



GOUT KIT INSTALLATION INSTRUCTIONS

1. Raise the condenser to its highest position
2. Place the polarizer on top of the field iris housing (Fig.1)
3. Rotate the polarizer until the Allen screw (Fig.2) is aligned with the housing notch (Fig.1). Tighten the Allen screw securely into the notch so the polarizer is in a locked position and cannot be rotated.
4. Remove the viewing head if it is attached to the microscope; the dovetail is now exposed (Fig.3)
5. Insert the analyzer (the smaller diameter portion facing downwards) into the dovetail
6. Turn on the illumination and rotate the nosepiece until the 40x objective is in the viewing position
7. Swing out the lambda plate compensator (Fig.2) so it is not in the light path
8. While looking downwards through the analyzer and 40x objective, rotate the analyzer until the field of view is at its darkest illumination. This will usually occur when the white dot on the analyzer is at the position shown in Figure 4
9. Re-attach the viewing head and re-align the lambda plate compensator over the polarizer

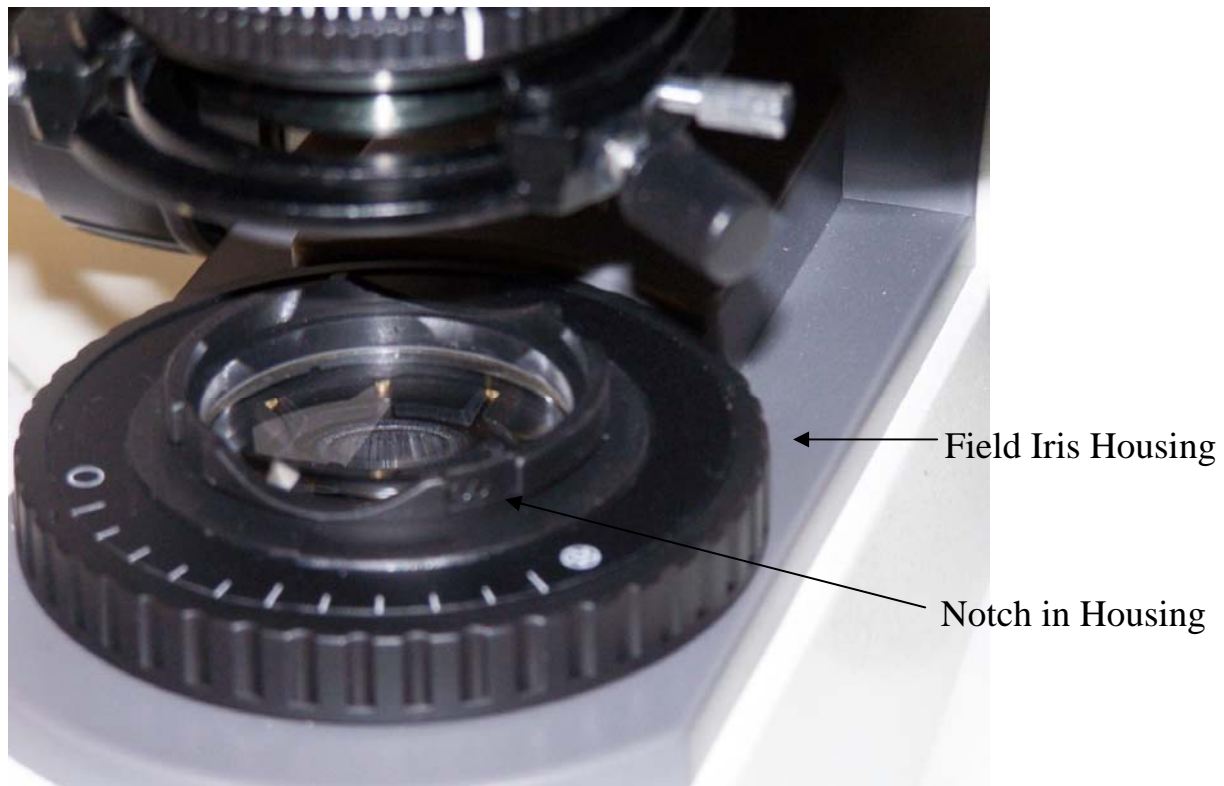


Figure 1



Figure 2

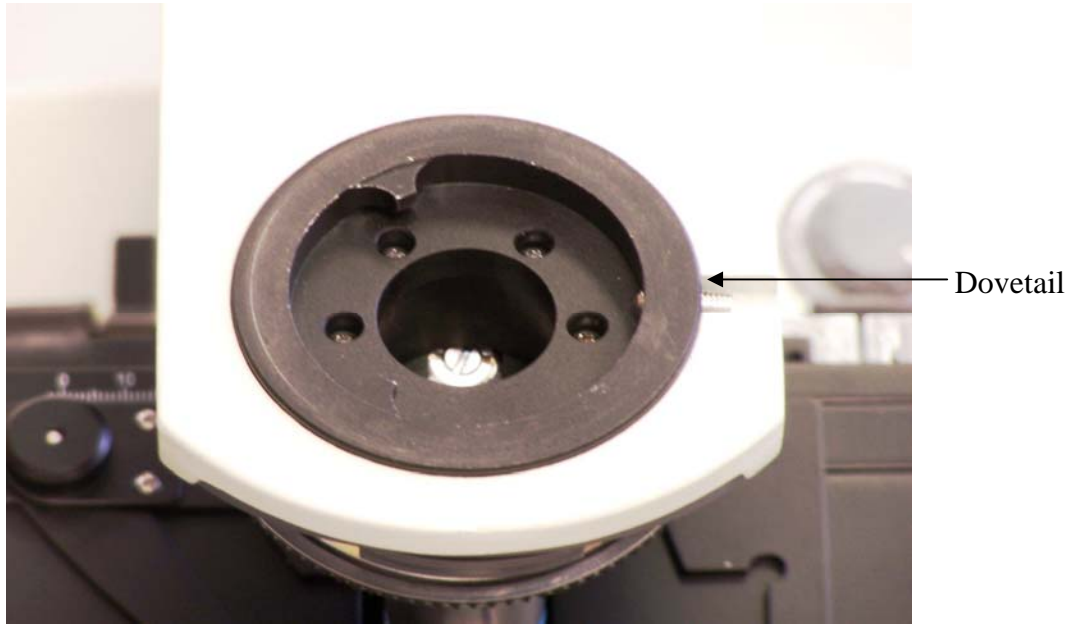


Figure 3

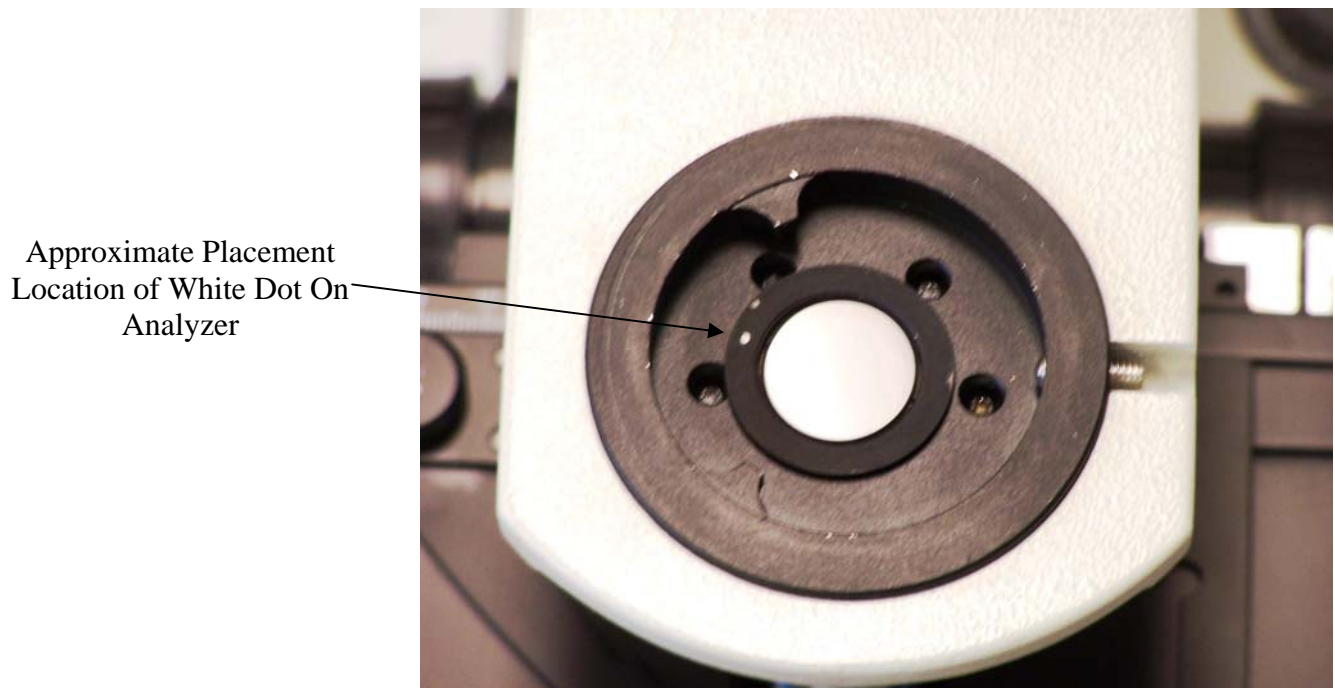


Figure 4

10.3 Differentiation of Gout / Pseudo Gout

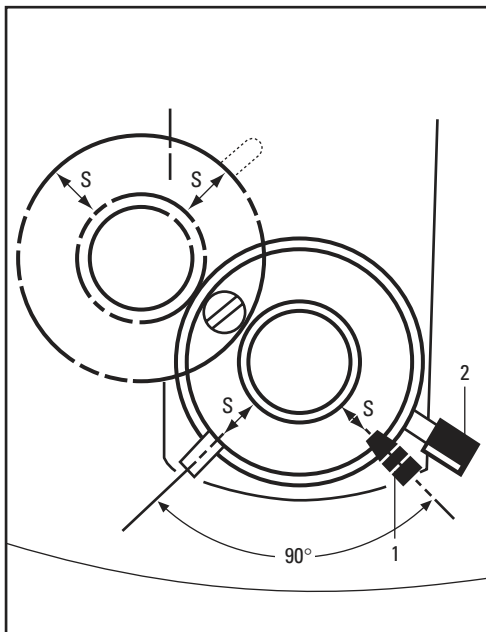
The use of the lambda plate compensator is a prerequisite for this test.
Assembly → p. 24.

Orienting the Lambda Plate Compensator

- Rotate the lambda plate compensator out of light path (fig. 51).
- Bring the lambda plate compensator and analyzer into cross position until they reach maximum darkness (polarization → p. 45).
- Fix the cross position thus determined with the clamping screw at the side (51.2).
- Swing in the lambda plate again.

Fig. 51 Lambda plate compensator swung out

- 1 Orientation handle
2 Clamping screw



The following section explains the basic procedure for gout/pseudo gout differentiation. This test is made possible due to the negative birefringence of urates and positive birefringence of pyrophosphates. Both gout (monosodium urate) and pseudo gout (calcium pyrophosphate) crystals tend to be needle shaped. However, many crystals may be broken and/or irregular. To do the test, it is necessary to find at least one intact crystal orientated North-South (i.e., vertically) and one East-West (horizontally) in the field of view.

Procedure

To insure the test is being done correctly, a slide of known monosodium urate crystals should be used initially.

- Use of a 40x objective is recommended.
- Swing the lambda plate out of the path of light (fig. 51).
- Place the slide on the stage and bring crystals into a sharp focus. The needle shaped crystals will appear white regardless of orientation.
- Swing in the lambda plate and put the orientation handle (51.1) into it's extreme left position. Crystals with a long dimension in the N/S direction should appear yellow and the E/W direction blue (fig. 52).

10. Measurements with the Microscope

- Move the orientation handle to its extreme right position. Now the N/S crystals should be blue, and E/W yellow (fig. 52).
- Be sure to test crystals with the orientation handle in each position to insure positive identification.

The following is the procedure for identification of pseudo gout:

The test for pseudo gout is done identically to the test for gout. However, the color change is opposite that of Gout. That is, with the handle at the left extreme, N/S crystals are blue and E/W crystals are yellow, and vice versa with the level at the right side (fig. 53).

Fig. 52 Identification of gout

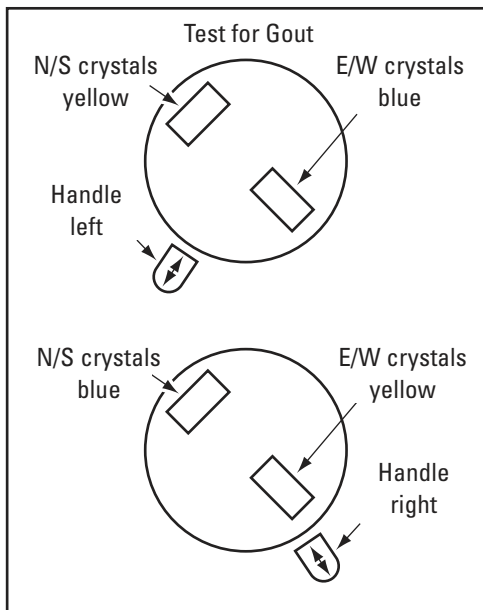


Fig. 53 Identification of pseudo gout

