THE CHESAPEAKE CHEMIST

MARYLAND SECTION
AMERICAN CHEMICAL SOCIETY

VOL. XXXI APRIL, 1975 NUMBER 4

AMERICAN CHEMICAL SOCIETY

ACS Short Courses

The Maryland Section of the American Chemical Society will sponsor a one day short course on WLN to be held at Notre Dame College in Baltimore.

Subject: Wiswesser Line Notation (WLN). WLN is a relatively new chemical information tool that enables you to describe the structure of chemical compounds with unique, unambiguous, linear sequences of letters and numerals. It is believed by many to be the most efficient method of providing chemical structure input for both manual and computer based chemical information systems. Already in use in about 100 organizations in the United States and abroad, well over a million compounds have been coded in WLN. The course is designed to teach chemists and information specialists the fundamentals of coding in WLN and areas of application to such practical problems as compound inventory control, substructure searches, structure-activity searches, etc.

Lecturer: Charles E. Granito, President of C G Associates. Mr. Granito has been involved in the development and application of WLN for over 10 years. He has collaborated in writing the revised manual on WLN (McGraw Hill) and has produced a number of computer programs for searching WLN. He has also given numerous WLN courses during the past few years, both here in the U.S. and in Europe.

Where and When: Notre Dame College (Knott Science Center), 4701 N. Charles Street, Baltimore, Maryland. Saturday, April 19, 1975. 9:00 A.M. to 4:00 P.M.

Registration: Registration fees will be $10.00 for employed chemists and $5.00 for students, retired chemists and unemployed chemists. Registration fees will include lunch, refreshments and course materials. Registration must be in advance. Send check, payable to Maryland Section, ACS, along with your name, address and telephone number to:

Dr. Allen Bednarczyk
McCormick & Co., Inc.
204 Wight Avenue
Hunt Valley, Maryland 21031

THE CHESAPEAKE CHEMIST

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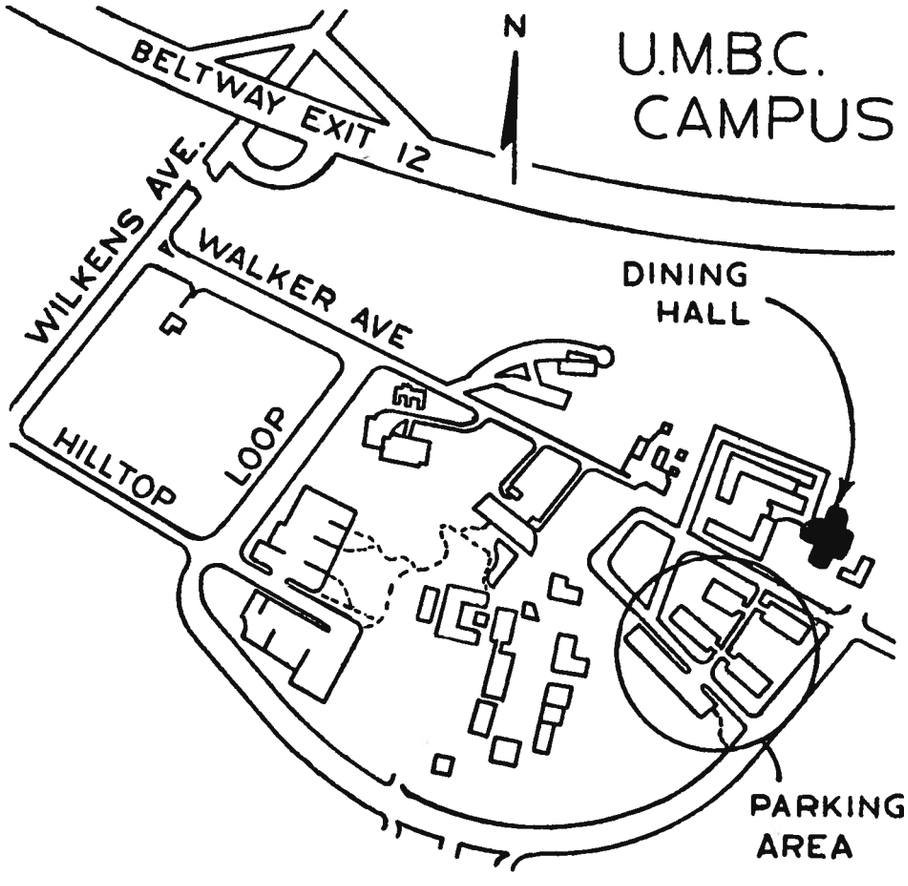
THE COVER PHOTO BY FRED L. APPEL

The Chesapeake Chemist is published monthly September through May by the Maryland Section of the American Chemical Society. Address editorial comments to Howard J. Cohen, Glidden-Durkee, Div. of SCM Corp., 3901 Hawkins Point Road, Baltimore, Md. 21226. Phone 633-6400. Address advertising inquiries and copy to Kent R. Zeller, McCormick & Co., Inc., 204 Wight Ave., Hunt Valley, Md. 21031.



---------- TEAR-OUT DINNER RESERVATION FORM ----------

There is enclosed $ _____ ($5.50 per person)* for dinner reservations at Dining Hall, University of Maryland Baltimore County, for the following persons.**

Name (Please print or typewrite)	Affiliation
_____	_____
_____	_____

* Please make checks payable to Maryland Section, ACS and mail together with reservation form to Dr. Allen Bednarczyk, McCormick and Co., Inc., 204 Wight Avenue, Hunt Valley, Md. 21031, or phone 667-7480, 667-7470.

** Return by Friday, April 11, 1975.

APRIL MEETING

DATE AND TIME:

Wednesday, April 16, 1975

PLACE:

Dining Hall, Univ. of Maryland Baltimore County. Located 1/2 mile west of exit 12 of Baltimore Beltway off Wilkens Avenue.

SPEAKERS AND TOPICS:

5.30 P.M. - Dr. Gary H. Posner
Associate Professor of Chemistry
The Johns Hopkins University
"Some New Organocopper Synthetic Methods"

8.30 P.M. - Dr. Melvin S. Newman
Professor of Chemistry
Ohio State University
"Development of Improved Methods for Selective Protection of Difunctional Compounds"

DR. MELVIN S. NEWMAN

SOCIAL HOUR:

There will be a social hour after the meeting. Refreshments will be served.

DR. GARY H. POSNER

COCKTAILS AND DINNER:

Dining Hall, UMBC

Cocktails 6:30-7:15 courtesy of W. H. Curtin & Co. Hot buffet dinner 7.15. $5.50 per person. Retired chemists, students, and their spouses may attend the dinner at $3.50 each. Reservations are necessary for dinner and should be made with

ACS Reservations
c/o Dr. Allen Bednarczyk
McCormick and Co., Inc.
204 Wight Avenue
Hunt Valley, Maryland 21030
(Use form on p. 4)

Phone 667-7480, 667-7470
ASK FOR ACS RESERVATIONS

It is not necessary to be a member of the American Chemical Society to attend the dinner or the talks. The talks may be attended without attending the dinner. You are invited to bring your spouse and friends to both the dinner and the meeting.

DR. GARY H. POSNER

Gary H. Posner was born in New York on June 2, 1943. He received his B.A. degree from Brandeis University in 1964 and his M.A. (1965) and Ph.D (1968) degrees from Harvard University. While at Harvard, he studied under Professor Corey. From July 1968 to June 1969 he was a Research Fellow with Professor William Dauben at the University of California at Berkeley. In 1969, Dr. Posner joined The Johns Hopkins University as Assistant Professor of Chemistry and was made Associate Professor of Chemistry in July 1974.

SOME NEW ORGANOCOPPER SYNTHETIC METHODS

Many new organometallic reagents are prepared each year; some of these have enormous beneficial effects in commercial catalytic processes and in pharmaceutical research. Some organometallic reagents are especially useful in small-scale laboratory organic synthesis for interconverting functional groups or for forming carbon-carbon bonds. Organocopper reagents in particular are becoming almost as familiar to practising synthetic chemists as the Grignard reagent.

The history and development of organocopper reagents will be discussed briefly. Mention will also be made of the application of organocopper reagents to laboratory synthesis of various insects growth regulating hormones, of food flavors, of an antibacterial pigment, and of prostalandins. Preparation of organocopper reagents will be illustrated by a series of photographs of an actual laboratory experiment. Much attention will be given to two new types of reactions based on organocopper chemistry: (1) replacement of ketone carbonyl groups by isopropylidene groups, and (2) attachment of hydrocarbon groups to the α- and β-carbon of an α,b-ethylenic ketone. Both new reaction types will be illustrated by syntheses of natutally-occurring compounds, and further uses of organocopper reagents will be suggested.

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Those who forget their history are doomed to repeat it.

George Santayana

DR. MELVIN S. NEWMAN

Melvin S. Newman was born on March 10, 1908 in New York. He received his B.S. (Magna Cum Laude, 1929) and Ph.D. (1932) degrees from Yale University and from 1932 to 1936 held Postdoctoral Fellowships at Yale, Columbia and Harvard. Dr. Newman began his career at Ohio State University as an Instructor in 1936. From 1939-1940, he was an Elizabeth Clay Howald Scholar and later held the positions of Assistant Professor (1940-1944), Professor (1944-1963) and in 1965, he received the appointment he presently holds, Regent Professor. Professor Newman has also been a Fulbright Lecturer at the University of Glasgow, Scotland in 1957 and 1967.

Among Professor Newman's awards and honors are listed two Guggenheim Fellowships (1949, 1951), election to the National Academy of Sciences, the American Chemical Society Award for Creative Research in Organic Chemistry (1961), the Society of Organic Chemical Manufacturers Association Medal for Creative Research in Organic Chemistry (1961), the Morley Medal from the Cleveland Section of the American Chemical Society (1969) and the Wilbur Cross Medal from Yale University in 1970.

DEVELOPMENT OF IMPROVED METHODS FOR SELECTIVE PROTECTION OF DIFUNCTIONAL COMPOUNDS

Two types of reactions will be discussed: the monoalkylation of hydroquinone; and the monoketalization of a steroid diketone. In the former case kinetic methods are shown to be of value. In the latter case equilibrium-controlled conditions give the best result.

PROFESSIONAL DEVELOPMENT PROGRAM
FOR SCIENTISTS
9513 Mellenbrook Road
Columbia, Maryland 21045

PROFESSIONAL DEVELOPMENT PROGRAM for SCIENTISTS

SPRING SESSION 1975

X-RAY SPECTROSCOPY

Sponsored by
BALTIMORE-WASHINGTON SECTION
SOCIETY FOR APPLIED
SPECTROSCOPY

STAFF

Director—Dr. Thomas O'Haver

University of Maryland

Executive Secretary—Kenneth A. Rayburn

University of Maryland

Technical Coordinator—Dr. Isadore Adler
University of Maryland

REGISTRATION

Registration is limited and will be closed April 30, 1975. Requests for applications and additional information should be sent to:

Kenneth A. Rayburn

or call: 301—730-6995 (Home)

301-454-4610 (OFFICE)

SPRING SESSION 1975

X-RAY SPECTROSCOPY

SATURDAY, May 10, 1975

General: Nature and properties of x-rays, interactions with matter, scattering processes.

Spectroscopy: Principals, instrumentation, analyzer crystals, collimators, detectors, readouts.

Detection and Intensity measurements Counters, evaluation and comparison.

SATURDAY, May 17, 1975

Qualitative and Semi-quantitative Analysis.

Methods of Quantitative Analysis: Absorption, enhancement, standard addition, dilution, thin film, comparison standards, scattering methods.

Specimen preparations and techniques.

★

Time: 9:00 AM to 4:00 PM

Place: The Other Barn
Oakland Mills Village Center
Columbia, Maryland

★

Directions and a map will be furnished with registration confirmation.

TECHNICAL INFORMATION

The Baltimore-Washington Section of the Society for Applied Spectroscopy in collaboration with the Maryland Section of the American Chemical Society and the Chemical Society of Washington is continuing the Professional Development Program for Scientists in the Baltimore-Washington Area.

This course is designed to cover basic x-ray spectroscopy and its applications to modern analytical problems. There will be ample opportunity for discussion of problems.

A Certificate of Award for the session will be awarded to participants upon completion of the session.

A buffet style luncheon and the textbook are included in the cost of the course. The textbook will be *Practical X-Ray Spectrometry* by Jenkins & DeVries.

FEES

Member Baltimore-Washington Section, SAS	$50.00
Member Maryland Section, ACS	$50.00
Member Chemical Society of Washington, ACS	$50.00
Non-Member	$60.00

Please Make All Checks Payable to PDP.

APPLICATION FOR PROFESSIONAL DEVELOPMENT PROGRAM

X-RAY SPECTROSCOPY

Name _____ Last _____ First _____ Middle _____ Home; Phone No. _____

Home Address _____ Street _____ City or Town _____ State _____ Zip Code

Employer _____

Employer's Address _____

Position _____ Work; Phone No. _____

Member Baltimore-Washington Section, SAS ☐
Member Maryland Section, ACS ☐
Member Chemical Society of Washington, ACS ☐
Non-Member ☐

Receipt Requested ☐

Please return form (and check) to Executive Secretary
Mr. K. A. Rayburn
9513 Mellenbrook Road
Columbia, Maryland 21045

Please make all checks payable to PROFESSIONAL DEVELOPMENT PROGRAM

ASTM **PUBLICATION**

CHEMICAL THERMODYNAMIC DATA AND ENERGY RELEASE COMPUTER PROGRAM

This program, which has the acronym *CHETAH*, can perform two separate although related, calculations. First, it provides estimates of the enthalpy and entropy of formation, and the heat capacity, of an almost unlimited number of organic and organometallic compounds, using only the structure of the compound itself as input information. Secondly, proceeding from this point, the program produces estimates of the potential explosive energy release that this compound may offer.

The energy release prediction capability of *CHETAH* will undoubtedly create the most interest in the chemical process industry. About 100,000 new compounds are considered every year for commercial applications in the United States alone, so that some form of rapid screening for energy release potential requiring a bare minimum of input information is a "must". Since the program can be used to prepare an estimate based on only the structure of the molecule, it fills this requirement. Of course, if additional information, such as the heat of formation of the compound, is available, it can be inserted immediately into the program to obtain an improved energy release appraisal.

Four separate energy release criteria are used by the program, each one resulting in an estimate of HIGH, MEDIUM, or LOW release.

For further information, write

ASTM • Dept CC • 1916 Race Street • Philadelphia, PA 19103

This space contributed by the Maryland Section in the interest of chemical safety.

ENGINEERING ETHICS CONFERENCE

Modern high intensity technology influences directly or indirectly the life of every human being. At the same time size and complexity of organization, both of business and government puts the individual engineer and scientist frequently before difficult ethical decisions. A Conference on Engineering Ethics, dealing with these problems will be held in Baltimore, Md. (Baltimore Hilton Hotel) on May 18 and 19, 1975. The conference is cosponsored by ACS; AIChE; ASME; IEEE; NSPE and TMS/AIME, and is held on occasion of the ASME/General Engineering Conference. Starting from a number of case studies the situation confronting conscientious engineers faced with conflicts of loyalties will be explored. Education towards greater awareness of ethical requirements in professional work, both in college and for practicing engineers and chemists will be discussed. A further session will deal with various methods of enforcing ethical codes. And finally, a number of people from various branches of engineering and science will propose ways of improving codes. For information contact·

Dr. Victor Paschkis
Fellowship House Farm
R.D. #3
Pottstown, Pa. 19464
(215) 326-5045

****

We should be glad...when a fundamentally wrong notion..finally...is proclaimed both loudly and openly. The falseness of it will soon be felt and eventually proclaimed equally loudly and openly. It is as if an abscess had burst.

Arthur Schopenhauer

NICK NACKS

MORE ON "STATES" RIGHTS

The California Section resolution, critical of the Committee on Professional Relations handling of layoff investigations as exemplified by their action on the 1970-72 Shell Development mass terminations, is finally, though incompletely, going to be published! This was decided by the CENEB at their December meeting.

The change of mind by CENEB came about as a result of a report by the CPR, requested by the Board of Directors, which stated in part, "both the statement published by the Committee on Professional Relations and the California Section resolution reflect the facts of the Shell Development termination conditions." The resolution should appear in C&EN substantially as the section originally submitted it almost a year earlier except that the CENEB continued to hold that the explanatory material at the end of the resolution is not appropriate for publication as part of the resolution. This latter caveat has always seemed to me to be a very peculiar position to take particularly since we are talking about pub- - lishing the material in a magazine which has the title "News" in its masthead. The explanatory material explains the basis for the resolution. Webster says that a resolution is "a formal expression of opinion, will, or intent supported by an official body or assembled group." So why should a resolution not contain its rationale?

I think the policy of the ACS Board of Directors should be that any resolution of a local section or division passed by its governing body should be printed in C&EN (as long as it does not exceed, say, one printed page). If the Editor wants to comment on the resolution, of course he could do so immediately following the resolution. Other people who disagreed could do so by writing to the Editor. I think it is time for the Society to recognize that local sections and divisions are responsible units of the Society.

ADVICE AND DISSENT

This is the title of a new book by Joe Primack and Frank von Hipple (Basic Books) subtitled "Scientists in the Political Arena." This book, by two physicists, is an intensive examination of the process whereby scientists have been and can be effective in connection with public policies and governmental actions. The authors are, of course, very much in favor of this sort of activity by scientists, believing that it shows an awareness of professional responsibility. They feel that scientists should lend their expertise to the solution of the difficult problem of arriving at decisions which would maximize the beneficial effects and minimize the detrimental results of the application of science and technology. Besides dealing with this general philoscphy, the authors dig into specific instances where scientists have or have not been effective in intervening in the broad political arena. These include the battle over the supersonic transport, the defeat of the anti-ballistic missile proposals, the saga of 245T, the cyclamates decision, the battle over persistent pesticides ("from Rachel Carson to the Environmental Defense Fund"), the argument over chemical and biological warfare and the Geneva Protocol, stopping the Sentinel, and the challenge to the AEC over the safety of nuclear power plants.

It is an exciting story well told. One of the striking things in reading through this account is how often detrimental actions or activities, promoted by special interests, which would have been allowed to pass unchallenged, have been exposed and eventually corrected because of the dedicated concern of single individuals or small groups of people. It is very evident that if we had a broader degree of concern promoted by the professional societies and with individual rights protected by legislation, more unwise or illegal matters would be exposed to the light of day and subjected to open debate, with great savings to the taxpayer and benefits to the country.

It is an important book -- read it.

Alan C. Nixon

SITUATION WANTED

Information Scientist-Librarian seeking employment in Baltimore-Washington area. Skilled in developing Computerized Data Bases. Highly knowledgeable in use of Chemcon, Toxline, Medline and other on-line Computer Data Bases. Competent in chemical nomenclature including WLN.

For further information on the above applicant please contact:

Dr. William Galetto
(301) 667-7481

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HIRE A STUDENT THIS SUMMER

The schools will be closing for the summer in less than a month and students are gambling that they will find something in their chosen field. The fewer jobs available today enables the employers to have a wider selection than they have had in previous years. These students can be evaluated with an eye towards hiring them after graduation. The present emphasis on energy and the environment would suggest that the future job market for these students as graduates, are bright. A small business investment now could insure an opportunity to bid for the services of the cream of the crop a few years hence.

If you have need of a student for the summer, or as temporary help for a week or two in your laboratory, plant, library, etc., please contact

Howard J. Cohen
3901 Hawkins Point Road
Baltimore, Maryland 21226
(301)633-6400

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FORENSIC SCIENTISTS

The Mid-Atlantic Association of Forensic Scientists are holding their spring meeting on April 25 and 26, 1975 at the Baltimore Hilton Hotel. There will be as part of the program a symposium on the posture and characterization of the expert witness in the courtroom. There will also be a symposium on the analysis of drugs. For further information contact:

Albert Mills
U.S. Customs Laboratory
103 South Gay Street
Baltimore, Maryland 21202
(301) 962-2920

MILK CARTONS MAKE SAFE TOYS EVEN IF CHEWED ON

Used milk cartons make especially safe toys for small children. They are nonbreakable, soft, and constructed and inspected under strict governmental controls. They make good boats, houses and building blocks. They do not make the kids sick if they put them in their mouths. In response to a question of whether botulism might be associated with milk cartons, the University News Service contacted Assistant Professor Walter Jopke, senior sanitarian in the University of Minnesota department of environmental health. "We don't find botulism associated with milk products or milk," Jopke said. "Furthermore, mothers don't have to worry about the original milk carton -- there would be no toxic substances in it. It is a general rule, under many regulations -- federal, state, city and others -- that these containers be safe for food. These regulations apply strictly to any single-service food container.

"I've been at this business 24 yrs. and only came across one case where commercial pasteurized milk was related to a problem. This was back when milk bottles were more common. Someone sent in a bottle in which they'd found a parakeet bill." As for botulism, preserved foods in which the toxin is most commonly found are string beans, corn, spinach, olives, beets, asparagus, seafood, pork and beef. Improperly smoked or canned fish are common sources of botulism. Cooking food for 30 min. at 176 degrees F. before eating is considered a safeguard against botulism.

By Bill Hafling
Univ. of Minnesota
Science Writer
The Minnesota Chemist
January, 1974

IF YOU CHANGE YOUR ADDRESS...
Please DO NOT notify the Editor of the *Chesapeake Chemist*, but send your new and old addresses to: The American Chemical Society, 1155 Sixteenth Street, N.W., Washington, D. C. 20036. The Maryland Section will then be notified.

NEW MEMBERS

The following people have recently joined the American Chemical Society or transferred into the Maryland Section from some other state. We welcome them to attend the monthly meetings and participate in other activities of the Maryland Section.

Jaleh Abedi
Baltimore, Md. 21218
Kevin Anthony Babiak
Baltimore, Md. 21218
Subrata Banerjee
Baltimore, Md. 21203
Ernesto Donayre Bustamante
Baltimore, Md. 21205
Jacob Carroll
Annapolis, Md. 21403
Lee Kyung Cho
Baltimore, Md. 21218
William Henry Collins
Towson, Md. 21204
Michael Colvin
Baltimore, Md. 21204
David Lee Correll
Edgewater, Md. 21037
Pedo Cuatrecasas
Baltimore, Md. 21210
Jacob Exler
Baltimore, Md. 21207
William C. Faith
Catonsville, Md. 21228
Stewart Carl Feinberg
Columbia, Md. 21043
Robert Charles Fitton
Havre De Grace, Md. 21078
James Michael Gaidis
Columbia, Md. 21044
John Del Gaudio
Baltimore, Md. 21223
Sandra L. Gordon
Edgewood, Md. 21040
Jensen Humpston Groff, Jr.
Millersville, Md. 21108
Diane Theresa Herbein
Baltimore, Md. 21226
Craig Herud
Aberdeen, Md. 21001
Shu-Jing Caroline Hu
Baltimore, Md. 21218
William James Janson
Frederick, Md. 21701
Ian Jardine
Baltimore, Md. 21205
John A. Kerchner
Severna Park, Md. 21146
Pallassana N. Krishman
Baltimore, Md. 21234
Stephen Howard Leppla
Frederick, Md. 21701
Robert G. Little
Baltimore, Md. 21228
Ronald James Lorentzen
Baltimore, Md. 21205
Ming Man
Baltimore, Md. 21206
Carol A. Mapes
Frederick, Md. 21701
Barry L. Marmer
Edgewood, Md. 21040
Grazina Maciunas McClure
Columbia, Md. 21044
Claude McClure
Edgewood Arsenal, Md. 21010
Michael David McClure
Columbia, Md. 21044
William S. Medart, Jr.
Columbia, Md. 21045
Carlton Thomas Niessner
Columbia, Md. 21045
Eugenie Funda Obst
Glen Burnie, Md. 21061
William F. O'Hara
Annapolis, Md. 21402
Mary Doris Oldewurtel
Baltimore, Md. 21221
Hugh Everett Peck
Baltimore, Md. 21222
Ruth Elizabeth Reed
Glen Burnie, Md. 21061
Carol Virginia Roane
Catonsville, Md. 21228
Seth David Rose
Baltimore, Md. 21212
Robert Anthony Rossi
Columbia, Md. 21043
Jeffrey David Saxe
Baltimore, Md. 21205
Norman Robert Schmuff
Baltimore, Md. 21218
Robert Shaddix
Aberdeen Proving Grd., Md. 21005
Philip A. Shreiner
Lutherville, Md. 21093
David Lee Simmons
Baltimore, Md. 21218
Jorma J. Sjoblom
Baltimore, Md. 21202
Charles Everett Thompson, Jr.
Baltimore, Md. 21216
Gabriella J. Toeneboehn
Glen Burnie, Md. 21061
William Ping Yiu Tong
Baltimore, Md. 21201
Gerald Lee Vogel
Frederick, Md. 21701
Laird G. L. Ward
Chesapeake City, Md. 21915

THE TEXAS STORY AND YOU!

Perhaps you have never considered the fact that the Texas, Maryland Limestone Products Operations of Harry T. Campbell Sons' Company, a division of Flintkote Company, affect your daily life in many ways.

Scores of Campbell products having a wide variety of uses result entirely or in part from our Texas Quarry and plant operations-- products that range from the fine white powder used on chewing gum to massive rip-rap rock used to build ocean and bay jetties.

The diversification of products and the high quality of these products results from the fact that the quarry contains a unique deposit of Cockeysville marble, which is found in two forms. One is dolomite or "bluestone," and it is approximately half calcium and half magnesium carbonates and has a dense structure. The other is calcite marble, with a composition that is predominately calcium carbonate with large crystals. Because it crushes white, it is known as "whitestone." It is the difference in the composition and characteristics of these two forms of marble that determine their ultimate uses.

The "bluestone" is the most prevalent of the two types of rock quarried at Texas, and it is used mainly in the construction industry. The calcite stone - or "whitestone" is subjected to more extensive and more sophisticated processing at Campbell plants in the Texas complex before reaching ultimate customers.

The coarse gradations of this crushed stone have many uses. They are employed as aggregates in the production of white concrete mixes used in producing decorative white block, gleaming white safety curbs and white divider lines on highways. These coarse gradations are used to create a high quality roofing chip, as a filtering agent in water softeners, as poultry grit and as grinding aids. One Campbell customer purchases 1/4" to 1/8" size of this white stone and dyes it with various bright colors for use in aquariums.

On the other hand, the finely ground sizes of this calcium carbonate (some are ground to such fineness that a microscope must be used to see the granules) have widely diverse uses in industry.

They are used as pigment extenders in the manufacture of coated paper, rubber, paint, and many plastics. Our Campbell calcium carbonates are found in such products as rubber soles and heels, belting, hose, rubber mats, electric wire insulation, shoe polish, hundred of plastic products ranging from toys to kitchen utensils, toothpaste, putty and ceramic coatings such as are found on bathtubs and wash basins. These however, are but a few of the uses of the calcium carbonate products produced from the "whitestone" at Texas!

Thus it is easy to see how Campbell products produced from both the "bluestone" and the "whitestone" quarried at Texas play many different roles in our everyday lives. When we brush our teeth in the morning, have our breakfast eggs and ride to work on the roads and highways of the area, Campbell products from our Texas operations are constantly with us in one form or another.

To insure highest quality products, the Campbell Company conducts exhaustive research, development and laboratory testing programs. In addition, Company training programs prepare Campbell employees to provide the best of products and service to our customers.

At our Texas operations, as at other Campbell production facilities, every effort is made to be a good neighbor. Where they exist, wooded areas are retained as buffer strips to shield surrounding areas from our operations. Earth berms are constructed and planted with trees and shrubs to provide a pleasing view for passing motorists. To prevent water pollution all plant washing water is cleaned, then passed through settling ponds to further remove the fines.

Thus the Texas story is one of a Company responding to the unique needs of the industries and people it serves and at the same time being a responsible member of the community in which it is located.

The Chesapeake Chemist
University of Maryland
636 W. Lombard Street
Baltimore, Maryland 21201

Dr. Yale Howard Caplan
8100 Tapscott Court
Pikesville, Md. 21203

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