



Fig.1 Harshaw 3500 TL reader.

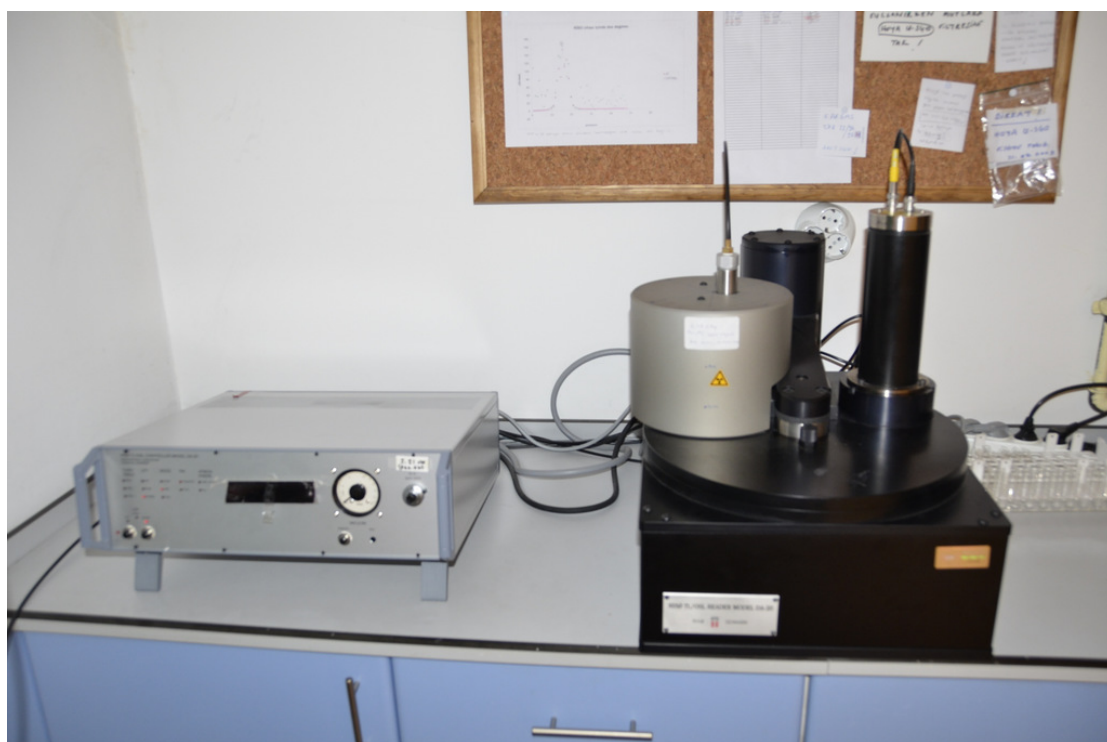


Fig.2 Riso DA 20 TL/OSL reader

Irradiator: Thermo 2210 $^{90}\text{S}/^{90}\text{Y}$ Beta source

AIM:

1. Introduction to instrumentation
2. Distinguish between experimental parameters and dependent variables
3. Check sensitivity and sensitization: Measure TL for one heating rate according to the following protocol (material TLD 100):
 - Step. 1: TL measurement ($T_{\text{max}}=350\text{ }^{\circ}\text{C}$, $\text{HR}=1\text{ }^{\circ}\text{C/s}$) for the “zero dose”
 - Step. 2: TL measurement ($T_{\text{max}}=350\text{ }^{\circ}\text{C}$, $\text{HR}=1\text{ }^{\circ}\text{C/s}$) for the background
 - Step. 3: Irradiation (0.5 Gy)
 - Step. 4: TL measurement ($T_{\text{max}}=350\text{ }^{\circ}\text{C}$, $\text{HR}=1\text{ }^{\circ}\text{C/s}$)
 - Step. 5: Irradiation (0.5 Gy)
 - Step. 6: TL measurement ($T_{\text{max}}=350\text{ }^{\circ}\text{C}$, $\text{HR}=1\text{ }^{\circ}\text{C/s}$)
 - Step. 7: Irradiation (0.25 or 0.5 Gy)
 - Step. 8: TL measurement ($T_{\text{max}}=350\text{ }^{\circ}\text{C}$, $\text{HR}=1\text{ }^{\circ}\text{C/s}$)
 - Step. 9: Irradiation (0.25 or 0.5 Gy)
 - Step. 10: TL measurement ($T_{\text{max}}=350\text{ }^{\circ}\text{C}$, $\text{HR}=1\text{ }^{\circ}\text{C/s}$)
 - Step. 11: TL measurement ($T_{\text{max}}=350\text{ }^{\circ}\text{C}$, $\text{HR}=1\text{ }^{\circ}\text{C/s}$) without irradiation
 - Step. 12: TL measurement ($T_{\text{max}}=350\text{ }^{\circ}\text{C}$, $\text{HR}=1\text{ }^{\circ}\text{C/s}$) for the background

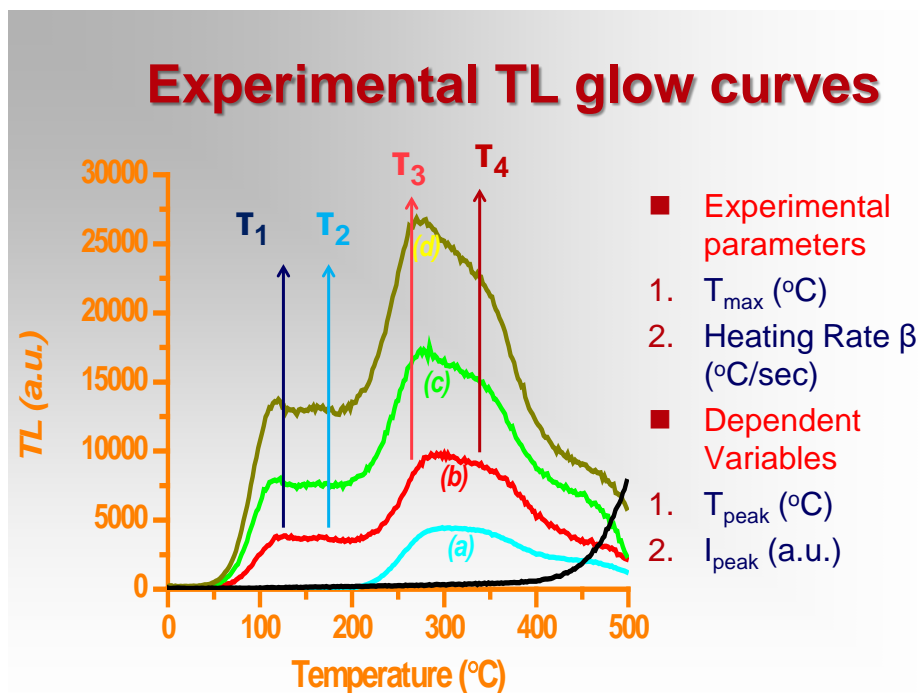


Fig.4 TL glow curves.