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<table>
<thead>
<tr>
<th>MI Aqueous Phase Per 10 ml Base</th>
<th>Approx. Water Percent By Vol.</th>
<th>HANDIFLUOR Cocktails Base Efficiency (Percent)</th>
<th>Cocktail Base: A</th>
<th>B</th>
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<tbody>
<tr>
<td>None</td>
<td>-</td>
<td>53.7</td>
<td>48.9</td>
<td>50.8</td>
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<tr>
<td>0.5</td>
<td>5</td>
<td>44.5</td>
<td>42.9</td>
<td>44.5</td>
</tr>
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<td>9</td>
<td>40.5</td>
<td>37.1</td>
<td>39.5</td>
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<td>29.8</td>
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<td>10.7</td>
<td>22.4</td>
</tr>
<tr>
<td>10.0</td>
<td>50</td>
<td>20.7</td>
<td>9.8</td>
<td>19.6</td>
</tr>
</tbody>
</table>

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In microbiological studies of animal cells, it often is desirable to isolate and separate the cells for further study. The researcher's need is to separate the cells from the connective and cementing materials without damaging the cells themselves.

Many researchers found that a natural mixture of digestive enzymes produced by a non-toxigenic strain of the bacterium *Clostridium histolyticum* provided the separation remarkably well. The enzymes, without the toxin that many of the *Clostridia* produce, effectively digest away the materials connecting the cells into a tissue, but leave the cells themselves virtually untouched.

The enzyme mixture is named after its more unique member, Collagenase. Worthington supplies Collagenase in several degrees of purity ranging from crude to highly-purified; researchers have generally found that the less purified material is more effective in releasing intact cells from tissues. The effectiveness, however, seemed to differ with different tissues, and it did not always match the quantitative differences noted in our assay labs.

A program was therefore initiated by Worthington aimed at correlating effectiveness of samples on specific tissues with results of our own biochemical assays. We enlisted the support of several dozen prominent researchers; they evaluated more than a hundred samples of regular production and specially prepared lots of Collagenase in their own studies.

Evaluation of these studies has enabled us to categorize our crude Collagenase into four different types which are blended and classified according to the specific tissues for which each is best suited. The four types are available as listed in our current catalog.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>CHARACTERISTIC</th>
<th>TISSUE BEST SUITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Normal balance</td>
<td>Fat cells; Adrenal tissue</td>
</tr>
<tr>
<td>II</td>
<td>High Clostridiopeptidase</td>
<td>Liver, Bone, Thyroid</td>
</tr>
<tr>
<td>III</td>
<td>Low Proteases generally</td>
<td>Mammary</td>
</tr>
<tr>
<td>IV</td>
<td>Low Tryptic activity</td>
<td>Pancreatic Islet cells</td>
</tr>
</tbody>
</table>

The increasing use of Collagenase in cell isolation is encouraging. Credit for the program's success is due to the many researchers who cooperated so openly with their time and talent.

Your comments and interest are welcome. Additional information on this application of Collagenase and a copy of our current catalog are available on request.

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letter raises the general question of whether to identify commercial sources in a scientific publication.

The pitfall of inter-, and even intra-strain, differences is well-known and is one example of the variation between products that can influence reproduction of experimental results. While open to persuasion, I am presently of the view that specifying the commercial source of any product is inappropriate unless the product is uniquely successful for a particular application. Scientists are creatures of habit, and there is often no other reason for the use of a particular brand or source of supply. Requests for commercial endorsement that are thinly veiled as appeals for experimental reproducibility do a disservice to the generally amicable working relationship between scientists and those who supply them with the tools of their trade.

Science has thus far escaped the plight of the medical profession, where brand names have nearly universally replaced generic names to the detriment of both the practitioner and the patient. Editorial guidance from many journals about the identification of sources of supply is often lacking, and scientists should be cautious in their references to products by company or brand name lest they unwittingly offer endorsements which, in other spheres, would bring due remuneration. The propriety of such a practice in scientific publications is open to question.

Happily, communication between investigators is not entirely defunct, and specific information can readily be obtained by direct inquiry.

D. W. BULLOCK
Department of Obstetrics and Gynecology, Albany Medical College of Union University, Albany, New York 12208

Health Records

About this time of year, Cornell University Health Services, like other college and university health services, begin to receive request forms for medical and mental health records for present or past Cornell students who are applying for places in various graduate school programs. Such request forms are always accompanied by a permission form signed by the applicant authorizing release of such information.
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A UV absorbance monitor in the system intermittently scans the gradient prior to sample application to determine when ampholytes are focused and provide a baseline of ampholyte absorbance. Scanning during migration shows when the sample is resolved, and a final scan provides a continuous profile of the gradient as fractions are being collected. The low volume column conserves expensive ampholytes; internal streamlining gives superior resolution and recovery of zones.

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Not all graduate schools require such information before acceptance. Surprisingly, the ones that do are mostly those relating to health professions (medical schools, nursing schools) which should, above all others, know better. It is obvious that the responses to such inquiries may be used as one of the criteria for admission.

It is our view that release of clinical information as a potential criterion for admission is an unnecessary and unethical breach of confidentiality. The fact that the applicant has signed permission for the release is, in practical terms, irrelevant, as he is in no position to refuse to sign the release.

I urge all graduate schools to discontinue this practice and all undergraduate health services to refuse to provide such information before the applicant is accepted.

In the first place, it is certain that in almost every case there is nothing in a health history that will effectively predict performance in graduate school. In those few cases where a health problem might affect performance, the matter should be obvious on the basis of other observations. Indeed, if a student can complete his course work as an undergraduate in a satisfactory manner, this is the very best criterion of his potential to perform in graduate school.

Furthermore, we have found that some students have purposely not sought needed medical or mental health care in our university health services because they have felt that such care would become part of their records and might jeopardize their acceptance by graduate schools. I am sure other undergraduate schools have the same experience.

Like other physicians, whether in individual or in institutional practice, we maintain a policy of strict confidentiality in our delivery of health care to our patients, students or nonstudents. Any corruption of this policy is contrary to the best interests of patients, including students, and contrary, in the long run, to the interests of the graduate schools.

Once the student has been accepted and has given his permission for release of information, it is then in the best interests of all concerned that clinical information be made readily available to those responsible for his health care.

ALLY B. LEY

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All the participants expressed a need for expert technical assistance in computer hardware and software design in the chemical laboratory and thought that chemistry departments could profit by the addition of a full-time computer scientist. Everyone reported, however, that their individual administrations were not enthusiastic about creating such positions in chemistry departments and interaction and communication with personnel in other departments and computer service groups was difficult.

The seminar was sponsored by the National Science Foundation and the Japan Society for Promotion of Science under the Joint United States-Japan Cooperative Science Program and was organized by H. B. Mark, Jr., and S. Fujimura. The proceedings will be published by the University of Tokyo Press.

**Harry B. Mark, Jr.**

*Department of Chemistry, University of Cincinnati, Cincinnati, Ohio 45221*

**Shizuo Fujimura**

*Department of Chemistry, Faculty of Science, University of Tokyo, Tokyo, Japan*

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**Geodynamics Symposium in Mexico**

The symposium on geodynamics held in Mexico City 20 through 24 June was the first of its kind to be convened in Latin America. Though shortage of funding prevented the attendance of as many colleagues from other Latin American countries as we would have liked to see, the meeting was truly continental in scope.

Three main topics were examined: (i) regional problems of the Americas, (ii) driving mechanisms of sea-floor spreading, and (iii) deep-seated mechanisms of geophysical fields. The final session consisted of a field trip into the Cuernavaca Valley.

The sessions on regional problems, which was chaired by Fernando de Almeida of the University of São Paulo, got off to a brisk start with a well-illustrated full-length lecture by Charles L. Drake, who reviewed the subject of geodynamics—past, present, and future. Talks were delivered by Ernesto López Ramos (PEMEX) on the paleography of Mexico, by James N. Brune et al. on the Gulf of California, by Roger A. Stacey on western Canada, by Roland von Huene on the Alaskan continental margin, by LaVerne D. Kulm on the Oregon-Washington continental margin, by Peter Vail (Esso Research) on the Central American continental margin, and by Cecilia Bellizzi on Northern Venezuela.

Among the results contributed in these sessions were the preliminary data obtained by Brune on the Colima earthquake of 30 January 1973 and the impressive seismic profiles of the Middle America Trench by Vail, who supplied convincing evidence for accretion of the continental slope.

David C. Tozer led a session on driving mechanisms, and he presented a paper in which he attempted to derive a physical concept of a plate. Like Tozer’s discussion, J. Weertman’s presentation on the mechanics of ridges and mantle plumes was especially full of fresh ideas.

George P. Woollard was chairman of the final session. In the first talk Yoshio Fukao (Nagoya) offered seismological evidence for down-dip tension rather than bending in the shallow part of subduction zones. George G. Shor et al. contributed recent results from the Cocos Plate; Luis del Castillo et al. summarized the Mexican gravity data, Martin Halpren discussed plate tectonics of southern South America and recent age determinations; Donald Hussong et al. showed their recent work off the coast of Peru, and Woollard closed the meeting with what amounted to a keynote address on the joys and disappointments of heat flow, gravity, and other measurements to decode the structure of the crust and mantle under the Pacific Basin.

Round-table discussions took place throughout the meeting. I remember at one of these Mauricio de la Fuente spoke on the Colorado River Delta, J. Negendank on the mineralogy of lavas in the Valley of Mexico, Rafael Rodriguez on tectonic regionalization of Mexico, Roger N. Anderson on the “cold spot” under the Guatemala Basin, and T. Matumoto on aftershocks of the Managua earthquake.

The Sunday field trip included climbing the Tepozteco, a steep volcanic cliff overlooking the village of Tepoztlán. About a hundred participants, with members of their families, undertook the strenuous climb, and nearly all made it to the Aztec pyramid at the top. The exotic geology and the physical effort made this a memorable adventure.

The Mexico Symposium on Geodynamics was programmed as part of the AAAS/CONACYT Conference, and was jointly sponsored by the Inter-Union Commission on Geodynamics and the Mexican National Committee on Geodynamics.

**C. Lomnitz**

*Istituto di Geofisica, Torre de Ciencias, Ciudad Universitaria, Mexico 20, D.F. Mexico*

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**Forthcoming Events**

**December**


10–14. American Soc. of Agricultural Engineers, Chicago, Ill. (J. L. Butt, ASAE, P.O. Box 229, St. Joseph, Mich. 49085)


11–14. International Symp. on Biomechanics, Madurai, India. (J. Jayaraman, ISB, Dept. of Biological Sciences, Madurai Univ., Madurai 625021)


17–21. Association of Engineers and Architects in Israel, 3rd world congr., Tel-Aviv. (AEAI, Engineers Inst., 200 Dizengoff Str., POB 3082, Tel-Aviv)


17–23. International Assoc. for Medical Research and Cultural Exchange, Yaounde, Cameroon. (IAMR, 4, rue de Sesse, 75 Paris 9, France)

26–30. Society for the History of Technology, San Francisco, Calif. (M. Kranzberg, Dept. of Social Sciences, Georgia Inst. of Technology, Atlanta 30332)
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28-30. Archaeological Inst. of America, St. Louis, Mo. (E. A. Whitehead, AIA, 260 West Broadway, New York 10013)


28-30. History of Science Soc., San Francisco, Calif. (R. H. Stuewer, School of Physics and Astronomy, Univ. of Minnesota, Minneapolis 55455)

28-30. Linguistic Soc. of America, San Diego, Calif. (T. A. Sebeok, LSA, Room 800, 1717 Massachusetts Ave., NW, Washington, D.C. 20036)

January

2-4. Solid State Physics, 11th conf., Inst. of Physics, Manchester, England. (Meetings Officer, IP, 47 Belgrave Sq., London, SW1X 8QX, England)


8-10. Biological Clocks and Changes in the Earth's Rotation, Geophysical and Astronomical Consequences Conf., Newcastle upon Tyne, England. (W. F. Mayor, School of Physics, The University, Newcastle upon Tyne, NE1 7RU)

8-11. American Meteorological Soc., 54th annual, Honolulu, Hawaii. (E. Mazur, AMS, 45 Beacon St., Boston, Mass. 02108)

8-11. International Conf. on Radioactive Isotopes in Clinical Medicine and Research, 11th, Badgastein, Austria. (R. Hufner, Nuclear Medicine Dept., 2nd Medical Univ. Clinic, A 1090 Wien, Garnison-gasse 13, Austria)
Cosmic Evolution: Are We Alone in the Universe?

Five lectures that probe our understanding of the origin and evolution of life and the possibility of life beyond the universe. They are organized by the University of Maryland, with the sponsorship of the National Aeronautics and Space Administration.

October 29, 8:00 p.m.: Design in the Universe, GEORGE WALD, Harvard University

November 7, 8:00 p.m.: To the Threshold of Life, ROBERT JASTROW, Goddard Institute of Theoretical Science

November 12, 8:00 p.m.: The Origin of Life, CYRIL PONNAMPERUMA, University of Maryland

November 19, 8:00 p.m.: The Procession of Life, KEITH THOMSON, Yale University

December 3, 8:00 p.m.: Intelligent Life Beyond the Earth, PHILIP MORRISON, Massachusetts Institute of Technology

All lectures will be held at the auditorium of the National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. There is no charge for the lectures, which are intended for a general, nonscientific audience. For further information: Dr. Cyril Ponnampерuma, Department of Chemistry, University of Maryland.
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SCIENCE, VOL. 182
February

7-8. Applied Vacuum Science and Technology Symp., Southeastern Regional Administrative Group, American Vacuum Soc., Tampa, Fla. (J. L. Provo, AVS, P.O. Box 15108, St. Petersburg, Fla. 33733)


10-16. American Soc. of Contemporary Medicine and Surgery, Miami Beach, Fla. (V. Kendall, Room 1506, 30 N. Michigan Ave., Chicago, Ill. 60002)

10-16. American Soc. of Contemporary Ophthalmology, Miami Beach, Fla. (V. Kendall, Room 1506, 30 N. Michigan Ave., Chicago, Ill. 60002)


13-16. American Acad. of Forensic Sciences, Dallas, Tex. (H. L. Kimball, P.O. Box 302, New Hartford, Conn. 06057)

13-16. National Assoc. of Medical Examiners, Dallas, Tex. (W. G. Ecker, Laboratory, St. Francis Hospital, Wichita, Kan. 67214)

14-16. Society of University Surgeons, St. Louis, Mo. (E. W. Fonkalsrud, Dept. of Surgery, Univ. of California Medical Center, Los Angeles 90024)


24-1. American Association for the Advancement of Science, annual mtg., San Francisco, Calif. (E. Zeutschel, AAAS Meetings Office, 1515 Massachusetts Ave., NW, Washington, D.C. 20005)


GENETICS OF SEX DIFFERENTIATION

by URSULA MITTWOCH

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