

# Survey of Palaeolithic sites by luminescence profiling, a case study from Eastern Europe

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## Supplementary Material:

HF Etched Fraction		Polymineral Fractions	
Preheat	220°C / 30s	Preheat	220°C/30s
OSL	470nm, 60s @ 125°C	IRSL	830nm, 60s @ 50°C
Test Dose	5 Gy	OSL	470nm, 30s @ 125°C
Preheat	200°C / 30s	TL	500°C @ 5°C/s
OSL	470nm, 60s @ 125°C	Regen. Dose	50 Gy
Regen. Dose	50 Gy	Preheat	220°C/30s
Preheat	220°C / 30s	IRSL	830nm, 60s @ 50°C
OSL	470nm, 60s @ 125°C	OSL	470nm, 30s @ 125°C
Test Dose	5 Gy	TL	500°C @ 5°C/s
Preheat	200°C / 30s		
OSL	470nm, 60s @ 125°C		

+ additional cycles to higher regenerative doses for high  $D_e$  samples

Table S 1. Luminescence profiling measurement procedures applied to different mineral fractions. All measurements were conducted using a Riso DA-15 with <sup>90</sup>Sr/<sup>90</sup>Y β-source, blue LEDs and red laser diodes, and U340 detection filter pack.

Fraction	Measurement	Kostienki	Monasheskaya	Akhshtyr
Polymineral	IRSL (cts/s/Gy)	2	17	0.06
Fine	post IR OSL (cts/s/Gy)	6	39	0.6
	post IR & OSL TL (cts/°C/Gy)	0.4	2	0.02
Polymineral	IRSL (cts/s/Gy)	37	122	9
Coarse	post IR OSL (cts/s/Gy)	253	165	35
	post IR & OSL TL (cts/°C/Gy)	13	17	3
HF Etched Coarse	OSL (cts/s/Gy)	538	359	41

Table S 2. Mean luminescence sensitivity of different mineral/grain size fractions, from each of three sites, to different stimulation methods.