


Name of Machine	Luminescence dating facility	
Make: RisØ National Laboratory, Denmark	Model: TL-DA-20; RisØ TL/OSL Reader	
		
Specification		
<ul style="list-style-type: none"> • Automated 48-position sample changer system built into a vacuum chamber (lowest pressure $< 2 \times 10^{-2}$ mbar). • Two exchangeable sample holders (each designed to hold 48 samples) for 9.7 mm diam. flat sample discs or 11.65 mm diam. sample cups. • Vacuum sensing system with automated switching on reaching desired pressure, vacuum gauge, and combined vacuum/nitrogen solenoid valves (exclusive vacuum pump). • Lift mechanism for heater element. • Shaped Kanthal heater strip, endpoint temperature: 700°C. • Filter holder to allow fitting of different optical detection filters. • Photomultiplier housing with dynode chain and μ-metal shielding. 		
Working principle:		
<p>Luminescence dating is based on the principle that certain naturally occurring minerals (e.g. quartz, feldspar, poly-minerals); which are previously exposed to ionizing radiation, emit light (luminescence) when stimulated thermally or optically. Luminescence dating requires a proper resetting of the previously acquired (pre depositional) luminescence in the natural minerals into a very low level (natural zeroing event), either by exposure to sun light during pre-depositional transportation (by wind, water etc.) or by a thermal event (pottery making, baking by lava, fusion crest of meteorites), before deposition. Following the natural zeroing event and subsequent burial, the natural minerals begin luminescence acquisition afresh from the ionizing radiation (alpha, beta and gamma) constantly provided by the decay of radioactive elements (U_{238}, Th_{232}, K_{40}, Rb) present in the sediments and also from the cosmic rays.</p>		
Application		
<p>Luminescence dating provides absolute ages and has very important application in Quaternary geology and archaeology.</p>		
User Instruction		
<p>The samples must be collected as per the instructions and method given in Morthekai and Ali, 2014. "Luminescence Dating Using Quartz-for End Users, Gond. Geol. Mag., V. 29".</p>		
Contact Person		
In-Charge	Dr. Anupam Sharma (0522-2742974); Email anupam110367@gmail.com ; anupam_sharma@bsip.res.in	
Staff:	Dr. S. N. Ali (0522-2742914), Email: snawazali@gmail.com ;	
	Dr. P. Morthekai (0522-2742914), Email: morthekai@gmail.com	

charges				
Instrument/ Analysis	Govt. Organization		Private sector/ Industry	Remarks (if any) (Rates quoted in Rs.)
	(University/ Research Institutes)	Student		
TL/OSL dating	18000.00	14000.00	25000.00	Sample should be collected following Morthe kai and Ali, 2014

Guideline

1. The analytical data/spectra provided cannot be used as certificates in legal disputes.
2. Service charges (GST) will be payable in advance (Draft/RTGS/NEFT) in favour of “The Director, BSIP, Lucknow”. Payable at Lucknow
3. Separate samples should be sent for different analysis. Samples will not be analysed until payment is received.
4. In case of prepared samples, the user must specify the procedure that how the sample was prepared (complete methodology).
5. In all correspondence related to analysis, our reference number must be mentioned.
6. Individual Scientists and Research fellows should send their application and samples through their project head. Discount in analysis charges for research fellows of universities/institutes will be decided by the Director in consultation with respective lab.
7. Interpretation of data/spectra will NOT be done.
8. It is mandatory for user to acknowledge the facility in their research work and communicate the same to the respective laboratory and the Director, BSIP, Lucknow for onward communication to DST, New Delhi.
9. For Lab visit, it is mandatory to take prior appointment from Director, BSIP before your visit. The application should be send through department/Senior official of institution/Company. No deviation will be allowed for the timings.

To be filled in by the user while submitting the form

Job No as ASE CF

Date of submission:

(Sample Information Form)

REQUISITION FORM

BIRBAL SAHNI INSTITUTE OF PALAEOSCIECES, LUCKNOW

53, University Road, Lucknow, Ph. 0522-2740008, 2740399

(ASE Central Facility)

Website: www.bsip.res.in, E mail: gcms.bsip@gmail.com

Geochemistry Lab

(Information to be filled in by the user)

Name: _____

Address: _____

Email and Mobile No.: _____

Category (In-house/sponsored/Govt. organization/private): _____

Number of samples: _____

Sl. No.	Sample ID	Type/Nature of Sample	Quantity	Year of collection	Lat./Long.	Remarks, if any
1						
2						
3						
4						
5						

To be filled in by the user while submitting the form

Job No as ASE CF
Date of submission:

SAMPLE REQUISITION FORM
BIRBAL SAHNI INSTITUTE OF PALAEOSCIECES, LUCKNOW
53, University Road, Lucknow, Ph. 0522-2740008, 2740399
(ASE Central Facility)
Website: www.bsip.res.in, E mail: gcms.bsip@gmail.com
Geochemistry Lab

(Information to be filled in by the user)

Name: _____

Address: _____

Email and Mobile No.: _____

Category (Inhouse/inhouse sponsored/Govt. organization/private): _____

Number of samples: _____

Nature of samples (with details): _____

Scientific Objective of this study: _____

Additional information, if any: _____

Location (Lat & Long): _____

Exposed Section/Trench/Core/Others: _____

(For office use only)

Lab Reference No.:

R.P.C.C./ Registrar : Kindly raise the bill for the above

Total Charges:

Taxes:

Grand Total: