

LIST OF FLUORESCENT WHITENING AGENTS FOR THE SOAP AND DETERGENT INDUSTRY

*Report of the Task Group on
Fluorescent Whitening Agents,
D12.15.05, of ASTM Committee D-12
on Soaps and Other Detergents*

DS 53 A



AMERICAN SOCIETY FOR TESTING AND MATERIALS

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Related
ASTM Publications

**Bibliographical Abstracts on Evaluation of Fluorescent Whitening Agents
1929-1968, STP 507 (1972), \$3.25 (04-507000-15)**

Introduction

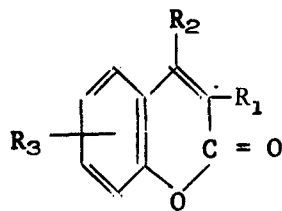
By far, the largest single consumer of Fluorescent Whitening Agents (FWAs) is the soap and detergent industry. In the past, the identification of these products in test methods, publications, customs declarations, etc. has been primarily limited to individual supplier's trade names which often create confusion and ambiguity. Although several of the products are included in the Colour Index, this compilation is incomplete and, in some instances, inaccurate.

ASTM Task Group on Fluorescent Whitening Agents, D12.15.05, of Committee D-12 on Soaps and Other Detergents, is currently developing ASTM test procedures for Fluorescent Whitening Agents and, in connection with these efforts, has compiled this listing of FWAs used commercially in substantial amounts in soap and detergent formulations. The identification of the chemical structure of each FWA by a unique set of letters and numbers is the most important and useful feature of this publication. The letter-number designation for each FWA will be used in the ASTM test methods being developed by ASTM Task Group D12.15.05, and it is expected that the designations will also be valuable to other organizations and committees, individual authors, etc. involved in the FWA field.

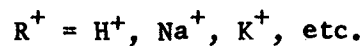
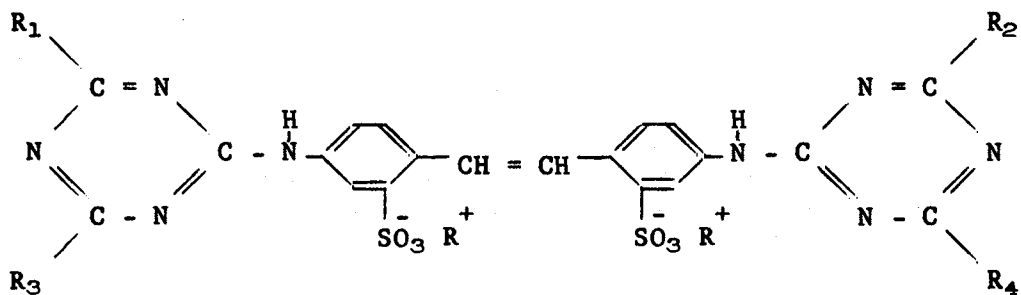
Included in the listing are the brand names and the names and addresses of the suppliers of FWAs who have participated in this project by making the necessary disclosures. ASTM Task Group D12.15.05 would like to express its appreciation to those suppliers for their cooperation.

Key to Letter Designation of Chemical Structures

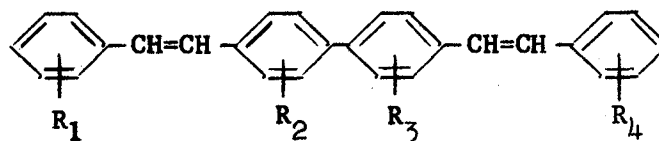
C COUMARIN



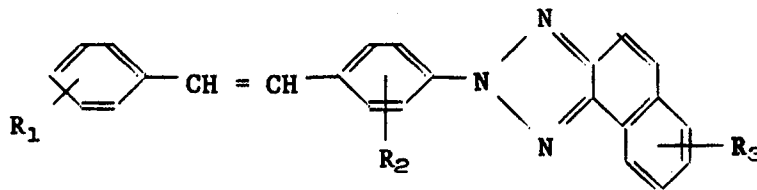
DASC DIAMINOSTILBENEDISULFONIC ACID-CYANURIC CHLORIDE



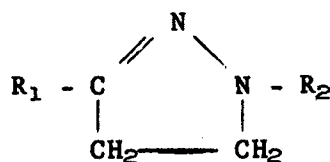
DSBP DISTYRYLBIPHENYL



NTS NAPHTHOTRIAZOLYLSTILBENE



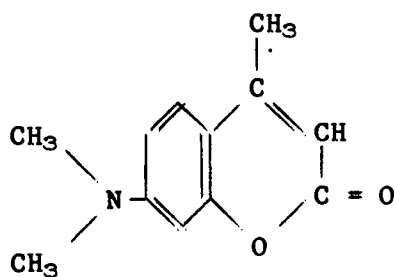
P PYRAZOLINE



**ASTM List of Fluorescent Whitening Agents
C Type**

Designation C-1

Chemical structure



Chemical Abstracts name: 7-Dimethylamino-4-methylcoumarin

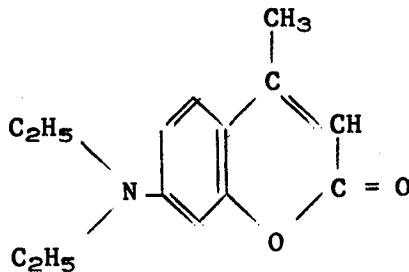
Suppliers and brand names

American Cyanamid Company, Calcofluor White LD

The Hilton-Davis Chemical Co., Hiltamine Artic White N

Designation C-2

Chemical structure



Chemical Abstracts name: 7-Diethylamino-4-methylcoumarin

Suppliers and brand names

American Cyanamid Company, Calcofluor White SD

Ciba-Geigy Corporation, Uvitex SWN Conc

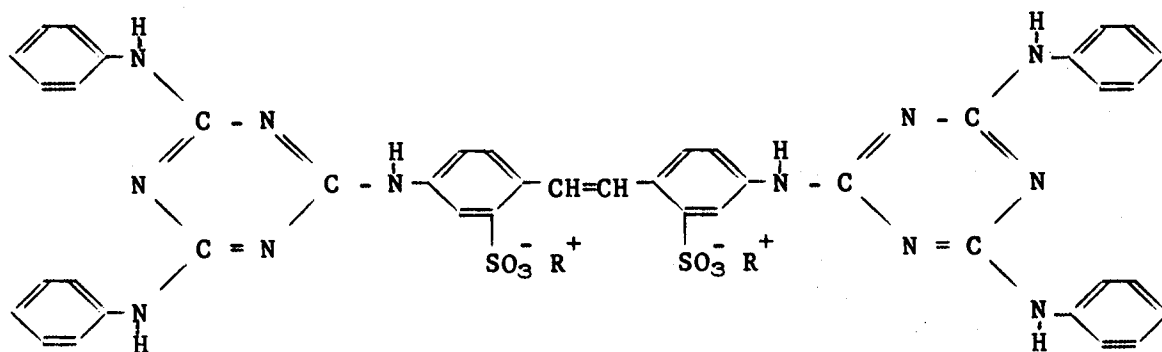
Sandoz Inc., Colors and Chemicals Division, Aclarat 8678

The Hilton-Davis Chemical Co., Hiltamine Arctic White SOL

DASC Type

Designation DASC-1

Chemical structure

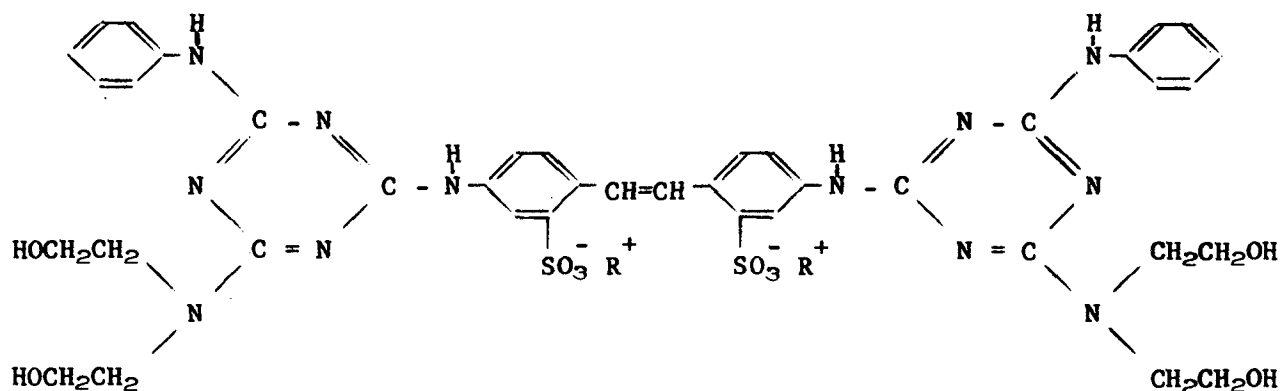


Chemical Abstracts name: 4,4'-Bis[(4,6-dianilino-s-triazin-2-yl)amino]-2,2'-stilbenedisulfonic Acid

Suppliers and brand names
 GAF Corporation, Blancophor®CN

Designation DASC-2

Chemical structure



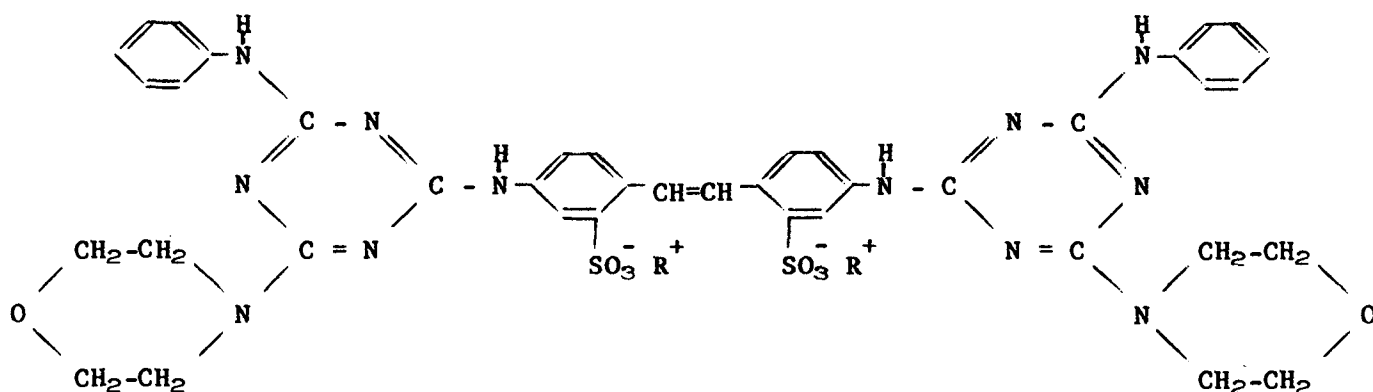
Chemical Abstracts name: 4,4'-Bis[4-anilino-6-bis(2-hydroxyethyl)amino]-s-triazin-2-yl]amino]-2,2'-stilbenedisulfonic Acid

Suppliers and brand names

American Cyanamid Company, Calcofluor White M2R New
 American Cyanamid Company, Calcofluor White CG Conc. (free sulfonic acid form)
 Ciba-Geigy Corporation, Tinopal UNPA
 Ciba-Geigy Corporation, Tinopal UNPS (disodium salt)
 GAF Corporation, Blancophor®RG
 The Hilton-Davis Chemical Co., Hiltamine Arctic White CWD
 Verona Dyestuff Div. Mobay Chemical Corp., Phorwite BBH Pure 766

Designation DASC-3

Chemical structure



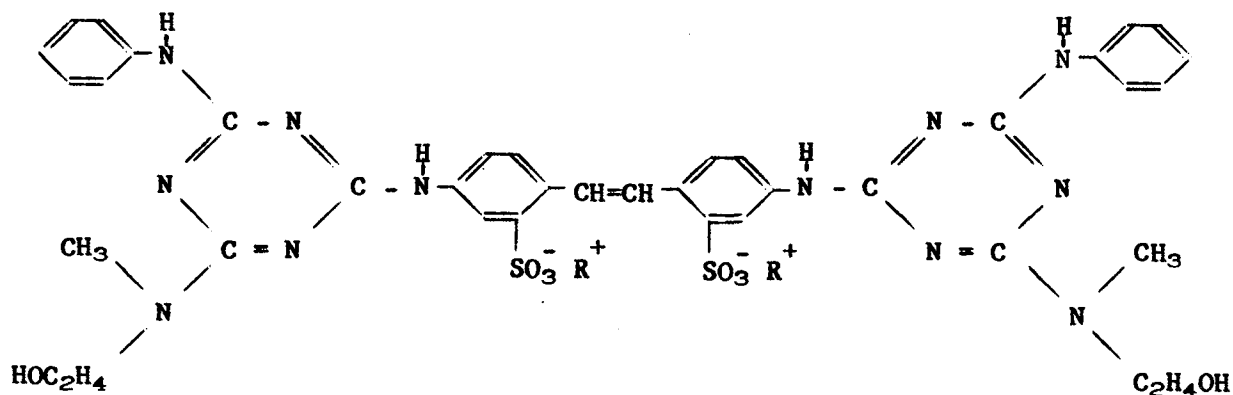
Chemical Abstracts name: 4,4'-Bis[4-anilino-6-morpholino-s-triazin-2-yl]amino]-2,2'-stilbenedisulfonic Acid

Suppliers and brand names

American Cyanamid Company, Calcofluor White RCX Super Conc.
 Ciba-Geigy Corporation, Tinopal AMS
 Ciba-Geigy Corporation, Tinopal AMS Pure
 GAF Corporation, Blancophor®DS
 The Hilton-Davis Chemical Co., Hiltamine Arctic White DML
 The Hilton-Davis Chemical Co., Hiltamine Arctic White DML Ex. Conc.
 The Hilton-Davis Chemical Co., Hiltamine Arctic White MSO
 Verona Dyestuff Div. Mobay Chemical Corp., Phorwite MBBH 766

Designation DASC-4

Chemical structure



Chemical Abstracts name: 4,4'-Bis[[4-anilino-6[N-2-hydroxyethyl-N-methylamino]-s-triazin-2-yl]amino]-2,2'-stilbenedisulfonic acid disodium salt

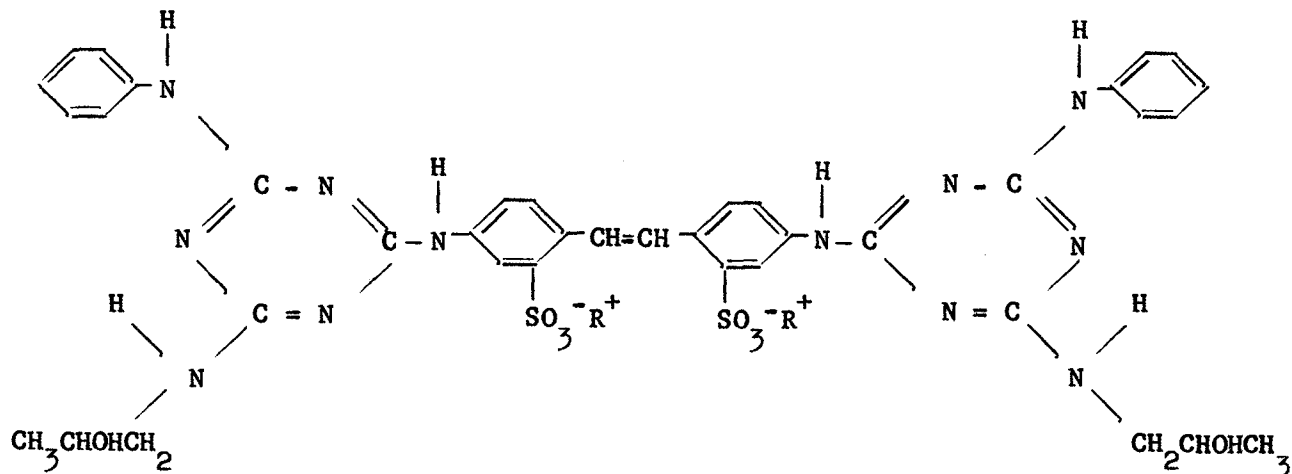
Suppliers and brand names

Ciba-Geigy Corporation, Tinopal 4 BM Conc.

Ciba-Geigy Corporation, Tinopal 5BM

Designation DASC-5

Chemical structure



Chemical Abstracts name: 4,4'-Bis[[4-anilino-6-[(2-hydroxy)propyl]amino]-s-triazin-2-yl]amino]-2,2'-stilbenedisulfonic acid disodium salt

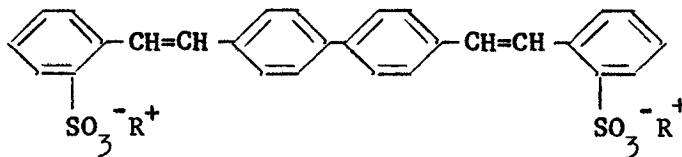
Suppliers and brand names

Sandoz Inc., Colors and Chemicals Division, Sandoz TH-40

DSBP Type

Designation DSBP-1

Chemical structure

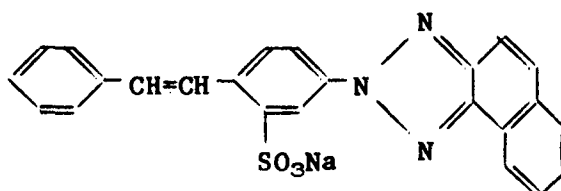


Chemical Abstracts name: 2,2-(4,4'-Biphenylene divinylene)-dibzenesulfonic acid, disodium salt

Suppliers and brand names
Ciba-Geigy Corporation, Tinopal CBS

NTS Type

Designation NTS-1
Chemical structure



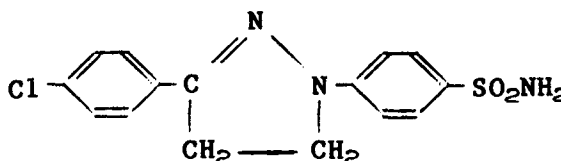
Chemical Abstracts name: 4-(2H-Naphtho[1,2-d]triazol-2-yl)-2-stilbenesulfonic acid, sodium salt

Suppliers and brand names

Ciba-Geigy Corporation, Tinopal RBS 200%

P Type

Designation P-1
Chemical structure



Chemical Abstracts name: p-[3-(p-Chlorophenyl)-2-pyrazolin-1-yl]-benzenesulfonamide

Suppliers and brand names

Verona Dyestuff Div. Mobay Chemical Corp., Phorwite FB 766

Names and Addresses of FWA Suppliers

American Cyanamid Company

Dyes and Textile Chemicals Department
Bound Brook, N. J. 08805

Ciba-Geigy Corporation

Dyestuffs and Chemicals Division
P.O. Box 11422
Greensboro, North Carolina 27409

GAF Corporation

Chemical Division
140 West 51 St.
New York, N. Y. 10020

Sandoz Inc.

Colors and Chemicals Division
East Hanover, N. J. 07936

The Hilton-Davis Chemical Co.

Division of Sterling Drug, Inc.
2235 Langdon Farm Rd.
Cincinnati, Ohio 45237

Verona Dyestuff Div.

Mobay Chemical Corporation
P.O. Box 385
Union Metropolitan Park
Union, N. J. 07083

