

THE AUTHOR.

## CONTENTS.

	PAGE
PREFACE . . . . .	v
CHAPTER I.	
INTRODUCTION . . . . .	1
CHAPTER II.	
CASEIN : ITS ORIGIN, PREPARATION AND PROPERTIES . . . . .	3
The Preparation of Casein . . . . .	4
Purifying the Curd . . . . .	19
CHAPTER III.	
VARIOUS METHODS OF PREPARING CASEIN . . . . .	21
Insoluble Preparation of Casein . . . . .	30
CHAPTER IV.	
COMPOSITION AND PROPERTIES OF CASEIN . . . . .	31
CHAPTER V.	
CASEIN PAINTS . . . . .	38
"Marble Lime" Colour for Outside Work . . . . .	42
Casein Paint According to an Older Method . . . . .	45
Casein Enamel Paint . . . . .	46
Casein Façade Paint . . . . .	46
Cold-Water Paint in Powder Form . . . . .	47
Casein-Lime Colours . . . . .	48



	PAGE
Kistory's Recipe for Casein Paint and Varnish . . . . .	51
Pure Casein Paints for Walls, etc. . . . .	52
Casein Paints for Woodwork and Iron . . . . .	52
Casein Distemper Paints . . . . .	53
Casein-Silicate Paints . . . . .	55
Milk Paints . . . . .	57
Casein-Silicate Paint Recipes . . . . .	58
Trojel's Boiled Oil Substitute . . . . .	58
Calsomine Wash . . . . .	59
Quick-Drying Casein Paint . . . . .	59
Boiled Oil Substitute . . . . .	60
Ring's Cold-Water Paint . . . . .	61
Formolactin . . . . .	61
Waterproof Paint for Playing Cards . . . . .	62
Casein Colour Lake . . . . .	63
Paint for Marking Bags, Iron Barrels, Cases, etc. . . . .	64
Casein-Cement Paint . . . . .	64

## CHAPTER VI.

THE TECHNICS OF CASEIN PAINTING . . . . .	66
Compounding the Binding Medium . . . . .	70
The Preparation and Application of Casein Paints . . . . .	72

## CHAPTER VII.

CASEIN ADHESIVES AND PUTTIES . . . . .	79
Casein Glue . . . . .	81
Casein Glue in Plates or Flakes . . . . .	82
Bolder's Liquid Casein Glue . . . . .	82
Crosspietsch's Adhesive . . . . .	83
Jeromin's Casein Adhesive . . . . .	83
Casein Adhesive . . . . .	85
Hall's Casein Glue . . . . .	85
Waterproof Glue . . . . .	85
Liquid Casein Glue . . . . .	86
Powdered Casein Glue . . . . .	87
Casein and Borax Glue . . . . .	87
Casein for Mending Glass, China, etc. . . . .	88

	PAGE
Solid Casein Adhesive . . . . .	88
Casein Glue for Cardboard Boxes . . . . .	88
Casein Solution . . . . .	89
Renken's Method of Using Glue . . . . .	89
Glue Powder . . . . .	89
Casein Glue . . . . .	89
Casein Glue for Match-Making . . . . .	90
Lehner's Casein Putties . . . . .	90
Washable Cement for Deal Boards . . . . .	93
Wenk's Casein Cement . . . . .	93
Casein and Lime Cement . . . . .	94
"Pitch Barm" . . . . .	94
Casein Stopping . . . . .	94
Casein Cement for Stone . . . . .	95
Insoluble Casein . . . . .	95

## CHAPTER VIII.

THE PREPARATION OF PLASTIC MASSES FROM CASEIN . . . . .	96
Imitation Ivory . . . . .	97
Lilienthal's Plastic Mass . . . . .	98
Jung, Brecher & Kittel's Insulating Preparation . . . . .	98
Anti-Radiation and Anti-Corrosive Composition . . . . .	99
Dickmann's Covering for Floors and Walls . . . . .	99
Imitation Linoleum . . . . .	100
Imitation Leather . . . . .	100
Imitation Bone . . . . .	100
Artificial Horn, etc., from Casein . . . . .	101
Plastic Mass of Keratin and Casein . . . . .	102
Insulating Mass . . . . .	102
Plastic Casein Masses . . . . .	102
Horny Casein Mass . . . . .	103
Production of Plastic Masses from Casein . . . . .	104
Plastic Mass from Celluloid . . . . .	104
Casein-Cellulose Composition . . . . .	105
Fireproof Cellulose Substitute . . . . .	106
Nitrocellulose and Casein Composition . . . . .	107
Franquet's Celluloid Substitute . . . . .	107
Plastic Mass with a Casein Basis . . . . .	109
Galalith . . . . .	109

## CHAPTER IX.

	PAGE
USES OF CASEIN IN THE TEXTILE INDUSTRY, FOR FINISHING	
COLOUR PRINTING, ETC. . . . .	117
Caseogum . . . . .	118
" Glutin " . . . . .	118
Casein Dressing for Linen and Cotton Fabrics . . . . .	119
Argentine . . . . .	120
Printing Colour with Metallic Lustre . . . . .	121
Process for Softening, Sizing and Loading Textile Fibres, and for Treating Yarns and Fabrics . . . . .	121
Fixing Casein and other Albuminoids on the Fibre, more particularly in Dyeing . . . . .	122
Fixing Insoluble Colouring Matters . . . . .	122
Waterproofing and Softening Dressing . . . . .	123
Casein for Mercerised Crêpe . . . . .	124
Fixing Zinc White on Cotton with Formaldehyde . . . . .	124
Casein-Magnesia . . . . .	125
Casein Medium for Calico Printing . . . . .	125
Chevalott's Waterproofing Process . . . . .	125
Loading Silk . . . . .	126
Threads, Blocks, Plates, etc., of Casein . . . . .	126

## CHAPTER X.

CASEIN FOODSTUFFS . . . . .	128
Casein Food . . . . .	133
Casein as a Substitute for Egg Albumen . . . . .	133
Synthetic Milk . . . . .	133
Milk Food . . . . .	134
Emulsifiable Casein . . . . .	134
Casein Phosphate for Baking . . . . .	134
Bernstein's Baking Preparation . . . . .	135
Making Bread, Low in Carbohydrates, from Flour and Curd . . . . .	135
Higgins's Casein Food . . . . .	135
Preparing Soluble Casein Compounds with Citrates . . . . .	135
Casein Food . . . . .	136
Self's Curd "Zwieback" Rolls . . . . .	136

## CHAPTER XI.

SUNDRY APPLICATIONS OF CASEIN . . . . .	137
Uses of Casein in the Paper Industry . . . . .	137
Metachromotype Paper . . . . .	138