fiber was about 300–400 Å, and the inside diameter averaged 50 Å. The inner voids were partially filled with amorphous material as is true of natural chrysotile (Bates, 1958).

Chemical analysis of the pure synthetic material indicated that no foreign ions from the mineralizer had entered the structure.

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QUICK IDENTIFICATION OF POTASH FELDSPAR, PLAGIOCLASE, AND QUARTZ FOR QUANTITATIVE THIN SECTION ANALYSIS

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Describing his simple and useful point counter, Chayes (1949) rightly remarks (p. 9): "Only an operator whose bravery exceeds his wisdom will attempt analyses when he has reason to suspect that errors of identification will be more than a trifling component of the total precision error." He took a good step towards eliminating such errors when he simplified the procedure of staining potash feldspar with HF and cobaltinitrite (Chayes, 1952).

In this connection I want to describe a still simpler modification of the procedure, developed by several workers at the Geological Museum, Oslo, and successfully used by the present author and many others:

Pour a little HF into the bottom of a plastic coverglass box (such as

used by manufacturer for packing 50 pieces of 32×24 mm. coverglass). Place uncovered thin section face down on the box instead of lid for 2 minutes. Place thin section face up on table. Apply (with dropper or directly from bottle, test tube etc.) freshly prepared saturated watery solution of cobaltinitrite and let react for 5 minutes. Wash gently under tap. Avoid scratching. The entire procedure is carried out at room temperature. Covering with tape or some such material is unnecessary. (After use put lid on coverglass box, wrap it in plastic foil and keep it in your office if you like!)

Plagioclase and quartz. To distinguish at a glance plagioclase from quartz is sometimes difficult or impossible in thin section. Use the *uncovered* thin section treated as above. Use reflected light from a Monla lamp placed a little higher than the microscope table. Tilt lamp axis (beam of light) about 15°. Due to diffuse reflection the etched plagioclase appears grayish white, whereas quartz is noticeably darker (dark gray). (Potash feldspar is of course strongly greenish yellow and is still more easily seen than in the ordinary way of observing.) For confirmation when (rarely) desirable, arrange so that transmitted light can be switched on at will. (The author substituted the Leitz Microdialamp for the microscope mirror.) Plagioclase appears darker (faintly brownish) than quartz (white).

By this procedure the quantitative determination of quartz and both feldspars can be quickly and safely performed with the aid of the point counter. At the same time there can be determined one or more colored constituents. It is, however, necessary to make a separate determination of *apatite* which is not readily distinguished from quartz in uncovered thin sections. It may therefore be just as convenient to determine the percentages of colored components or most of them separately along with apatite after covering the thin section, either provisionally using glycerine, or permanently with canada balsam. This, when using the ordinary laboratory counter with only five keys, obviously implies no extra work.

The method described was developed for some granitic rocks (quartz, plagioclase, microcline, hornblende, biotite, apatite, titanite) with plagioclase almost free from impurities, often untwinned and, in ordinary covered thin section, having nearly the same relief as quartz.

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