



Standard Test Methods for Identification of Fibers in Textiles¹

This standard is issued under the fixed designation D276; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the U.S. Department of Defense.

INTRODUCTION

Methods D276 – 62 T, Identification of Fibers in Textiles were discontinued in 1969 because the responsible subcommittee failed to recommend adoption as standard after several years publication as a tentative. The subcommittee action was based on the members' knowledge that the standard did not include several fiber types introduced to the textile trade after the methods were published, and that the techniques required to identify these fibers were lacking in the text, so that the text had become out of date. Reinstatement as a standard using the previously assigned designation was requested since the listed procedures were reliable and the text was considered to be the best available, though not all-inclusive. Extensive editorial changes were made in various sections in 1972, and the methods were reinstated as D276 – 72.

The methods have been revised completely, emphasizing infrared spectroscopic techniques for identifying man-made fiber types. Methods for determining several physical properties and solubility data useful for confirming infrared spectral identifications have been included. The longitudinal and cross-section photographs of the various fibers have been omitted since they are published elsewhere and the usefulness for identification is limited. Extensive editorial changes have been made throughout the text.

AATCC Test Method 20 was first published in 1947 and has been revised or reaffirmed on a regular basis since that time. The most current version is AATCC "Test Method 20–2011"².

1. Scope

1.1 These test methods cover the identification of the following textile fibers used commercially in the United States:

Acetate (secondary)	Nylon
Acrylic	Nytril
Anidex	Olefin
Aramid	Polycarbonate
Asbestos	Polyester
Cotton	Ramie
Cuprammonium rayon	Rayon (viscose)
Flax	Saran
Fluorocarbon	Silk
Glass	Spandex
Hemp	Triacetate
Jute	Vinal
Lycocell	Vinyon
Modacrylic	Wool

Novoloid

1.2 Man-made fibers are listed in 1.1 under the generic names approved by the Federal Trade Commission and listed in Terminology D123, Annex A1 (except for fluorocarbon and polycarbonate). Many of the generic classes of man-made fibers are produced by several manufacturers and sold under various trademark names as follows (Note 1):

Acetate	Acele®, Aviscon®, Celanese®, Chromspun®, Estron®
Acrylic	Acrilan®, Courtelle®, Creslan®, Dralon®, Orlon®, Zefran®
Anidex	Anim/8®
Aramid	Kevlar®, Nomex®, Technora®, TeijinConex®, Twaron®
Cuprammonium	Bemberg®
Fluorocarbon	Teflon®
Glass	Fiberglas®, Garan®, Modiglass®, PPG®, Ultrastrand®
Lyocell	Tencel®
Modacrylic	Dynel®, Kanecaron®, Monsanto SEF®, Verel®
Novoloid	Kynol®
Polyamide (Nylon) 6	Caprolan®, Enka®, Perlon®, Zefran®, Enkalon®
Polyamide (Nylon) 6, 6	Antron®, Blue C®, Cantreco®, Celanese Phillips®, Enka®Nylon
Polyamide (Nylon) (other)	Rilsan®(nylon 11), Qiana®, StanylEnka®,(Nylon 4,6)
Nytril	Darvan®

¹ These test methods are under the jurisdiction of ASTM Committee D13 on Textiles and are the direct responsibility of Subcommittee D13.51 on Conditioning, Chemical and Thermal Properties.

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² AATCC Technical Manual, available from the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709.