CALL FOR PAPERS AND SPEAKERS

The Sixth Annual Ophthalmic Photographers' Society meeting will take place this fall again in Dallas, Texas. The exact dates and times will be announced in a later newsletter along with a schedule of programs. At present, however, it would be greatly appreciated if those interested in presenting a paper or instructional presentation would send a copy of their paper to our Society Vice President, Mr. Terry George. His mailing address is: Terry George, Wilmer Institute, 113A, Johns Hopkins, 601 N. Broadway, Baltimore, Maryland 21205. Terry is in charge of the program for the Sixth Annual OPS meeting and would like to receive this information as soon as possible so he may be able to construct the final programs. The problems in the past have always been a tremendous burden on the Program Chairman regarding the organization of speakers for the Scientific Session and the Instructional Session due to the fact that too many of us procrastinate and are non-committal when it comes to volunteering our time and thoughts. Your interest in contributing to the OPS annual meeting as well as this newsletter benefits everyone involved with ophthalmic photography.

OPS RESEARCH AND DEVELOPMENT COMMITTEE

Members of the Ophthalmic Photographers' Society should be aware of the fact that there has been a formation of a research and development committee. Chairman William Bell and Co-Chairman Tom Van Cader will direct this OPS committee which includes Ogden Frazier, Marshall Tyler, Ron Kaczak and William Zuke. The purpose of this committee is to secure research grants from various sponsoring institutions such as the N.I.H. and N.E.I. by making it known to the sponsoring agencies the many talents, list of equipment and facilities available for research. In the coming weeks, the R & D Committee will be sending out questionnaires to members that will provide information for their use in compiling necessary data for applying for any available research grants.

HAVING PROBLEMS?

There are many of us who have experienced particular problems with equipment, film processing, filters and patients. If you are one of these people, the Newsletter will attempt to help. By sending examples of photographs or articles to me so I may publish them, other members may be able to contact you directly and offer advice.
WHO'S WHO AND WHERE?

From time to time many OPS members need to contact the Society Officers. The following is a list of current officers:

President: Earl Choromokos
Department of Ophthalmology
Northwestern University Medical School
303 East Chicago Avenue
Chicago, Illinois 60611
Area Code 312 649-8156

Vice President: Terry George
Wilmer Institute
113 A
Johns Hopkins Hospital
601 N. Broadway
Baltimore, Maryland 21205
Area Code 301 955-3703

Secretary: Tom Van Cader
Department of Ophthalmology
University of South Florida
Tampa, Florida 33620
Area Code 813 971-4500 Extension 396

Treasurer: Bill Ludwick
Box 568
Department of Ophthalmology
L.A. County/U.S.C. Medical Center
1200 North State Street
Los Angeles, California 90033
Area Code 213 226-2622

Newsletter Editor: John Johnson - Retina Service
William Beaumont Hospital
3601 W. 13 Mile Road
Royal Oak, Michigan 48072
Area Code 313 549-7000 Extension 210

The above information is the most current that I have available. If there are any corrections to be made, please submit the corrections to me and I will have them in the next Newsletter.

PLEASE REPLY!

To all of those who received a short questionnaire from me, please reply. The information I asked for will benefit those who may be having difficulty with processing formulas. Thanks to all those who have already responded. Your efforts are appreciated very much.
BPA TO OFFER OPHTHALMIC WORKSHOP

The Biological Photographic Association will offer an ophthalmic photography workshop this year at their annual meeting in Phoenix, Arizona, July 15th and 16th. Speakers for the workshop will include Johnny Justice, Bill Ludwick and John Johnson. Zeiss will also be participating in the two day session and will have their video fundus system on display for an "on hands" demonstration. Zeiss will also present a lecture regarding the optics of the fundus camera. The BPA meeting will begin July 14th and run 'til the 17th but the ophthalmic workshop will only be offered the 15th and 16th. The following is a program schedule for the two days that will be held at the Camelback Inn, Phoenix:

**Tuesday, July 15th**
1:00-1:20  Optics of the Fundus Camera
1:50-2:50  Fluorescein Angiographic Conference by Johnny Justice, Baylor College of Medicine
2:30-2:45  Coffee Break
2:45-3:15  Fluorescein Conference Continues
3:15-3:30  Demonstration Session
3:30-4:00  Photographic Materials and Darkroom Procedures Related to Fluorescein Angiography by John Johnson, William Beaumont Hospital, Royal Oak, Michigan

**Wednesday, July 16th**
1:30-???   Ophthalmic Workshop Critique Session with Bill Ludwick as moderator.

Registration fee is $75.00 per day for those attending the ophthalmic workshop only. For additional information regarding the entire meeting and ophthalmic workshop please contact OPS member Laura Jordan, Ophthalmic Workshop Chairman, 6735 N. 11th Place, Phoenix, Arizona 85014. Telephone area code 602 274-9109.

**POSITION AVAILABLE**

There is an opening for an ophthalmic photographer at the University of Pittsburgh Eye and Ear Hospital. Those who apply should be experienced in doing fluorescein angiographies and possess supervisory abilities. A basic science background is desirable but not necessary. Applicants send resume to Mr. Barrett Walker, Eye & Ear Hospital, 230 Lothrop Street, Pittsburgh, Pennsylvania 15213. The telephone number there is area code 412 683-3500, extension 282.

**MEMBERS RELOCATED**

Mary T. Mannella has left Eye & Ear Hospital in Pittsburgh and is now at:
Ophthalmic Photography Services
Room 110 Washington Plaza
1420 Center Avenue
Pittsburgh, Pa. 15219
Phone: 412 562-3611

Marshall Tyler has joined the Dept. of Ophthalmology at Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, North Carolina 27103 Phone: 919 727-4091
QUALITY COLOR PRINTS DIRECTLY FROM TRANSPARENCIES
by Barrett P. Walker, University of Pittsburgh, Dept. of Ophthalmology, Eye & Ear Hospital, Pittsburgh, Pa.

A recent rush order for color prints from 35mm slides prompted me to try Kodak's new Type 1993 direct positive color paper. The instruction sheets packaged with the color paper and the RD chemicals used to process it are anything but helpful for a photographer used to manually processing occasional batches of color prints. To be specific, the printing instructions cover only the use of a base filter pack consisting of yellow, magenta, and cyan filters plus a 2E ultraviolet cut-off and an expensive ($70) #301 infrared cut-off filter. In addition, the processing instructions are limited to cover only the use of three Kodak Rapid Color Processing Machines (Models 11, 16-K and 30A) at an elevated temperature of 100°F.

The following is a simplified, empirically derived recipe for exposing and processing Type 1993 paper:

Exposure

First, purchase an appropriate quantity of one emulsion number in the largest size that you plan to use. The smallest sizes available are 100 sheets of 8"x10" or 50 sheets of 11"x14" You may then cut the paper down to smaller sizes as they are needed (ex: an 8"x10" to 2 5"x7"s, or an 11"x14" to 2 7"x10"s or 4 5"x7"s). Since the greatest difficulty is likely to be experienced in making the first print from any individual color paper emulsion, unnecessarily changing emulsion numbers is to avoided, as is storage of the unexposed paper at room temperature. Refrigeration of paper that is not in use will minimize undesirable color shifts.

Filtration may be achieved by using a basic pack of yellow, magenta, and cyan acetate filters above the enlarging lens or by the use of a complete set of additive and subtractive color filters that may already be in use for slide duplication. By using a basic set of .05, .10, .20, and .40 filters in the following six colors listed as compliments,

<table>
<thead>
<tr>
<th>additive</th>
<th>red</th>
<th>cyan</th>
</tr>
</thead>
<tbody>
<tr>
<td>magenta</td>
<td>blue</td>
<td>green</td>
</tr>
</tbody>
</table>

it is possible to directly change the color of the print in the desired direction.

- If the print is too red - add a cyan filter
- If the print is too yellow - add a blue filter
- If the print is too magenta - add a green filter
- If the print is too cyan - add a red filter
- If the print is too blue - add a yellow filter
- If the print is too green - add a magenta filter

Remember that acetate filters must go above the condensers in the enlarger while gelatin filters (handle with care!) may be placed either above the condensers or below the lens.

Only a wratten filter #2E and a standard heat absorbing glass used for regular color printing need to be placed in the enlarger prior to making the first print with 1993 paper. I obtained good results without using the #301 infra-red-cut-off filter (originally recommended to minimize printing differences between Kodachrome and Ektachrome slides).
Begin by making an 8" x 10" test print from a good quality "standard" color slide of the film type that you most frequently use. Uncover the paper to the enlarging light with a piece of cardboard in evenly spaced steps centered around your estimated exposure time. Since this is a positive paper, an increase in exposure will make the print lighter, while a decrease will darken the print. Once the correct exposure is determined, adjust the color balance. This will be relatively simple, since you will have an original transparency to use in comparison. I obtained a good test print from a Kodachrome 64 original with an exposure of 12 seconds at f/11 and only a .10 cyan plus the 2E filter in my Omega D-6 enlarger with a No. 212 bulb.

The next step is to make an 8" x 10" contact sheet of your transparencies at the same enlarger settings. Based on the contact sheet, judge the exposure and color balance of all the other slides that you plan to print in relation to the standard slide.

### STEPS FOR TRAY PROCESSING TYPE 1993 PAPER

<table>
<thead>
<tr>
<th>Processing Step</th>
<th>Time in Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In Darkness</td>
</tr>
<tr>
<td>1. First Developer *</td>
<td>2 1/4</td>
</tr>
<tr>
<td>2. Stop Bath</td>
<td>1</td>
</tr>
<tr>
<td>3. First Wash</td>
<td>2 1/2</td>
</tr>
<tr>
<td>4. Color Developer *</td>
<td>4</td>
</tr>
<tr>
<td>Remaining Steps can be done in normal room light</td>
<td></td>
</tr>
<tr>
<td>5. Second Wash</td>
<td>1</td>
</tr>
<tr>
<td>6. Bleach - Fix</td>
<td>2</td>
</tr>
<tr>
<td>7. Final Wash</td>
<td>2</td>
</tr>
<tr>
<td>8. Stabilizer</td>
<td>2</td>
</tr>
<tr>
<td>9. Dry</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Processing Time</strong></td>
<td><strong>16 3/4</strong></td>
</tr>
</tbody>
</table>

Immerse the print evenly and agitate continuously in the first developer, agitate frequently in the other solutions.

A 5 second drain time is included in the time for each processing step.

* Solutions will keep in open trays for 18 hrs. if the times for the first and color developers are gradually increased up to 20 additional seconds to compensate for exhaustion of the chemicals.

### Processing

The 5 solutions of RD chemistry required are mixed from liquid concentrates supplied separately in 1 gallon size. A sixth solution of potassium iodide specified by Kodak, may be eliminated.
Tray processing at a reduced temperature of 85°F is a practical alternative to machine or drum processing. A sink is needed that will hold 5 trays equal in size to the largest size print that is planned. A short piece of open-ended plastic pipe may be inserted in the drain hole of the sink to provide a water jacket around 1 inch to 1 1/2 inches deep around the trays. One of the five trays should be tilted upside down against a small heavy object to provide a washing board. Water entering the sink from a rubber hose will provide a supply of tempered water with which to wash the prints and keep the water jacket full. Follow the processing chart for the order and times of all processing solutions. Each wash may be carried out on the same inverted tray by hosing off the print on both sides and then keeping a continuous flow of water across the emulsion side until the time is up. Arrange the trays in such a way as to avoid contamination of solutions with splash and drip as the paper is processed.

An alternative method of tray processing where space is limited is to use a small tray for solutions inside of a larger water jacket tray with a hole drilled in the side to serve as a drain. The large tray should be made of plastic to conserve heat, while the smaller one should be of metal to transmit heat. Fill and drain the small tray from a series of graduates containing sufficient quantities of solutions for each processing run. If each solution is discarded after it is used, the same small tray may be tilted to allow the print inside to be hosed off during each wash.

In both methods, the stabilizer may be placed in a separate clean tray at room temperature and used to "hold" a series of prints for a short time until it is convenient to dry them. The color of wet prints is best judged by viewing with transmitted rather than reflected light. Drying is most simply done by wiping excess stabilizer from the print face with a squeegee and placing the prints on a horizontal fiberglass window screen or a table top.

Two prints may be processed simultaneously by placing them back to back and flipping them as a unit during the tray process. They need only be separated during the wash to remove the solutions trapped between them. Extend the wash times slightly if the prints are flipped or place them both emulsion side up on a large washing tray. Finally, to avoid skin irritation, the use of rubber gloves is strongly recommended when handling the chemical solutions.

Color reproduction and tonal rendition are surprisingly good. The color most poorly reproduced, green, is seldom seen in ophthalmic photography, and the contrast of the material is low enough to allow printing of slit lamp photos with a minimum of dodging and burning in. Since 1933 is an Ektachrome emulsion on an RC paper stock, the ability to process both color prints and slides with the soon to be introduced E-8 chemistry may have occurred to some of you. I have no official information from Kodak that this will be the case, but I am eagerly anticipating the possibility.

JOHN JOHNSON
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