SPECTROSCOPY LETTERS 1(5), 189-195 (1968)

THE USE OF AN 8X BEAM CONDENSER WITH THE BECKMAN IR-11 AND IR-12*

L. J. Basile, C. Postmus and J. R. Ferraro

Argonne National Laboratory, Argonne, Illinois 60439

A new 8X beam condenser has been designed by the Beckman Instruments, Inc., for use with the supersize IR-11 and IR-12. This letter will report on results obtained with this accessory.

The supersize instruments are required because a larger sampling area (10" wide) is needed to accommodate the beam condenser. The optical diagram of a supersize instrument is shown in Fig. 1. The beam geometry is essentially that of the standard type instruments.

Fig. 2 shows an optical schematic of the beam condenser, which was used with a high pressure diamond cell. The image size at the cell is about 3.5 mm high by 1.0 mm wide, with a relative aperature of about f1.4. Fig. 3 shows the beam condenser with the diamond cell in the IR-12 spectrophotometer. The entire sampling area is covered with a lucite lid fitted with rubber gloves for manipulation in a dry atmosphere.

*Based on work performed under the auspices of the U. S. Atomic Energy Commission.

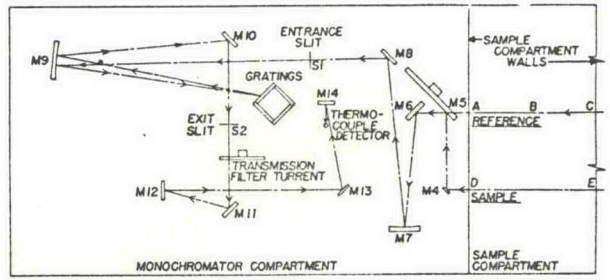

IMAGE SIZES

	WIDE	HIGH
A-	1.00"	2.00"
B-	.20"	1.00"
C-	.80"	2.00"
D-	.20"	1.40"
E-	1.25"	1.80"
F-	1.75"	2.00"

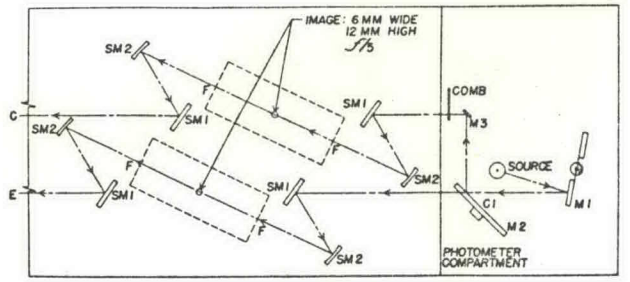

Fig. 1. Optical Diagram of Supersize Beckman Instrument