

focus on fabrics

by **Dorothy Siegert Lyle, Ph.D.**



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NATIONAL INSTITUTE OF DRYCLEANING

Silver Spring, Maryland

focus on fabrics

SELECTION AND
BEHAVIOR IN
DRYCLEANING



National Institute of Drycleaning: National Headquarters, Silver Spring, Maryland

Western Laboratory, Glendale, California



FOREWORD

DRYCLEANING and fabrics are synonymous—drycleaners must have a thorough knowledge of fabrics, and fabric manufacturers must produce fabrics that will withstand the processes necessary to remove the soil and stains of wear.

The National Institute of Drycleaning has, for 50 years, kept its members (and the drycleaning industry) informed of the most modern, efficient, and accepted procedures for renovating soiled garments and other textile items. It has played an important part in the growth of the industry to an annual sales volume of One and three-quarter billion dollars.

We are proud of our industry's technological advancement—we are proud of our ability to process the hundreds of different fibers and fabrics which the American textile industry develops. But we would not be realistic if we did not acknowledge the role the textile industry has played in our success—without their cooperation our progress would have been retarded. No industry in the world has made greater strides and greater improvements in its products than has the textile industry. Its scientists must produce fabrics which depend on beauty of color, texture, and design; others which must produce warmth; still others which must be cool to the wearer; some which must combine all these properties; and above all—fabrics which will give the consumer the degree of wearability and serviceability she requires.

This is no easy task. And it is no easy task for the drycleaner to renovate these fabrics and retain the characteristics they possess when new. If sometimes we fail, it is understandable, whether it is the fault of drycleaning or of the fabric itself. Our failures are few, our successes, many.

Excellent books have been written on textiles; the National Institute of Drycleaning has published several texts and hundreds of bulletins on standard procedures in drycleaning, and special processes to meet the requirements of a particular fabric or garment. But never, to our knowledge, has a book been published which combines Fabric Selection and Care with Fabric Behavior in Drycleaning, as does "Focus on Fabrics."

Dr. Dorothy Siegert Lyle, the author, started work on "Focus on Fabrics" two years before its completion. Always a perfectionist, this

work was no exception—she checked and rechecked her data, her sources of information. The book contains 173 samples of fabrics, many of them furnished by the manufacturers, many purchased on the open market; 107 black and white, and 51 full color photographs of actual fabric damage. It is written in two parts: Part I, Selection and Care, gives description, construction, and samples of hundreds of fabrics of natural and man-made fibers: Part II, Fabric Behavior in Drycleaning, describes common and uncommon damages, their cause, and their avoidance when possible, all illustrated by photographs.

A book on textile fabrics, even when directed at one particular group—manufacturers, retailers, *or* drycleaners—is no easy task. But a book directed at a composite group—manufacturers, retailers, consumers, *and* drycleaners—is indeed a herculean task, and one which few persons are qualified to write.

Dr. Lyle has those qualifications. She received her Ph. D. degree in Home Economics at Pennsylvania State College. She came to the National Institute of Drycleaning in 1947 from Ohio State University, where she taught textiles to Home Economics students. In the 10 years she has been at NID, she has devoted her time to research on the drycleaning of fabrics. She has appeared on the programs of hundreds of drycleaner meetings, retail stores, universities and colleges. She is the author of NID's "Fashions and Fabrics" bulletins published monthly to members, keeping them informed of fabrics and their processing, and "Fabric Facts," NID's publication to Better Business Bureaus, retail stores, and those engaged in the field of textile education.

Dr. Lyle is well-known to the textile trade, the retail trade, drycleaners, and consumers. She has been an active member of the American Home Economics Association for many years, and this year was elected to the office of Recording Secretary of that organization. The Journal of Home Economics, What's New in Home Economics, and Practical Home Economics have published articles she has written on fabrics and garments. Also an active member of the American Association of Textile Chemists and Colorists, papers by Dr. Lyle have appeared in American Dyestuff Reporter, Modern Textiles, and Textile Reporter. She has lectured on textiles all over the country, not only in her position with the National Institute of Drycleaning, but also in the Distributive Education program of the U. S. Department of Education. She is the 1957-1958 Chairman of the Home Economics Research Advisory Committee, of the U. S. Department of Agriculture, Agriculture Research Service.

We offer this book with pride, and the feeling that it is a valuable addition to the textile libraries of the world. The great amount of time, effort, and money that went into its production will be compensated for if, as we hope, it produces a better understanding and knowledge of the fabrics manufactured, worn, used, and drycleaned.

January, 1958

PREFACE

THE FOREWORD and Introduction to the first edition of "*Focus on Fabrics*" have been retained in this revised edition, because they are just as pertinent today as they were five years ago.

When NID undertook to publish the original edition of "*Focus on Fabrics*" it was our first experience with a publication of this magnitude. The cost in time and money was tremendous and we had no idea how the book would be accepted. Several thousand copies were published, and it was estimated these would fill the demand for five years. But in less than three years the entire supply was exhausted, and hundreds of orders for copies had to be turned down. The demand for the book was just as great from colleges, universities, high schools, libraries, textile manufacturers, retailers, Better Business Bureaus, as it was from drycleaners.

When the decision was made to reprint the book it was decided to also revise it. Many new fabrics and finishes had been developed in the five years since the original printing, and many were now obsolete. The author, Dr. Dorothy Siegert Lyle, had the tremendous task of assembling all the fabrics, rechecking all the data, and bringing the book up-to-date. The revised edition contains 204 samples of fabrics, 150 black and white, and 58 full color photographs of actual fabric damage.

Dr. Lyle's qualifications and background are given in the Foreword to the original edition. Since that time, she has served as President of the American Home Economics Association (1961-1962). The Home Economics in Business Section awarded her a life membership in AHEA; and she was voted a national honorary member of Omicron Nu and Phi Upsilon Omicron, honorary Home Economics societies. In November 1963 she was elected to the Board of Directors of the American Standards Association on nomination by AHEA, and is the fourth woman to serve on that Board in 46 years. She has written articles on fabrics for leading magazines, including *Seventeen* and Penney's *Fashions & Fabrics*, and has traveled thousands of miles each year continuing her fabric lectures to colleges, retailers, drycleaners, TV and radio audiences.

We expect this revised edition of "*Focus on Fabrics*" to be accepted as favorably as was the original. Our pride in offering it is just as great.

January 1964

INTRODUCTION

TEXTILE MANUFACTURE comprises one of America's greatest industries. The fabrics and fashions created by it play a very important role in our personal lives and in our industrial life.

Many books have been written on historic textiles, the mechanical production or engineering of textiles, the chemistry and physics involved in the producing and testing of textiles, the marketing and merchandising of textiles, the economic and psychological influence of textiles. Yet no attempt has ever been made to spell out the principles that should serve as a guide to selection in relation to behavior in use and drycleaning, or to explain why fabrics react as they do in use and drycleaning. To do this has not been an easy task since there are so many variables that influence any one principle of fabric construction, garment construction, conditions of use, and conditions of drycleaning.

A book such as this is not the work of one person, but of many people. It represents laboratory findings and the experiences of many persons over many years.

The purpose of this book is to help develop an understanding on the part of the consumer, the educator, the individuals engaged in the

retailing and drycleaning trades, as to why all fabrics cannot be created to perform uniformly under all conditions of use and drycleaning; why certain fabrics react as they do in wear and in drycleaning.

The breadth and scope of our economic system of production and distribution is such that we frequently lose sight of the fact that many of the problems we experience with textiles in use and drycleaning may never be solved. We may learn to recognize them, however, so that we may better equip ourselves to understand these problems.

This book is in no way intended to be a complete treatise on fabric selection and behavior in drycleaning. In it we have attempted to bring together current information that we feel is pertinent and of general interest.

We present the material in two parts: Part I, Selection and Care, including fiber content, types of fabrics, construction, finishes and design, illustrated with swatches of fabrics; Part II, Behavior in Drycleaning, illustrated by colored and black and white photographs, answers the important questions: Why does a fabric react as it does? When does the problem arise? How may the particular problem be remedied or avoided?

WE APPRECIATE

WE EXPRESS special appreciation to those who gave their talent, time, criticism and suggestions and thus made this book possible.

For the Idea of the Book (1958 edition)

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WE ALSO APPRECIATE

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American Enka Corporation
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Arkansas Company, Inc.
S. M. Axelrod and Son
Joseph Baneroft & Sons Company
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Belding Heminway Co., Inc.
Berkshire Hathaway, Inc.
Blumenthal Mills
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Celanese Corporation of America
Chemstrand Company, Division of Monsanto
Chemical Company
Chicopee Mills, Inc.
Cohn-Hall-Marx Company
Collins & Aikman Corporation
Courtaulds North America, Inc.
Cranston Print Works Company
The Davoe Corporation
Dazian's, Inc.
Deering, Milliken & Company, Inc.
Defiance Bleachery
The Dow Chemical Company
Drew Chemical Corporation
Duchess Fabrics, Inc.
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Eastland Woolen Corporation
Eastman Chemical Products, Inc., subsidiary
of Eastman Kodak Company
Empire Piece Dyeing and Finishing Company, Inc.

Enterprise, Inc.
N. Erlanger, Blumgart & Company, Inc.
The Felters Company
Galey & Lord
Glenoit Mills, Inc.
Goodall Vinyl Fabrics, Division of
Burlington Industries.
Heeksuede, Inc.
Arthur Kahn Co., Inc.
William Lind Co., Inc.
Milliken Woolens, Inc.
Newburgh Moire Company, Inc.
Owens-Corning Fiberglas Corporation
Pedigree Fabrics
Pellon Corporation
Pepperell Manufacturing Company
Perma Dry Company, Inc.
Reeves Brothers, Inc.
Rosenstein Bros.
John J. Ryan & Sons
The Sanforized Company
A. W. Scheffres Corporation
F. Schumacher & Co.
Scott Paper Company
J. P. Stevens & Company, Inc.
Stillwater Worsted Mills, Inc.
Supima Association of America
James Thompson & Co., Inc.
Thortel Fireproof Fabrics, Inc.
Union Carbide Chemical Co.
United Elastic Corporation
United States Rubber Company
Wellington Sears Company, Inc.
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