Consider now the light from a high-quality positive red filter, which is seen in the photograph below. The color patch is obtained by placing the filter over a rectangular baffle on an overhead projector. The spectrum is obtained by placing the red filter just in front of the slit in the spectrum experiment, as seen in the photograph below the color patch.
The question is what the spectrum of this filter looks like: that is, the spectrum that corresponds to this color of light, just as the white light and its spectrum go together as seen above. You are to explain what the spectrum will look like with the help of some possible hints given below.

The spectrum will:

• (a) be just like the white light spectrum above.
• (b) be like the white light spectrum above with the red missing.
• (c) be like the spectrum above with everything but the red missing.
• (d) be like the spectrum above with the red stronger than other colors.
• (e) be like the white light spectrum above with some other color missing.
• (f) not exist because the light is not white.

Click here for Answer #192 after October 4, 2004.