

**IMPORTANT CHARACTERISTICS OF
SCINTILLATION CRYSTALS & PHOSPHORS**
ISOMET CORP., N.J.

MATERIAL	Density	Relative Pulse Height ¹	Decay Constant, ² microseconds	Peak Emission Wavelength, angstroms
ANTHRACENE	1.25	1.0	0.03	4400
CESIUM IODIDE (TI)	4.51	0.7	1.1	4200-5700
LITHIUM IODIDE (Eu)	4.06	0.3	1.4	4500-5000
<i>Liquid Phos</i>	<i>0.86</i>	<i>0.27 to 0.49</i>	<i>0.002 to 0.008</i>	<i>3550-4550</i>
PLASTIFLUOR®	1.06	0.5	0.004	4250
<i>A Pilot "B"</i>	<i>1.02</i>	<i>0.68</i>	<i>0.0021</i>	<i>4000</i>
<i>B NE 102</i>	<i>1.03</i>	<i>0.65</i>	<i>~0.004</i>	<i>4250</i>
SODIUM IODIDE (TI)	3.67	2.0	0.25	4100
STILBENE	1.16	0.6	0.008	4100

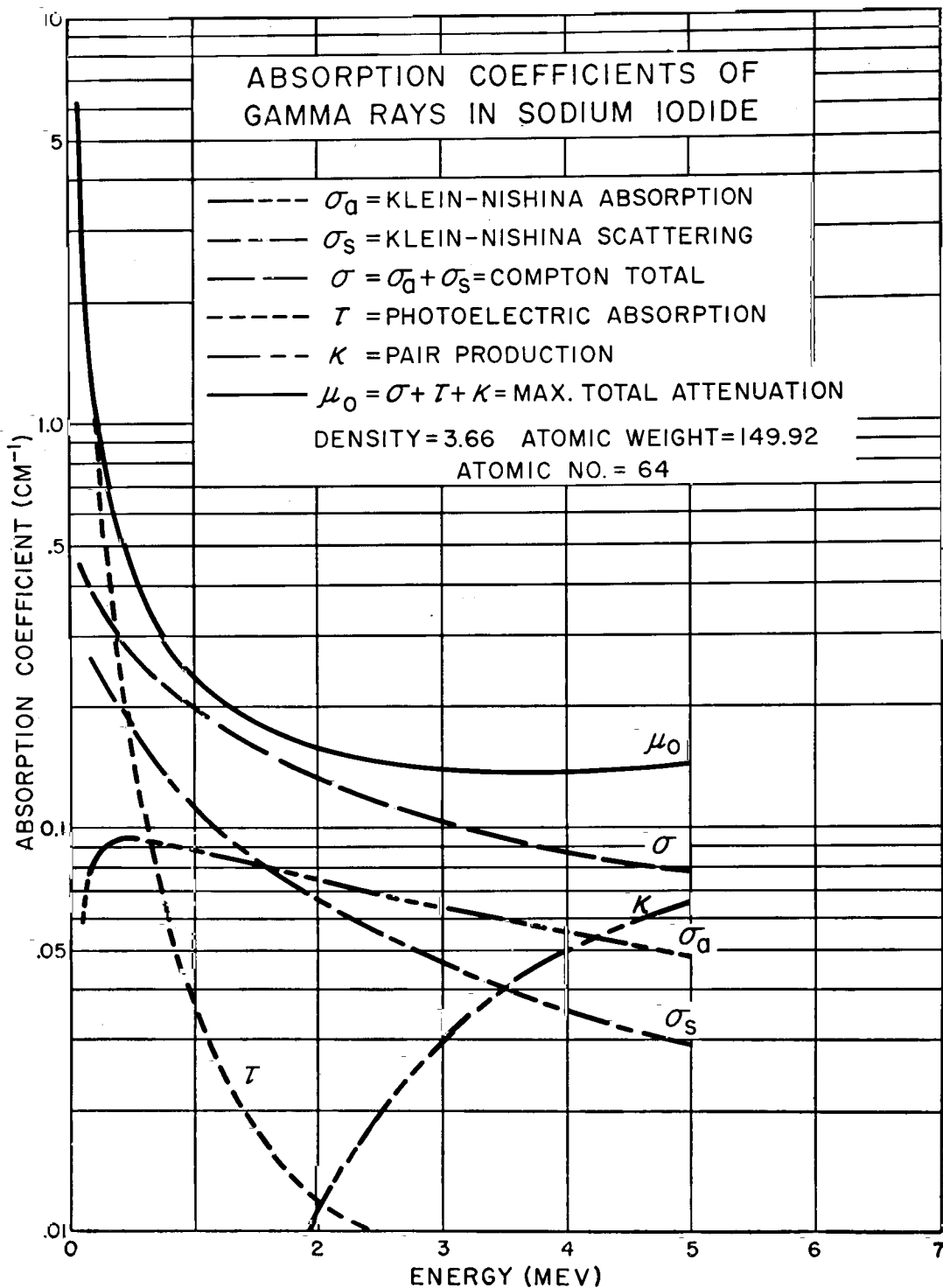
¹ Pulse heights are obtained from the height of the Cs¹³⁷ photopeak and are given relative to a standard high quality anthracene crystal.

² Decay constant is the time for the light pulse to decay to 1/e of its peak value.

A. PILOT CHEMICALS, WATERTOWN MASS.

B. NUCLEAR ENTERPRISES LTD., WINNIPEG, CANADA

FIGURE 1



Absorption coefficients for gamma rays in a Thallium activated Sodium Iodide crystal. From these coefficients the counting efficiency of the crystal itself can be readily calculated.