

## STUDENT SPECTROSCOPE MODEL SP-125

The Winsco Model SP-125 Student Spectroscope is a replica diffraction grating instrument with a scale that shows approximate wave lengths in nanometers.

The housing is a single-piece aluminum casting mounted on sturdy stainless steel post and supported by a cast iron tripod base. In use, the white faced reflector is positioned to give a small amount of back lighting to the photographic film scale so that the lines may be clearly seen against the super-imposed image of the spectrum.

To observe the solar spectrum, the adjustable slit is pointed at the sky, but never directly at the sun. A white fluffy cloud is an excellent source. As the slit is closed, the more prominent vertical Fraunhofer lines will appear. (Horizontal lines are caused by dust particles on the slit and should be disregarded.) To view spectra in the laboratory, the light source is placed in front of the slit and the adjustable reflector is positioned so that sufficient ambient light is directed at the scale to illuminate it.

This unit will be found satisfactory for detection of Ca, Pa, Sr, Li, K, Na, Th, Rb, Pb, Cu in flames. For making such tests, a concentrated solution of the salt is placed in a small beaker. A clean Pyrex test tube, partially filled with cold water, is then dipped in the solution which will adhere to the outside and bottom of the test tube. The tube is then held in a colorless Bunsen flame. The salt will vaporize and color the flame which can then be examined with the spectroscope. The purpose of the cold water within the tube is to prevent the glass of the tube from getting so hot as to impart color to the flame.

