is regulated in such a way that the mineral grains will fly at a suitable speed into the globes and halt in them when the hole (A) is stopped by a finger. The suction is cut off immediately when the finger is lifted from the hole, whereupon it is possible to guide the mineral grains at will with the tip of the capillary. Only a slight motion of the finger is needed to start and to cut off the suction. It is easy to pour the mineral grains out of the apparatus through the hole (A).

If the mineral-picking apparatus is mounted on the stereoscopic tube, the tip of the capillary is guided to the mineral grain by means of the cross-stage.

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METHOD OF MINIMIZING DAMAGE TO REFRACTOMETERS FROM THE USE OF ARSENIC TRIBROMIDE LIQUIDS[1]

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If there be other users of high-index liquids containing arsenic tribromide who have overlooked Meyrowitz's (1955, p. 400) reference to Alexander's (1934, p. 181) caution against their use with refractometers having lead-glass prisms, or who have used them in ignorance of the composition (commonly undisclosed) of the prism, the following note may be useful.

The refractometer I used (a Zeiss instrument having a prism marked S-3 with an index above 1.83) promptly showed the same white film described by Alexander, when used with Meyrowitz's liquid of index 1.79. Within a few minutes, the film became so dense that the boundary line could not be seen.

[1] Publication authorized by the Director, U. S. Geological Survey.

Wiping with the soft absorptive paper furnished with the instrument did not suffice, as Alexander pointed out, to remove the film. However, when a drop of a slurry of fine tin oxide (available from dealers in lapidary supplies) was applied to a piece of the absorptive paper and the surface of the prism gently polished therewith, the film was quickly removed, and the refractometer restored to usable condition, if not to its pristine one. Examination of the surface of the prism after repolishing showed irregular, shallow, roughened areas, obviously not scratches, covering a small part of the surface. Both lead and bromine could be detected by x-ray spectrography on the paper used for polishing. Apparently, the arsenic bromide reacts with the lead glass to form lead bromide and arsenic oxide.

In view of the availability of the Morey lanthanum borate type glasses, with indices up to 1.88, that are "very stable" (Kingslake and DePaolis, 1949, p. 422), it is surprising that lead glass is still used in high-index refractometers. If refractometers using lanthanum borate glasses are available the fact does not seem to have been widely publicized. Possibly there are objections, not readily apparent, to their use.*

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* In commenting on this note, G. W. Morey (written communication, April 28, 1960) has kindly pointed out that, while the lanthanum borate glasses are hard and resistant to corrosion, dispersion is less in commonly available glasses than in the lead glasses of corresponding index. Dr. Morey has also suggested that it would not be difficult to produce a glass of the lanthanum borate type having a high enough dispersion but the market would be very small.

PITTSBURGH DIFFRACTION CONFERENCE

The annual Pittsburgh Diffraction Conference will be held November 9–11, 1960, at Mellon Institute, Pittsburgh, Pennsylvania. Sessions will be devoted to metals and alloys, instrumentation, structures, polymers and fibers, refractories, electron probe and electron diffraction. The evening meeting will be addressed by Professor I. Fankuchen of the Polytechnic Institute of Brooklyn. Further information can be obtained from L. F. Vassamillet, Mellon Institute, 4400 Fifth Avenue, Pittsburgh 13, Pennsylvania.