

The treatment with fuller's earth effectively reduced the metal content of the liquids. The ion exchange resins were less effective. The low lead and zinc contents of the used bromoform probably result from the earlier bleaching by fuller's earth. The clay also removes dissolved water from bromoform, reducing the coagulation of suspended particles that sometimes takes place during separation of minerals finer than 200 mesh. The diiodomethane had been stabilized with mercury, which accounts for its high metal content. Stabilization with tin or copper may introduce similar amounts of these metals into the liquid. The metal that would cause the fewest problems in any investigation presumably should be used as a stabilizer.

The effectiveness of fuller's earth in removing metals from the liquids indicates that some clays may become seriously contaminated if they contact unclean heavy liquids. The contamination naturally is more serious if the amount of mineral in contact with the liquid is small, as in the later stages of purification of mineral concentrates, and may be critical if metal is selectively absorbed by some mineral.

THE AMERICAN MINERALOGIST, VOL. 45, MAY-JUNE, 1960

MEASUREMENT OF REFRACTIVE INDICES IN THIN SECTION

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The uniform thickness and random orientation of grains in most thin sections are highly desirable features for many types of optical measurements. Unfortunately, however, the precise measurement of indices of permanently mounted material is difficult. One way to overcome this difficulty, while preserving the thin section, is to dissolve the Canada balsam mounting material around the edges by immersing the section in xylene. The solution process is easily watched and is stopped by washing the xylene out with acetone (which dries rapidly) when the xylene just reaches the outer edge of the rock slice (about 15 minutes for most sections). The section is then dried, and immersion oils are inserted under the edge of the cover glass and into contact with the rock. Indices of the various minerals are determined by using different oils sequentially and washing each of them out with acetone. Sections in which the rock slice is attached to the underlying slide by a mounting medium not easily soluble in xylene should have the outer edges of the rock "shaved" off before the cover glass is attached, and the cover should be cemented by Canada balsam. By removing edges which might be coated by an insoluble mounting medium, contact between immersion oil and mineral is assured.